EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

Exploring the Social Anxiety Spectrum using Qualitative Analyses of Early Memories

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Declaration

I declare that this thesis contains no material that has been accepted for the award of any other degree or diploma, except where due reference is made in the text of the examinable outcome. To the best of my knowledge this thesis contains no material previously published or written by another person, except where due reference is made in the text. I further declare that the ethical principles and procedures specified in the Faculty of Life and Social Sciences Human Research Ethics Committee document have been adhered to in the process of conducting this research.

Name: Davina Howell

Signed:
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Abstract

Albeit a shift in the literature, toward dimensional approaches of conceptualising Social Anxiety Disorder (SAD) (Kollman, Brown, Liverant, Stefan & Hofmann, 2006; Ruscio, 2010), recent revisions of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), classifies SAD as a distinct condition, such that criterion for diagnosis represents the presence or absence of categorically identifiable symptoms and features from non-clinical populations (American Psychiatric Association, 2013). Therefore, difficulties associated with DSM-IV-TR classification of SAD as a separate entity to subclinical social anxiety, characterised by similar yet less frequent and intense underlying core issues and fears, remain apparent when differentiating less extreme symptoms from diagnostic criteria (Kollman et al., 2006; Ruscio, 2010). Further to this, current diagnostic criteria can lead to under recognition and treatment of socially anxious individuals in the community, whose symptoms do not meet diagnostic thresholds but would benefit from therapeutic intervention (Knappe, Beesdo, Fehm, Lieb & Wittchen, 2009b). Subsequently, the current study intends to extend literature regarding classification of SAD as best representing: a categorically distinct entity, with distinguishable features from nonclinical presentations; or extreme manifestations of similar core issues underlying subclinical social anxiety symptoms, indicative of a spectrum disorder (Kollman et al., 2006; Ruscio, 2010). The aim of this study was to explore and identify symptom profiles of SAD and subclinical social anxiety, by identifying diagnostic boundaries that demarcate clinical thresholds from subclinical presentations, relative to non-psychiatric controls.

This first known study in early memory research, investigated potential links between self-reported social anxiety symptom severity and thematic content elicited from early memory probes. To implement this methodology, qualitative and projective research techniques were
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

utilised as a means of exploring themes from earliest social memories, as potential clues revealing of meaningful information associated with trajectories of social anxiety. The sample was recruited from a predominantly student based population, with a proportion recruited from the general community (N=203). All participants provided written narratives of their earliest social memory and completed a battery of questionnaire measures, used to determine selection criteria for social anxiety threshold groups. Of these, 94 women (age: M= 26.51, SD=12.37) and 36 men (age: M= 26, SD=10.62), ranging in age from 18-70 years comprised the final sample. These 130 participants comprised three subgroups representative of the social anxiety spectrum; SAD, subclinical social anxiety, non-socially anxious controls (N=130). The exploratory nature of this pilot study, necessitated few hypotheses, with the exception of general predictions based on the wealth of social anxiety literature, which were supported by results. Findings demonstrated, increased social anxiety symptom severity corresponded to significantly more early memories signified by (H1): greater degree of negative affect and (H2): higher incidence of themes related to negative interpersonal encounters. Thematic analysis also revealed trends partially consistent with hypotheses related to parents. Negative interactions with mothers were most prominent for the SAD group, followed by subclinical and control groups respectively (H2a). However, a similar graded relationship between negative interactions with fathers and social anxiety symptom severity was not supported (H2b). Interestingly however, the nature rather than frequency of negative interactions with fathers was more meaningful in understanding potential trajectories of SAD, and lesser extent subclinical social anxiety. Findings were consistent with predictions that (H2c): individuals with clinical and subclinical social anxiety would recall significantly more memories involving perceived negative interactions with peers, than non-socially anxious controls.

In relation to general research questions, patterns of themes that emerged from memories offered preliminary evidence in support of dimensional classifications for SAD. For instance,
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

thematic content analysis revealed conceptually and meaningfully relevant themes from early memory probes indicating, increased incidence and extremity of symptoms, vulnerability factors, and negative early social experiences, corresponded to greater severity, distress, and impairment associated with self-reported SAD, compared to symptoms below diagnostic thresholds and non-pathological anxiety reported by controls. Characteristic features of earliest social memories from both clinical and subclinical social anxiety groups, related to: greater frequency of negative interactions with parents, experiences of peer rejection, social or performance difficulties associated with heightened anxious arousal, and emotionally painful interpersonal experiences early in life. Key themes or potential markers of DSM-IV-TR (APA; 2000) threshold SAD, involved: earlier age of onset, greater interpersonal difficulties, social embarrassment, public humiliation, and negative cognitive appraisals relating to fears of potential scrutiny.

This pilot study, extended a wealth of quantitative research evidence by exploring extensive themes from earliest social memories, which may assist in delineating arbitrary diagnostic boundaries of SAD from subclinical presentations. These preliminary findings, suggest core features of SAD entail more intense negative emotions (i.e., embarrassment and humiliation) and cognitive appraisals regarding oneself and others (i.e., fear of being judged, or negatively evaluated by others). This information can assist accurate diagnosis of SAD and inform future nosologies regarding diagnostic thresholds from less severe presentations (Karlsson et al., 2010; Kollman et al., 2006; Ruscio, 2010). An increased understanding of symptomatology across the social anxiety spectrum, is important for informing accurate diagnosis of DSM-5 SAD in clinical settings, as well as systematic measurement of SAD in research (Knappe et al., 2009b; Tillfors & Furmark, 2007). Additional implications involve treatment of socially anxious individuals in the general community who would benefit from therapeutic
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

intervention, due to increased avoidance, distress, impairments, and/or comorbidities associated with subclinical symptoms (Kerns, Comer, Pincus & Hofmann, 2013). Finally, qualitative analysis of earliest social memories, generated pilot data revealing conceptually relevant themes associated with social anxiety symptom severity, supporting the use of early memory probes in homogenous populations of socially anxious participants. Future research would benefit from replicating the qualitative research design and projective techniques utilised by this study, to validate themes linked to symptoms of the social anxiety spectrum.
# Table of Contents

Declaration…………………………………………………………………………………………… ii
Acknowledgements…………………………………………………………….. iii
Abstract……………………………………………………………………………… iv
Table of Contents……………………………………………………………………………… vii
List of Tables…………………………………………………………………………………. xiii
List of Figures…………………………………………………………………………………. xiv

## Chapter 1. Introduction and Overview........................................................................... 1

1. Description and Symptoms.................................................................................. 9
2. Diagnostic Criteria of Social Anxiety Disorder................................................. 9
   2.1. Generalised and 'non-generalised' subtypes of SAD......................... 10
   2.2. Performance and social fear subtypes.................................................... 13
3. The Social Anxiety Spectrum.............................................................................. 15
   3.1. DSM-5 approach to diagnosis............................................................. 16
   3.2. Diagnostic thresholds of social anxiety.............................................. 18
4. Epidemiology of Social Anxiety Disorder....................................................... 22
   4.1. Questionnaire measures versus diagnostic interviews.................... 24
5. Onset of Social Anxiety Disorder...................................................................... 24
6. Aetiological Factors associated with Social Anxiety Disorder........................ 26
   6.1. Parental influences and family environment......................................... 27
   6.2. Peer influences and school environment............................................. 30
   6.3. Adverse conditioning experiences and traumatic events.................... 32
7. Course of Social Anxiety Disorder.................................................................. 34
8. Implications of Comorbid Social Anxiety Disorder......................................... 36
9. Summary of Chapter 2.................................................................................... 38

## Chapter 2. Social Anxiety Disorder.......................................................................... 6

1. Description and Symptoms.................................................................................. 9
2. Diagnostic Criteria of Social Anxiety Disorder................................................. 9
   2.1. Generalised and 'non-generalised' subtypes of SAD......................... 10
   2.2. Performance and social fear subtypes.................................................... 13
3. The Social Anxiety Spectrum.............................................................................. 15
   3.1. DSM-5 approach to diagnosis............................................................. 16
   3.2. Diagnostic thresholds of social anxiety.............................................. 18
4. Epidemiology of Social Anxiety Disorder....................................................... 22
   4.1. Questionnaire measures versus diagnostic interviews.................... 24
5. Onset of Social Anxiety Disorder...................................................................... 24
6. Aetiological Factors associated with Social Anxiety Disorder........................ 26
   6.1. Parental influences and family environment......................................... 27
   6.2. Peer influences and school environment............................................. 30
   6.3. Adverse conditioning experiences and traumatic events.................... 32
7. Course of Social Anxiety Disorder.................................................................. 34
8. Implications of Comorbid Social Anxiety Disorder......................................... 36
9. Summary of Chapter 2.................................................................................... 38

## Chapter 3. Theoretical Framework.......................................................................... 39

1. Clark and Wells Cognitive Model of Social Anxiety Disorder........................ 39
2. Cognitive Theories of Social Anxiety Disorder............................................... 41
3. Unconscious Schematic Processing................................................................... 42
4. Research on Cognitive Processes...................................................................... 44
5. Investigation of Cognitive Processes in the Current Study............................ 47
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.6.</td>
<td>Theoretical Orientation of this Research Study</td>
<td>48</td>
</tr>
<tr>
<td>3.7.</td>
<td>Summary of Chapter 3</td>
<td>50</td>
</tr>
<tr>
<td>4.1.</td>
<td>The Development of Early Memory Theories</td>
<td>52</td>
</tr>
<tr>
<td>4.2.</td>
<td>Early Memory as part of Autobiographical Memory</td>
<td>52</td>
</tr>
<tr>
<td>4.3.</td>
<td>Psychoanalytic and Psychodynamic Theories</td>
<td>53</td>
</tr>
<tr>
<td>4.4.</td>
<td>Object Relations and Attachment Theories</td>
<td>54</td>
</tr>
<tr>
<td>4.5.</td>
<td>Cognitive-Perceptual Theory of Early Childhood Memories</td>
<td>56</td>
</tr>
<tr>
<td>4.5.1.</td>
<td>Major unresolved issues</td>
<td>58</td>
</tr>
<tr>
<td>4.5.2.</td>
<td>Organisation of long-term autobiographical memory</td>
<td>59</td>
</tr>
<tr>
<td>4.6.</td>
<td>Memories for Adverse Social Experiences in Social Anxiety</td>
<td>62</td>
</tr>
<tr>
<td>4.7.</td>
<td>Early Memory Probes as a Projective Technique</td>
<td>63</td>
</tr>
<tr>
<td>4.8.</td>
<td>The Early Memories Procedure</td>
<td>64</td>
</tr>
<tr>
<td>4.9.</td>
<td>Empirical Evidence of Early Memory Probes in Research</td>
<td>65</td>
</tr>
<tr>
<td>4.10.</td>
<td>Empirical Research related to Memories and Social Anxiety</td>
<td>67</td>
</tr>
<tr>
<td>4.11.</td>
<td>Early Memory Probes and the Current Study</td>
<td>70</td>
</tr>
<tr>
<td>4.11.1.</td>
<td>Affect type and early memories</td>
<td>72</td>
</tr>
<tr>
<td>4.11.2.</td>
<td>Overgeneral memory and social anxiety</td>
<td>74</td>
</tr>
<tr>
<td>4.12.</td>
<td>Summary of Chapter 4</td>
<td>76</td>
</tr>
<tr>
<td>5.1.</td>
<td>Overview of the Current Study</td>
<td>77</td>
</tr>
<tr>
<td>5.1.1.</td>
<td>Early onset and negative conditioning experiences</td>
<td>79</td>
</tr>
<tr>
<td>5.1.2.</td>
<td>Investigation of earliest social memory</td>
<td>80</td>
</tr>
<tr>
<td>5.2.</td>
<td>Research Aims and Hypotheses relating to Social Anxiety Thresholds</td>
<td>82</td>
</tr>
<tr>
<td>6.1.</td>
<td>Participants</td>
<td>86</td>
</tr>
<tr>
<td>6.2.</td>
<td>Sampling Methods and Procedures</td>
<td>87</td>
</tr>
<tr>
<td>6.3.</td>
<td>Selection Measures for Social Anxiety Groups</td>
<td>89</td>
</tr>
<tr>
<td>6.3.1.</td>
<td>Social phobia screening questionnaire (SPSQ)</td>
<td>89</td>
</tr>
<tr>
<td>6.3.1.1.</td>
<td>Psychometric Properties of the SPSQ</td>
<td>90</td>
</tr>
<tr>
<td>6.3.2.</td>
<td>Companion scales: SIAS and SPS</td>
<td>91</td>
</tr>
<tr>
<td>6.3.2.1.</td>
<td>Psychometric properties and validity of the SIAS and SPS.............</td>
<td>92</td>
</tr>
<tr>
<td>6.3.3.</td>
<td>Depression anxiety and stress scales (DASS)</td>
<td>94</td>
</tr>
<tr>
<td>6.3.3.1.</td>
<td>Psychometric Properties of the DASS</td>
<td>95</td>
</tr>
</tbody>
</table>
6.4. Selection Criteria for Social Anxiety Threshold Groups ........................................ 96
  6.4.1. SAD group criteria .................................................................................................. 96
  6.4.2. Subclinical social anxiety group criteria ................................................................. 98
  6.4.3. Control group criteria ............................................................................................. 99
  6.4.4. Demographic characteristics of social anxiety threshold groups ............... 100
6.5. Research Design ...................................................................................................... 104
6.6. Quantitative and Qualitative Research Methods .................................................. 107
  6.6.1. Pilot studies, statistical power, sample, and effect size ..................................... 108
  6.6.2. Statistical analysis of early memory codes ............................................................ 111
6.7. Projective Technique: Earliest Social Memory Probe .......................................... 112
  6.7.1. Scoring thematic data using the early memories procedure .............................. 113
  6.7.2. Validity of the early memories procedure ............................................................. 114
6.8. Thematic Analysis of Qualitative Data .................................................................... 115
  6.8.1. The comprehensive early memory scoring system (CEMSS) ................. 116
  6.8.2. Scoring guidelines for tone, affect type, content and characters ............... 116
  6.8.3. Psychometric properties of the CEMSS ............................................................... 118
6.9. Scoring Procedures for Coding Early Memories ..................................................... 119
  6.9.1. Inter-rater reliability of early memory codes ....................................................... 120
  6.9.2. Affect, content and character codes ...................................................................... 125
6.10. Procedure .................................................................................................................. 131

Chapter 7. Results ............................................................................................................ 133
  7.1. Data Screening .......................................................................................................... 133
  7.2. Preliminary Analyses ................................................................................................. 134
    7.2.1. Chi-square and assumptions testing ................................................................. 134
    7.2.2. Analysis of variance assumptions testing ......................................................... 135
  7.3. Scale Properties ........................................................................................................ 136
  7.4. Descriptive Statistics for Social Anxiety Threshold Groups .............................. 136
  7.5. Thematic Content from Earliest Social Memories of Social Anxiety Groups .... 139
  7.6. Hypothesis 1: Affective Tone of Earliest Social Memory .................................. 140
  7.7. Hypothesis 2: Tone of Interactions with Characters ............................................. 144
    7.7.1. Hypothesis 2: Interactions with mother (H2a) and father (H2b) .......... 148
    7.7.2. Hypothesis 2c: Interactions with peers ......................................................... 151
  7.8. Research Question 1: Affect Categories from Earliest Social Memory .......... 154
  7.9. Main Affect Categories associated with Social Anxiety Threshold Groups ...... 156
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

7.9.1. Positive and neutral affect................................................................. 156
7.9.2. Anxiety, distress, and fear................................................................. 158
7.9.3. Self consciousness, embarrassment and humiliation...................... 161
7.9.4. Emotional pain.................................................................................. 163
7.10. Negative Affect Categories with Low Frequencies.............................. 165
7.10.1. Anger, frustration and hatred........................................................... 165
7.10.2. Depression and guilt-shame............................................................... 166
7.11. Summary of Affect for Social Anxiety Threshold Groups.................. 167
7.12. Research Question 2: Content and Process Themes from Early Memories.. 169
7.13. Positive Content and Process Themes associated with Social Anxiety.... 171
7.14. Negative Content and Process Themes associated with Social Anxiety.... 175
7.15. Summary of Content and Process Themes for Social Anxiety Groups.... 180

Chapter 8. Discussion......................................................................................... 182
8.1. Overview of Findings for Social Anxiety Symptom Presentations.......... 183
8.2. Overall Tone of Earliest Social Memory................................................. 184
8.3. Interactions with Other People from Earliest Social Memory................ 186
8.3.1. Negative interactions with parents...................................................... 188
8.3.2. Negative interactions with peers.......................................................... 195
8.4. Peer Rejection Experiences................................................................. 196
8.5. Emotional Pain and Devaluing Interpersonal Relationships.................. 201
8.6. Unsuccessful Mastery of Socials Goals.................................................. 205
8.7. Anxious Arousal in Social or Performance Situations............................ 208
8.8. Self-Consciousness, Embarrassment or Humiliation.............................. 211
8.9. Fear of Negative Evaluation ................................................................. 214
8.10. Interpretation of Earliest Social Memory according to Bruhn’s CPT........ 220
8.11. Need Attainment in Early Life for Social Anxiety and Control Groups.... 222
8.11.1. Nurturance and safety................................................................. 223
8.11.2. Affiliation, achievement, and autonomy.......................................... 225
8.11.3. Summary of core issues associated with current social anxiety...... 229
8.12. The Social Anxiety Spectrum............................................................. 229
8.12.1. Trajectories of subclinical social anxiety......................................... 236
8.12.2. Trajectories of clinical SAD.............................................................. 245
8.13. Findings According to Cognitive Theories and Schematic Processes........ 253
8.14. Diagnostic and Treatment Implications of the Social Anxiety Spectrum.... 258
8.15. Application of Findings in Clinical Practice with Socially Anxious Clients
   8.15.1. Accessing unconscious information in therapy
   8.15.2. Benefits of early memories in therapy for social anxiety
   8.15.3. Early onset and intervention for children and adolescents
8.16. Strengths and Limitations
   8.16.1. Projective and self-report measures
   8.16.2. Sampling characteristics
8.17. Suggestions for Future Research
8.18. Conclusion

References

Appendix A: Ethics Approval
Appendix B: Consent Information
Appendix C: Questionnaire Battery
Appendix D: REP forms and Flyers
List of Tables

Table 1. Proportion of Men and Women in Social Anxiety Threshold Groups…………………….100
Table 2. Summary of Demographics for Social Anxiety Threshold Groups……………………..101
Table 3. Trait Anxiety and Depression reported by Social Anxiety Groups……………………..103
Table 4. Frequencies and Cohens Kappa for Affect Categories Scored for IRR………………122
Table 5. Frequencies and Cohens Kappa for Content-Process Themes Scored for IRR……….124
Table 6. Affect Categories and Severity Sub-codes ………………………………………………….126
Table 7. Negative Content and Process Codes comprising the Final Scoring Form……………128
Table 8. Positive Content and Process Codes comprising Final Scoring Form………………129
Table 9. Characters scored from Earliest Social Memories……………………………………130
Table 10. Means, Standard Deviations and Ranges of Scores on the SIAS…………………..137
Table 11. Means, Standard Deviations and Ranges of Scores on the SPS …………………………….138
Table 12. Rating of Overall Tone from Earliest Memory of being in a Social Situation………141
Table 13. Narrative Examples of Earliest Memories Scored for Negative Affect……………143
Table 14. Narrative Examples of Earliest Memories Scored for Neutral and Positive Affect.144
Table 15. Tone of Social Interactions with Characters from Earliest Social Memory………..145
Table 16. Negative and Positive Interactions with Specific Characters…………………………147
Table 17. Case Examples of Negative Interactions with Parents………………………………….150
Table 18. Case Examples of Negative Interactions with Peers……………………………………152
Table 19. Case Examples of Positive Interactions with Peers……………………………………153
Table 20. Positive, Negative, and Neutral Affect from Earliest Social Memory………………155
Table 21. Case Examples of Positive Affect Categories from Earliest Social Memory……….157
Table 22. Narrative Examples of Earliest Social Memory containing Anxious Themes………..159
Table 23. Narrative Examples of Earliest Social Memory with Themes of Embarrassment…162
Table 24. Case Examples of Earliest Social Memory with themes of Emotional Pain……….164
Table 25. Positive and Negative Content and Process Themes……………………………………170
Table 26. Case Examples of Themes related to Interactions with Others………………….……173
Table 27. Case Examples of Earliest Social Memory involving Successful Mastery……….175
Table 28. Case Examples of Earliest Social Memory involving Failure of Social Goals……….176
Table 29. Case Examples of Earliest Social Memory involving Rejection…………………….178
Table 30. Case Examples of Earliest Social Memory involving Fear of Negative Evaluation179
List of Figures

Figure 1. Visual map of research design and thematic content analysis of qualitative data……106
Figure 2. Main Affect Categories from Earliest Social Memories for Social Anxiety Group…168
Figure 3. Main Content and Process Themes from Earliest Social Memory……………………181
Chapter 1: Introduction and Overview

Social Anxiety Disorder (SAD) involves intense fear or anxiety in relation to being scrutinised, embarrassed, or noticeably anxious in social situations (APA, 2013). It is a common condition in the general population, which presents in varying degrees of severity that correspond to substantial distress and psychosocial impairment (Brunello et al., 2000; Iancu et al., 2006; Merikangas, Avenevoli, Acharyya, Zang & Angst, 2002; Ruscio et al., 2008). In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), only one criterion distinguishes SAD from subclinical presentations below diagnostic thresholds. It specifies that symptoms must cause “significant distress, and/or impairment in normal areas of daily functioning” to warrant a diagnosis (APA, 2013). However, due to limitations associated with rigid categorical classification of psychological disorders (APA, 2013), extensive research studies have examined whether classification of SAD best represents categorical (i.e., characteristically distinct) or dimensional distinctions (i.e., spectrum disorder). These empirical investigations typically suggest unclear boundaries between diagnostic thresholds and report that social anxiety is best conceptualised as a spectrum disorder (Aderka, Nickerson & Hofmann, 2012; Kollman et al., 2006; Ruscio, 2010).

Nonetheless, research is still far from complete in understanding specific profiles that distinguish clinical from subclinical presentations of social anxiety (Ruscio et al., 2008; Weeks, Carleton, Asmundson, McCabe & Antony, 2010a). Therefore, the current study intended to add to evidence, regarding symptomatic and vulnerability factors that constitute the social anxiety spectrum. The basis of this research derives from various theoretical perspectives, which contend individuals’ perceptions of themselves, others, and the world, are uniquely influenced by early childhood experiences, reflected in memories of personally meaningful events (Beck, 1996; Bruhn, 1990). More specifically, cognitive theories suggest memories of past social encounters
influence maladaptive beliefs, assumptions, and schemas regarding the self and the social world (Beck, Rush, Shaw & Emery, 1985; Clark, 2005; Clark & Wells, 1995; Rapee & Heimberg, 1997). These schemas serve as templates for guiding information processing and are thought to operate outside of conscious awareness. Moreover, particular schemas are activated by relevant environmental cues or stressors. Therefore, of interest to this study was the belief that schematic processing shapes personality functioning and psychological disorders (Beck, 1996; Bruhn, 1990; Bruhn & Last, 1982; Young, 1999), including SAD (Calvete, Orue & Hankin, 2013; Pinto-Gouveia, Castilho, Galhardo & Cunha, 2006).

To date, most research investigating specific cognitive factors have predominantly utilised self-report questionnaires (Clark, 2001; Morgan, 2010). However, critics suggest questionnaire measures are restricted to assessing conscious thoughts and beliefs rather than potentially unconscious information revealed through schematic processing (Chambless & Hope, 1996; Clark, 2001; Clark & Purdon, 1995). Thus, studies assessing schemas relevant to social anxiety should employ social threat tasks as a means of activating unconscious cognitive processes, which operate outside of awareness and may not be accessible to self-report (Clark & Purdon, 1995, Nisbett & Wilson, 1977; Wenzel & Cochran, 2006). Subsequently, the premise that unconscious schematic processing can be accessed through accounts of early childhood memories, is noteworthy to this study’s research design (Bruhn, 1990; Bruhn & Last, 1982; McGinn & Young, 1996).

In particular, Bruhn’s Cognitive Perceptual Theory (CPT) of personality (1990) suggests important projective information related to schematic processing of core problems and present concerns, is embedded in the structure of early memories. Therefore, CPT was applied as a framework for utilising early memory probes as a projective technique, to elicit thematic content from schematic processing of social situations (Bruhn, 1990). It was anticipated, that probing
memories of personally meaningful events would activate unconscious schemas of social
situations and capture the essence of historical influences on current socially anxious concerns
(Bruhn, 1995; Bruhn, 1990; Bruhn & Last, 1982; Fowler, Hilsenroth & Handler, 2000), for
individuals with clinical and subclinical social anxiety.

Following from this reasoning, memory probes adapted for this study generated self-
narratives for participants representing different points of the social anxiety spectrum, with the
intent of exploring thematic content related to early social situations. Several empirical studies
suggest that individuals with SAD and subclinical social anxiety recall memories containing
more negative themes denoted by fear, anxiety, self-consciousness (Field, Psychol & Morgan,
2004; Stopa, Denton, Wingfield & Taylor, 2013; Wenzel & Cochran, 2006), embarrassment, and
humiliation (Anderson, Goldin, Kurita & Gross, 2008; Hackmann, Clark & McManus, 2000),
compared to non-socially anxious controls. Recent investigations of autobiographical memories
in clinical samples of SAD patients, also found memories of past social events depicted themes
associated with core features of SAD, such as social evaluative content (Witheridge, Cabral &
Rector, 2010), self-critical appraisals, and negative self-judgments (Anderson et al., 2008; Stopa
et al., 2013). However, no known study to date has explored the content of memories between
clinical, subclinical, and non-socially anxious samples representative of the social anxiety
spectrum.

In view of the fact that theoretical contentions of cognitive models for SAD, propose
memories of past events as important influences in the development and maintenance of social
anxiety (Clark, 2005; Clark & Wells, 1995; Rapee & Heimberg, 1997), it seems important to
explore similarities and differences in themes recalled from earliest social memories, for
individuals who develop clinical and subclinical symptoms of social anxiety, relative to controls
(Rapee & Spence, 2004). Subsequently, projective tests were utilised to probe participants’
earliest memory of being in a social situation, to elicit self-narratives revealing of meaningful information and potential clues associated with social anxiety symptomatology. Thematic content from memory narratives were explored for potential indicators representing common and/or distinct social experiences associated with symptom profiles of the social anxiety spectrum. Therefore, this pilot study intended to extend empirical evidence regarding classification of social anxiety, by exploring meaningful themes from earliest social memories of participants with self-reported social anxiety ranging from normal to pathological.

Conceptualisation of this condition as representing dimensional cut-offs along a continuum of severity (i.e., spectrum disorder) or categorically distinct group (i.e., SAD), is imperative for theory to account for the aetiology of SAD and subclinical symptom presentations (Kollman et al., 2006; Ruscio et al., 2008; Tillfors & Furmark, 2007). This information is essential for accurate diagnosis, as well as future revisions of the DSM in appraising dimensional classifications, which can assist identification of client groups that would benefit from treatment. Overall, a more complete understanding of how subclinical social anxiety differs from clinically diagnosable symptoms, can inform efficient treatment implications for socially anxious individuals in the general community who experience distress in everyday social and/or performance situations (APA, 2013; Van Roy, Kristensen, Groholt & Clench-Aas, 2009; Ruscio, 2010).

The following introductory chapters of this dissertation, reviews literature relating to: social anxiety symptomatology, classification as a spectrum disorder, diagnostic thresholds, epidemiology, treatment, comorbidity, and aetiological factors associated with the onset of SAD (Chapter 2). The theoretical framework of this study is outlined in Chapter 3 (cognitive theories) and Chapter 4 (early memory theories). Chapter 4 also presents empirical evidence from social anxiety and early memory research. The rationale behind exploring thematic content from
earliest social memories to identify diagnostic boundaries of the social anxiety spectrum, is discussed in Chapter 5. This chapter also provides an overview of research questions and hypotheses, informed by the social anxiety literature, early memory theories and research, and clinically relevant themes prescribed by an early memory scoring system (CEMSS-R; Last & Bruhn, 1992). In Chapter 5, the aim of this pilot study is described as exploring meaningful themes from early memories, revealing of potential clues associated with social anxiety symptom severity.

The methodology implemented by this study is presented in Chapter 6. It outlines demographic information, sampling procedures, and selection measures used to determine selection criteria for social anxiety threshold groups comprising this study. The memory probe adapted for this study’s homogenous sample of socially anxious participants, is described according to early memory theories and research. The qualitative research design and thematic analysis of emerging themes from early memory narratives are explained, including details of procedures for refining a validated scoring system and developing new codes relevant to this sample. The method section also outlines the process of conducting inter-rater reliability for a proportion of early memory data. Results relating to research questions and hypotheses are presented in Chapter 7, with case examples demonstrating categorical differences and similarities of themes identified from social anxiety threshold groups’ earliest social memories.

Chapter 8 explains preliminary findings of themes, in terms of potential trajectories of subclinical and clinical social anxiety relative to non-socially anxious controls. The importance of these findings are presented in relation to; broadening understanding of diagnostic features and symptoms representing different points of the social anxiety spectrum, as well as diagnostic and treatment implications that focus on reclassification of social anxiety as a spectrum disorder. Therapeutic benefits of using early memories to accurately identify socially anxious individuals
who would benefit from treatment are also discussed. The strengths and limitations of the current study are presented, before suggestions for future research investigating social anxiety symptom severities.

Chapter 2: Social Anxiety Disorder

This chapter introduces descriptive and symptomatic features of SAD, as well as diagnostic criteria specified by the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) (APA, 2000) and changes identified in the newest edition of the DSM-5, which was released subsequent to commencing this study (APA, 2013). Following this, empirical evidence for conceptualising SAD as a spectrum disorder is discussed according to recent literature suggesting social anxiety is best represented along a continuum of severity, distress, and impairment, as opposed to a categorically distinct entity. Epidemiological research is presented before introducing SAD as an early onset disorder, which develops during crucial developmental periods in childhood or adolescence. Potential predisposing factors, cognitive vulnerabilities, and traumatic conditioning events are highlighted as important aetiological factors that influence the development of the disorder. The chapter concludes with information regarding the chronic course of SAD and negative implications of comorbidities associated with the disorder.

2.1. Description and Symptoms

The term Social Phobia (SP) was used to describe SAD in early editions of the DSM and subsequent literature, although the term SAD appeared in the fourth edition and continued to DSM-5 (APA, 2013). Subsequently, the term SAD has been increasingly used in empirical and clinical practice to describe this condition (APA, 2013; Bögels et al., 2010; Brunello et al., 2000; Elizabeth et al., 2006; Hidalgo, Barnett & Davidson, 2001) and will be used throughout this
thesis, except when referring to data that focused specifically on subclinical (i.e., high social anxiety), or non-clinical social anxiety in community populations. Social anxiety disorder is typically characterised by a fear of embarrassment, humiliation, or negative evaluation in social contexts (APA, 2013; Beidel & Turner, 2007; Brunello et al., 2000; Hidaglo et al., 2001; Hofmann, Heinrichs & Moscovitch, 2004; Iancu et al., 2006; Ruscio et al., 2008). Individuals with SAD typically feel self-conscious, inferior, worthless, or ashamed, and are hypersensitive to criticism or rejection from other people, thus have difficulty being assertive in social interactions (Alden & Taylor, 2004; Chartier, Hazen & Stein, 1998; Clark, 2005; Cunha, Soares & Pinto-Gouveia, 2008; Helsel, 2005; Stein & Stein, 2008).

Further to this, SAD has been associated with self-criticism, a destructive form of negative self-evaluation and scrutiny (Cox et al., 2000; Cox, Fleet & Stein, 2004; Cox, Walker, Enns & Karpinski, 2002; Naragon-Gainey & Watson, 2011). Thus, individuals with SAD view themselves as undesirable and fear that they will be revealed to others as boring, stupid, ‘crazy’, weak, or unlikeable (APA, 2013; Clark, 2005; Stein & Gorman, 2001; Stein & Stein, 2008). As a result of the aforementioned symptom presentation, individuals with SAD become distressed by the potential risk of inadequate performance in social interactions, presenting as nervous or noticeably embarrassed, and/or showing observable signs of anxiety (e.g., blushing, trembling voice or hands) in front of others (Furmark, 2002; Neal & Edelmann, 2003; Rosenberg, Ledley & Heimberg, 2010). In feared situations, individuals with SAD experience physiological symptoms of anxiety, including trembling, sweating, blushing, increased heart rate, palpitations, nausea, diarrhoea, or panic attacks, and become concerned about appearing weak, anxious, or socially inept (Bögels et al., 2010; Brunello et al., 2000; Clark, 2005; Neal & Edelmann, 2003; Rosenberg et al., 2010; Stein & Stein, 2008).
Subsequently, anticipation of or exposure to social interactions or performance situations are severely agonising and if unavoidable, endured with intense anxiety and distress (Brunello et al., 2000; Neal & Edelmann, 2003; Tillfors & Furmark, 2007; Ruscio et al., 2008). Commonly feared and avoided situations typically involve; social gatherings, parties, meetings, initiating and maintaining conversations, particularly with the opposite sex, dealing with authority figures (social interactional situations), or being observed writing, eating/drinking, or speaking in public (performance situations) (APA, 2013; Faravelli et al., 2000; Furmark, 2002; Iancu et al., 2006; Knappe et al., 2011; Neal & Edelmann, 2003; Vriends, Becker, Meyer, Michael & Mograf, 2007). The majority of individuals with SAD fear more than one situation, with more feared situations associated with increased symptom severity and impairment (Bögels et al., 2010; Faravelli et al., 2000; Knappe et al., 2011; Van Roy et al., 2009; Ruscio et al., 2008; Stein et al., 2010; Wittchen, Fuetsch, Sonntag, Müller & Leibowitz, 2000). Thus, given the nature of contemporary society in which social interactions are impossible to avoid, SAD can lead to significant restrictions in one’s lifestyle and life decisions (Iancu et al., 2006; Stein & Gorman, 2001).

In particular, SAD impacts upon various areas of functioning including: educational attainment (Brunello et al., 2000; Furmark et al., 1999; Iancu et al., 2006; Wittchen et al., 2000), employment and finances (Fehm, Beeso, Jacobi & Fiedler, 2008; Furmark, 2002; Iancu et al., 2006; Lampe, Slade, Issakidis & Andrews, 2003), social life (Iancu et al., 2006; Kessler, 2003; Merikangas et al., 2002; Ruscio et al., 2008), friendships and relationships (Brunello et al., 2000; Fehm et al., 2008; Iancu et al., 2006; Kessler, 2003; Lampe et al., 2003; Ruscio et al., 2008), and consequent lack of social support (APA, 2013; Furmark et al., 1999; Olfson et al., 2000). Furthermore, individuals with SAD are more often single, separated or divorced (Chambless, Fydrich & Rodebaugh, 2008; Lampe et al., 2003), which is speculated to be the result of severe
impairments associated with SAD, in terms of difficulties and avoidance in social interactions and situations (Brunello et al., 2000; Stein & Gorman, 2001).

Therefore, it is not surprising that individuals with SAD commonly report high levels of subjective distress (Merikangas et al., 2002; Stein & Gorman, 2001) and diminished quality of life (Fehm et al., 2008; Hummelen, Wilberg, Pedersen & Karterud, 2007; Iancu et al., 2006; Merikangas et al., 2002; Wittchen & Fehm, 2003). This is especially apparent in areas of general health, mental health, social functioning, role limitations (Wittchen et al., 2000), encountering fewer positive life events, and diminished positive emotions (Farmer & Kashdan, 2012; Kashdan et al., 2013; Kashdan & Steger, 2006; Nargon-Gainey & Watson, 2011).

2.2. Diagnostic Criteria of Social Anxiety Disorder

The current study utilised DSM-IV-TR (APA, 2000) criteria for identifying cases of clinical SAD, described by a “marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing” (Criterion A) (APA, 2000, p. 456). According to DSM-IV-TR, exposure to feared situations almost always incites anxiety (Criterion B), the individual must see the fear as unreasonable or excessive (Criterion C), avoid feared situations, or experience anxiety or distress in anticipation of the event (Criterion D). It must also significantly interfere with areas of the individual’s life and/or cause marked distress (Criterion E). The fear or avoidance must not be the result of a general medical condition or due to the direct effect of any substance (Criterion G) (APA, 2000; Brunello et al., 2000; Hidaglo et al., 2001).

During the course of this study, publication of the DSM-5 identified minor changes to diagnostic criteria. Core features of the disorder remained the same however recognition of
social fears as excessive or unreasonable is no longer required for diagnosis. Instead, the fear or anxiety must be disproportionate to the actual threat (APA, 2013). Further to this, the ‘Generalised’ specifier, which was introduced in DSM-III-R and carried on to DSM-IV-TR, was previously used to identify individuals’ who feared ‘most’ social situations (APA, 2000). However, guidelines for the exact number and type of social fears that constituted ‘most’ situations were not explicitly defined, proving problematic for systematic measurement of SAD in research, and accurate diagnosis in clinical settings (Furmark et al., 1999; Hoffman et al., 2004; Knappe et al. 2011; Wittchen & Fehm, 2003). Therefore, the generalised specifier was replaced in the DSM-5 with a ‘Performance only’ specifier, to be applied “if the fear is restricted to speaking or performing in public” (APA, 2013. p. 203).

These revisions from DSM-IV-TR to DSM-5, did not affect classification of the SAD group in the current study. Participants comprising the sample in the present study, who reported isolated speaking fears in the absence of at least moderate distress in two other social or performance situations, did not meet selection criteria for group inclusion for clinical SAD (Refer to Section 2.2.2. Performance and social fear subtypes. p.13). Moreover, current conceptualisations of SAD in DSM-5, highlight the need to delineate individuals whose fears reflect more general social situations to those with pure speaking or performance fears, and also demonstrate important implications of empirical investigations in shaping diagnostic criterion (APA, 2013; Kerns et al., 2013).

2.2.1. Generalised and 'non-generalised' subtypes of SAD. Despite SAD being delineated into a generalised subtype in the DSM-IV-TR, it was only inferred that others with more limited social or performance fears (e.g., only public speaking) comprised a non-generalised subtype (Cox, Clara, Sareen & Stein, 2008; Hudson & Rapee, 2000; Rosenberg et al., 2010). Thus, varied terminology has been used within the literature to describe this subset of
individuals who fear limited but not most social situations. Commonly referred to labels include but are not limited to: non-generalised, discrete, specific, circumscribed, or performance subtypes (Tillfors & Furmark, 2007). For the purpose of this review, the term non-generalised SAD (NGSAD) will be used to describe empirical findings of individuals with SAD who feared limited social or performance situations, but did not meet criteria for the generalised subtype.

However, due to variations in operational definitions, and subjectively determined cut-off criteria used to specify a number of social fears that delineate generalised from NGSAD, direct comparisons across studies are difficult (Bögels & Stein, 2009; Carter & Wu, 2010; Cox et al., 2008; Hofmann et al., 2004; Kerns et al., 2013). For instance, the number of feared situations used to categorise NGSAD across studies, has ranged between one or two (Tillfors & Furmark, 2007) and up to six feared situations (Cox et al., 2008). Nonetheless, several empirical investigations cited below explored the value of classifying SAD subgroups according to numbers of social fears.

In keeping methodological differences in mind, findings consistently showed generalised SAD to be associated with a higher incidence of social fears than NGSAD, with increased number of feared situations related to more severe distress and impairment (Bögels et al., 2010; Carter & Wu, 2010; Cox et al., 2008; Faravelli et al., 2000; Knappe et al., 2011; Van Roy et al., 2009; Ruscio et al., 2008; Stein et al., 2010; Wittchen et al., 2000). Evidence also suggested stronger associations for generalised than NGSAD, in terms of greater fear of negative evaluation and humiliation, increased symptom severity, avoidance, social skills deficits, and/or functional impairment (Brunello et al., 2000; Heimberg et al., 2000; Kerns et al., 2013; Rosenberg et al., 2010; Tillfors & Furmark, 2007; van Velzen, Emmelkamp & Scholing, 2000; Wittchen & Fehm, 2003).
Furthermore, generalised SAD is found to have an earlier age of onset than NGSAD (Bögels et al., 2010; Heimberg et al., 2000; Hirschfield-Becker, 2010), as well as being associated with higher levels of introversion (van Velzen, Emmelkamp & Scholing, 2000), shyness, neuroticism, and lower extraversion (Norton, Cox, Hewitt & MacLeod, 1997; Stemberger et al., 1995). However, comparisons between generalised and non-generalised subtypes have provided mixed evidence regarding differences in neuroticism, symptom severity, distress, avoidance, and additional impairment or comorbidities (Beidel et al., 2010; Carter & Wu, 2010; Tillfors et al., 2004; van Velzen et al., 2000).

For instance, Aderka, Nickerson and Hofmann (2012) controlled for symptom severity in a large treatment seeking sample (N=202) and found no significant differences between generalised and NGSAD, in relation to depression, general anxiety, or feared social situations. Thus, findings were interpreted as evidence that generalised and non-generalised subgroups come from the same underlying population and can be differentiated based on quantitative gradients of severity. Accordingly, generalised SAD represents a more severe and debilitating variant of the disorder (Aderka et al., 2012; Bögels et al., 2010; Van Roy et al., 2009; Ruscio et al., 2008; Stein et al., 2010; Wittchen et al., 2000), and no clear demarcation distinguishes generalised from NGSAD (Ruscio et al., 2008; Stein et al., 2010). Therefore, DSM-IV-TR subtype classification of SAD based on numbers of social fears was criticised for its lack of categorical distinctions and subsequent utility of the generalised specifier (Bögels & Stein, 2009; Kerns et al., 2013; Ruscio et al., 2008; Vriends et al., 2007).

Consequently, an additional line of research aimed to delineate SAD subtypes based on types of social evaluative fears across different situations (i.e., social interactional vs. performance) (Bögels et al., 2010; Carter & Wu, 2010; Knappe et al., 2011; Ruscio et al., 2008; Stein & Stein, 2008). A wealth of empirical evidence revealed generalised SAD is associated
with a higher incidence of mixed fears, involving social interactions, being observed, and/or performance situations, whereas NGSAD is more often characterised by circumscribed performance fears (Bögels et al., 2010; Carter & Wu, 2010; Cox et al., 2008; Knappe et al., 2011; Ruscio et al., 2008).

2.2.2. Performance and social fear subtypes. Several studies provide evidence that categorical differences exist between social interactional or evaluative fears (e.g., conversing with other people) and exclusive performance or speaking fears (Bögels et al., 2010; Heimberg, Stein, Hiripi & Kessler, 2000; Kessler, Stein & Berglund, 1998; Knappe et al., 2011; Sareen, Chartier, Paulus & Stein, 2006; Stein & Deutsch, 2003). More specifically, isolated performance or speaking fears are reported as less impairing, persistent, and associated with fewer comorbidities than isolated interaction or social evaluative fears (Kessler et al., 1998; Knappe et al., 2011; Sareen et al., 2006). Interestingly, performance fears are linked to; later age of onset than social interactional fears, and weaker associations with shy or behaviourally inhibited temperaments, which typically indicate potential vulnerabilities toward developing SAD (Heimberg et al., 2000; Knappe et al., 2011; Stemberger, Turner, Beidel & Calhoun, 1995).

Thus, despite sharing the same concern of being negatively judged or scrutinised, individuals with isolated speaking or performance anxieties appear categorically distinct from individuals with more generalised SAD, who fear both interaction and performance situations (Bögels et al., 2010; Faravelli et al., 2000; Knappe et al., 2011; Stein & Deutsch, 2003). These findings discriminate interaction from performance fears and bear resemblance to generalised and non-generalised subgroups respectively (Cox et al., 2008; Kessler et al., 1998; Knappe et al., 2011). However, a controversial issue relating to performance fears is the status of public speaking anxiety in the context of diagnosing SAD (Blöte, Kint, Miers & Westenberg, 2009; Eng, Heimberg, Coles, Schneier & Leibowitz, 2000). While most individuals with SAD fear
public speaking, some individuals with SAD report speaking in public to be their only fear (Furmark et al., 1999; Furmark, 2002; Knappe et al., 2011; Neufeld, Swartz, Bienvenu, Eaton & Cai, 1999).

Moreover, public speaking fears are widespread among non-clinical individuals within the general community and consistently reported as the most common social fear experienced by individuals with SAD (Furmark, 2002; Iancu et al., 2006; Knappe et al., 2011; Ruscio et al., 2008; Stein, Walker & Forde, 1996; Tillfors & Furmark, 2007; Vriends et al., 2007; Wittchen & Fehm, 2003). Therefore, some researchers have questioned whether isolated speaking fears warrant diagnosis of SAD, or could be better classified as a specific phobia (Blöte et al., 2009; Eng et al., 2000; Knappe et al., 2011). One argument for diagnosing public speaking anxiety as SAD relates to evidence suggesting individuals who fear public speaking situations experience similar cognitions to those with more generalised social fears, including fear of embarrassment, one’s mind going blank, saying something foolish, trembling, shaking, or showing other signs of anxiety (Bögels et al., 2010; Rapee & Heimberg, 1997). Furthermore, Neufeld et al. (1999) found individuals with sole public speaking anxiety and DSM-IV diagnosis of SAD were categorically similar in relation to various risk factors, including age, gender, race, education, marital status, or household income.

Alternatively, several empirical investigations report significant differences between public speaking anxiety and general social interaction fears characteristic of SAD. In particular, findings suggest that public speaking anxiety differs from generalised social fears in terms of less impairment, reduced persistence, lower comorbidity rates, higher physiological arousal, and later age of onset (Bögels et al., 2010; Blöte et al., 2009; Kessler et al., 1998; Knappe et al., 2011). Further to this, with the exception of public speaking, social fears rarely occur in isolation (Kerns et al., 2013; Knappe et al., 2011). Therefore, Blöte et al. (2009) raised an important issue
for research investigating typical social interaction fears associated with SAD and the suitability of combining public speaking anxiety with more widespread social fears as one experimental group. This was important to consider when determining cases representative of clinical SAD in the current study. As such, participants who reported isolated fear or distress in public speaking situations were not included in the clinical subgroup (Refer to Section 6.4.1. SAD group criteria).

2.3. The Social Anxiety Spectrum

A common perception within the literature, is that social anxiety in the general population reflects a normally distributed variable from normality to pathology. The social anxiety spectrum represents non-impairing shyness at the lower end of the continuum, followed by normal social anxiety (i.e., mild social fears and avoidance), subclinical social anxiety, NGSAD, generalised SAD, and Avoidant Personality Disorder (APD), at the most extreme end of the spectrum (Aderka et al., 2012; Brunello et al., 2000; Dell’Osso et al., 2003; Furmark, 2002; Rapee & Spence, 2004; Retew, 2000). A recently debated issue, is whether classification of SAD represents arbitrary cut-offs along quantitative gradients of severity, or a categorically distinct construct with identifiable features that differentiate clinical from non-clinical groups (Carter & Wu, 2010; Tillfors & Furmark, 2007; Van Roy et al., 2009; Ruscio, 2010; Ruscio et al., 2008; Weeks, Norton & Heimberg, 2009; Weeks et al., 2010).

Several empirical studies support conceptualisations of social anxiety as a spectrum disorder, based on findings that increasing symptomatology is associated with: greater number of feared situations, increased symptom severity, distress, avoidance, impairment, and/or incidence of comorbidity (Chartrand, Cox, El-Gabalawy & Clara, 2011; Furmark et al., 1999; Van Roy et al., 2009; Ruscio et al., 2008). Such evidence is normally interpreted to reflect quantitative indicators of increased severity between subclinical to clinical social anxiety, non-generalised to
generalised SAD, and SAD to APD (Aderka et al., 2012; Chambless et al., 2008; Fehm et al., 2008; Filho et al., 2010; Furmark, 2002; Ruscio, 2010; Stein et al., 2010).

Consistent with the continuum hypothesis, several studies report that individuals with varied social anxiety symptom severity are characteristically similar. More specifically, comparisons between generalised and NGSAD (Bögels et al., 2010; Kachin, Newman & Pincus, 2001), and SAD with APD (Hummelen et al., 2007), have shown each of these variants of social anxiety presentations are associated with the same kinds of core interpersonal problems. Individuals with symptoms at the upper extreme of the social anxiety spectrum (i.e., SAD and APD), also share common genetic vulnerabilities, aetiological pathways and personality traits (Hummelen et al., 2007; van Velzen et al., 2000).

2.3.1. DSM-5 approach to diagnosis. Subsequent to DSM-5, disorders were classified as “categorically separate from health and other disorders” (APA, 2013. p. 12). This categorical classification system, implied that individuals who warrant diagnosis of a particular disorder, display distinguishable characteristic features from psychologically healthy individuals (Brown, Campbell, Lehman, Grisham & Mancill, 2001; Knappe et al., 2013; Kollman et al., 2006; Merikangas et al., 2002; Van Roy et al., 2009; Ruscio, 2010). However, psychologists, theorists and researchers, typically conceptualise psychological attributes as continuous or dimensional constructs that differ in degree of severity, rather than type (Clark, 2001; Hofmann et al., 2004). Thus, adherence to applying categorical cut-offs to clinical diagnoses is problematic, with current diagnostic guidelines limiting the ability to identify and prescribe treatment recommendations for socially anxious individuals without a diagnosis (Brown et al.,
Nevertheless, recent revisions of the diagnostic manual have attempted to sustain continuity with previous diagnostic criteria where possible. The DSM-5 maintains categorical classification of SAD as either present or absent (Kerns et al., 2013; Kollman et al., 2006), with no specification of boundaries for separating normal from pathological symptom presentations, beyond criterion that “the disorder causes clinically significant distress or impairment” (APA, 2013. p. 21). However, the DSM-5 shifted its emphasis on diagnosis from rigid utilisation of categorical systems, to encourage dimensional approaches for conceptualising disorders (APA, 2013). According to dimensional classifications, continuous variations or extremes in cognitive, emotional, or behavioural functioning distinguish features of disorders from healthy psychological functioning (APA, 2013; Kerns et al., 2013; Kollman et al., 2006; Merikangas et al., 2002; Ruscio, 2010).

Moreover, individuals have been shown to move up and down the social anxiety continuum over time (Karlsson et al., 2010; Knappe et al., 2013; Wittchen et al., 2000). This fluctuation is especially apparent for individuals with subclinical and clinically significant symptoms that meet diagnostic thresholds (Merikangas et al., 2002). Thus, dimensional approaches to measuring boundaries between symptom presentations, allows identification of a broader range of descriptors associated with symptom severity. This is beneficial in clinical and research settings, when identifying and evaluating essential criteria for diagnosis, as well as common features associated with subclinical symptoms (Brown et al., 2001; Kerns et al., 2013; Kollman et al., 2006). Therefore, this study aimed to uncover clinically relevant indicators of social anxiety at and below diagnostic thresholds, to inform dimensional approaches to diagnosis in future revisions of the DSM and subsequent treatment recommendations for subclinical
symptoms (Bögels & Stein, 2009; Brown et al., 2001; Kerns et al., 2013; Kollman et al., 2006; Knappe et al., 2013).

2.3.2. Diagnostic thresholds of social anxiety. The term ‘subclinical’ social anxiety is used throughout this research to describe non-clinical samples of high socially anxious participant’s with symptoms below diagnostic thresholds. In considering the continuous nature of social anxiety, it is not surprising that a subclinical group of individuals with substantial social fears and high levels of anxiety that do not meet diagnostic criteria, have been identified across empirical research studies (Furmark et al., 1999; Gren-Landell et al., 2009; Kessler, Chiu, Demler & Walter, 2005b; Merikangas et al., 2002; Pelissolo, Andre, Moutard-Martin, Wittchen & Lepine, 2000; Tillfors & Furmark, 2007). A subset of these individuals with subclinical symptoms experience no functional impairment and adequately perform in certain situations with some degree of discomfort (Faravelli et al., 2000; Van Roy et al., 2009). However, there is also a subset of socially anxious individuals who experience a large degree of distress and impairment and would likely benefit from therapeutic intervention (Dell’Osso et al., 2003; Fehm et al., 2008; Filho et al., 2010; Merikangas et al., 2002; Ruscio et al., 2008; Wittchen et al., 2000).

As mentioned in earlier discussions of social anxiety as a spectrum disorder (Section 2.3), data mostly indicates quantitative differences (i.e., greater symptom severity, distress, impairment) between social anxiety thresholds, with subclinical symptoms representing a less severe form of SAD (Dell’Osso et al., 2003; Filho et al., 2010; Kessler et al., 2005b; Merikangas et al., 2002; Rapee & Spence, 2004; Ruscio, 2010). Several studies demonstrate that prevalence of social anxiety increases, as criteria used to capture diagnostic thresholds of clinical SAD are broadened (i.e., number of feared situations, symptoms, distress, avoidance, and functional impairment) (Dell’Osso et al., 2003; Faravelli et al., 2000; Fehm et al., 2008; Filho et al., 2010;
Gren-Landell et al., 2009; Kessler et al., 2005b; Merikangas et al., 2002; Pelissolo et al., 2000; Ruscio et al., 2008; Wittchen et al., 2000).

Furthermore, empirical investigations typically fail to support categorical distinctions between individuals with social anxiety above and below diagnostic thresholds, when compared with controls. These findings suggest clinical and subclinical social anxiety threshold groups are categorically similar in terms of various demographics, such as sex, marital status, education, employment, comorbidity with anxiety and mood disorders (Filho et al., 2010; Gren-Landell, Tillfors, Furmark, Bohlin & Andersson, 2009; Kley, Tuschen-Caffier & Heinrichs, 2012; Merikangas et al., 2002; Ruscio et al., 2008), as well as performance during social evaluative tasks (Tuschen-Caffier, Kühl & Bender, 2011).

Moreover, no apparent demarcation has been found between clinical and subclinical SAD in relation to several variables (i.e., number of social fears, symptom severity, impairment), illustrating the continuity between social anxiety symptoms along the spectrum (Kollman et al., 2006; Merikangas et al., 2002; Ruscio, 2010). Additional evidence suggests, continual graded relationships between diagnostic thresholds and family history of parental psychopathology, negative parenting styles (Knappe, Beesdo, Fehm, Lieb & Wittchen, 2009b), and family history of SAD (Merikangas et al., 2002). However, parent to child transmission of SAD is specific to clinical SAD, with subclinical groups showing similar patterns of heritability as control groups (Knappe et al., 2009b).

Similarly, greater social anxiety symptom severity is directly linked to higher degrees of negative thinking. Research utilising self-report questionnaire measures, reveal associations between SAD and frequencies of cognitive thoughts relating to negative and positive evaluation. Weaker associations have been found for subclinical and control groups respectively, whereby negative thoughts are least common (Tuschen-Caffier et al., 2011; Weeks et al., 2009). In
comparison, Kley et al.’s (2012) study, in a child population did not find evidence suggesting continuity between social anxiety thresholds and negative thoughts. Rather, findings revealed children with a diagnosis of SAD experienced significantly more negative cognitions (i.e., fear of negative evaluation), compared to children with subclinical symptoms and controls. Similarly, one known study conducted by Weeks et al. (2010), supported categorical distinctions between clinical and subclinical thresholds, based on data from a large sample of adult patients with SAD, undergraduate, and community participants. Results of taxonomic analysis, a statistical technique that calculates marked breaks in distributions of scores, indicated that emotional tendencies associated with social interaction anxiety, fear of overt evaluation, and fear of attracting attention, differentiated individuals with clinical from subclinical symptoms.

Further to this, a paucity of evidence suggests individuals with SAD and subclinical social anxiety differ significantly according to employment status (Vriends et al., 2007), use of psychotropic medications (Filho et al., 2010), and types of feared situations, with subclinical presentations associated with more isolated performance fears (Filho et al., 2010; Vriends et al., 2007; Wittchen et al., 2000). However, such differences between subclinical and threshold SAD may signify incremental indicators of severity and impairment, rather than characteristically distinct features of diagnostic symptom presentations. As highlighted by Aderka and colleagues (2012), interpretation of findings between threshold groups could be suggestive of dimensional or categorical conceptualisations of SAD. For instance, differences in employment status, number of feared situations, comorbidity, or frequency of negative thoughts, may be due to greater severity of social anxiety (quantitative view) or categorically distinct symptoms, cognitive processes, and vulnerability factors.

Taken together, subclinical social anxiety shares characteristics of SAD and healthy control groups, but is more comparable to clinical social anxiety (Filho et al., 2010; Knappe et
al., 2009b; Ruscio, 2010; Weeks et al., 2010; Weeks & Howell, 2012). Thus, as with SAD, subclinical social anxiety is characterised by greater impairment in diverse areas of life and elevated risk for comorbidity compared to control groups, suggesting expressions of social anxiety below diagnostic thresholds are also associated with adverse outcomes (Dell’Osso et al., 2003; Fehm et al., 2008; Filho et al., 2010; Ruscio et al., 2008; Wittchen et al., 2000). Moreover, research studies have reported relatively few categorical differences between subclinical and diagnostic thresholds, with the exception of some evidence that emotional and cognitive tendencies toward fear of negative evaluation are potential markers for diagnosis (Kley et al., 2012; Weeks et al., 2010), however this evidence has been mixed (Tuschen-Caffier et al., 2011; Weeks et al., 2009).

Nonetheless, such findings represent preliminary evidence toward identifying shared and/or unique features associated with diagnostic thresholds of social anxiety. Further investigation of boundaries between SAD and subclinical symptom presentations, is necessary for future classification of SAD as a distinct group with characteristic markers indicating a clinical diagnosis, or spectrum disorder that varies in degree of severity. This is essential in order for theory to account for the aetiology of SAD (Kerns et al., 2013; Rapee & Spence, 2004; Ruscio, 2010) and prevent the emergence of the disorder, by detecting subclinical symptoms reflecting residual cases that require early intervention (Bögels & Stein, 2009; Kessler, 2003; Kollman et al., 2006; Ruscio, 2010). Therefore, identification of potential indicators representing diagnostic thresholds has important implications for theory, client formulation, treatment, and research that can inform prospective conceptualisations of SAD in future revisions of the diagnostic manual (Bögels & Stein, 2009; Kerns et al., 2013; Merikangas et al., 2002; Van Roy et al., 2009; Ruscio, 2010).
2.4. Epidemiology of Social Anxiety Disorder

A major challenge of epidemiological studies lies in the difficulty distinguishing cut-off criteria between normal shyness and pathological social anxiety (Brunello et al., 2000; Hidaglo et al., 2001; Van Roy et al., 2009; Sareen & Stein, 2000). The threshold selected by researchers at which social anxiety is considered pathological is subjective, and boundaries for distinguishing social anxiety as a disorder are often unclear. Therefore, one of the main intricacies in establishing a diagnosis of SAD in research is the subjective variability, due to lack of empirically derived thresholds that differentiate normal or high social anxiety from clinical expressions of SAD (Brunello et al., 2000; Faravelli et al., 2000; Pelissolo et al., 2000; Schneier, Blanco, Anita & Liebowitz, 2002).

Even so, an abundance of community and epidemiological studies have provided remarkable insight into how common SAD is within contemporary Western society (Fehm et al., 2008; Kessler et al., 2005a; Lampe et al., 2003; Tillfors & Furmark, 2007; Wittchen & Fehm, 2003). Recently, the DSM-5 cited 12-month prevalence estimates of SAD at 7% in the United States, with lower rates in European countries (APA, 2013). These, differences observed in community surveys likely reflect cultural factors (Furmark, 2002; Iancu et al., 2003), as the level at which shyness or social anxiety is considered acceptable, desirable or pathological, can be seen to differ across countries and cultures (Faravelli et al., 2000; Neal & Edelmann, 2003; Rapee & Spence, 2004).

Prevalence estimates are also largely influenced by various clinical and methodological factors (Brunello et al., 2000; Faravelli et al., 2000; Furmark, 2002; Hidaglo et al., 2001; Ohayon & Schatzberg, 2010). For instance, due to the nature of SAD, many people in the community would not seek, or receive treatment, leading to an underestimation of prevalence (Hidaglo et al, 2001; Olfson et al., 2000; Stein & Gorman, 2001). Similarly, estimates from epidemiological
surveys could be underestimated as the nature of SAD might result in a high rate of non-response (Lampe et al., 2003). In support of this claim, non-responders have been found to report elevated rates of psychiatric disorders (Kessler et al., 1994), including SAD (Furmark et al., 1999). These findings suggest, the prevalence of SAD in the general community has a greater social impact than reported by estimates from epidemiological studies. This is especially true when considering the subset of individuals with symptoms below diagnostic thresholds that also experience a certain degree of distress or impairment in everyday social encounters (Dell’Osso et al., 2003; Fehm et al., 2008; Filho et al., 2010; Merikangas et al., 2002; Ruscio et al., 2008).

Furthermore, most epidemiological surveys utilise diagnostic interviews (Brunello et al., 2000; Kessler et al., 2005a; Sareen et al., 2006; Wittchen & Fehm, 2003), thus variations in prevalence estimates may reflect differences in the use of clinical versus lay interviewers, since lay interviewers do not have the same level of competence in diagnosing psychopathology. Therefore, the interviewer’s level of experience and skill in confirming functional impairment criteria for SAD, can influence the number of cases identified from diagnostic interviews across epidemiological studies (Faravelli et al., 2000; Lampe et al., 2003; Ohayon & Schatzberg, 2010; Sareen & Stein, 2000; Sareen et al., 2006; Wittchen & Fehm, 2003; Yonkers, Bruce, Dyck & Keller, 2003).

2.4.1. Questionnaire measures versus diagnostic interviews. Inconsistencies presented in the subjective nature of diagnostic interviews provide a strong argument for implementing questionnaire measures in determining cases of SAD in research (Furmark, 2002). Furmark and colleagues argue, psychometrically sound questionnaire measures that thoroughly measure DSM criteria for SAD are time effective and may be more useful than allowing for lay interviewers’ subjective stance in diagnosis. Most diagnostic interviews only explore six social situations, thus the likelihood of identifying SAD cases is limited to the specified situations.
being screened (Furmark et al., 2000; Furmark, 2002). Thus, diagnostic methods used to identify cases of SAD should assess a sufficiently large number of phobic situations to avoid missing cases.

Accordingly, to identify cases of clinical SAD in the current study, a validated self-report questionnaire congruent with DSM-IV criteria A to H for SAD, the Social Phobia Screening Questionnaire (SPSQ; Furmark et al., 1999), was utilised to assess SAD across 14 phobic situations. Despite well-known limitations of questionnaire measures, such as socially desirable responses and response sets (Asch, 1958; de Jonge & Slaets, 2005; Furnham, 1986; Hersen, 1966), an advantage of utilising questionnaires to ascertain cases of SAD is the reduction in sample bias against reporting embarrassing and humiliating behaviours or experiences in interviews (Bruhn, 1990; Kessler et al., 2005a). This seems particularly relevant for research associated with social anxiety, given a core feature of the disorder being fear of embarrassment or humiliation (APA, 2013). Moreover, psychometrically sound diagnostic questions are helpful tools for research studies, which typically rely on cut-off scores from social anxiety measures to delineate subgroups from a dimensional construct (Furmark et al., 1999; Furmark, 2002).

2.5. Onset of Social Anxiety Disorder

There is general agreement among clinicians and researchers that onset of SAD typically occurs during late childhood or adolescence (Beesdo-Baum et al., 2012; Costello et al., 2005; Hudson & Rapee, 2010; Kessler et al., 2005a; Knappe et al., 2011; Merikangas et al., 2002; Van Roy et al., 2009). Thus, onset of SAD later in life is relatively rare (Fehm et al., 2008; Heimberg et al., 2000; Kessler et al., 2005a), or often secondary to another psychological disorder (Neufeld et al., 1999; Rapee & Spence, 2004; Wittchen & Fehm, 2003). However, a number of individuals with SAD develop social fears early in life and do not meet full criteria until later in life, which
may explain cases of adult onset (Costello et al., 2005; Faravelli et al., 2000; Merikangas et al., 2002; Van Roy et al., 2009).

Even so, for individuals with childhood histories of symptomatic social anxiety, onset in adolescence may partly reflect increased life stressors caused by social demands typical of this critical developmental stage (Chartier et al., 1998; Gazelle & Rubin, 2010). The interference of SAD during this crucial period of development, explains findings that earlier age of onset is associated with greater severity of the disorder (Merikangas et al., 2002), lower rates of recovery in adulthood (Beard, Moitra, Weisberg & Kessler, 2010; Wittchen & Fehm, 2003), and that new cases of SAD beginning in adulthood are rare (Rapee & Spence, 2004; Wittchen & Fehm, 2003).

The DSM-5 states, onset of SAD may precipitate a stressful or humiliating experience, or follow a more subtle onset (APA, 2013). Several empirical studies report links between social anxiety and traumatic, stressful, humiliating (Erwin, Heimberg, Marx & Franklin, 2006; Hackmann et al., 2000; Marteinsdottir, Svensson, Svedberg, Anderberg & Knorring, 2007; McCabe, Antony, Summerfeldt, Liss & Swinson, 2003; Stemberger et al., 1995), or highly meaningful experiences (Chartier et al., 1998; Harvey, Elhers & Clark, 2005; Rapee & Spence, 2004). Moreover, retrospective reports of adults with SAD provide evidence that negative or undesirable social experiences that occurred during childhood or adolescence, not only played a role in the development of social fears (Erwin et al., 2006; Marteinsdottir et al., 2007; Stemberger et al., 1995), but specifically related to the onset of the disorder (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003). However, adverse conditioning events or psychosocial maltreatment in childhood does not cause SAD rather; negative events represent risk factors for developing the disorder (APA, 2013). Nevertheless, these studies highlight the importance of negative social experiences in the development of social anxiety, for a large
proportion of individuals (Hackmann et al., 2000; McCabe et al., 2003; Harvey et al., 2005; Stemberger et al., 1995).

2.6. Aetiological Factors associated with Social Anxiety Disorder

Despite no conclusive pathway leading to SAD, most aetiological models propose an interaction between biological and psychological vulnerabilities, which are compounded by environmental factors, such as traumatic or conditioning events, as well as a cycle of negative thoughts, feelings, and behaviours (Beidel & Turner, 2007; Brook & Schmidt, 2008; Elizabeth et al., 2006; Ollendick & Hirshfeld-Becker, 2002; Rapee & Spence, 2004; Ledley & Heimberg, 2006). From this view, vulnerability factors such as heritability and temperament styles involving shy or fearful reactions, social withdrawal, uneasiness or avoidance of unfamiliar people or events, likely represent predisposing factors toward developing persistent social fears and subsequent avoidance when confronted with challenging situations (Beesdo-Baum et al., 2012; Gazelle & Rubin, 2010; Neal & Edelmann, 2003; Rapee & Spence, 2004).

However, genetics or early temperament alone do not necessarily cause later psychopathology, instead certain types of temperament (e.g., shyness, behavioural inhibition) can influence negative emotions (e.g., anxiety, self-consciousness) and maladaptive coping styles in response to social evaluative concerns (Clark & Wells, 1995; Gazelle & Rubin, 2010; Ledley & Heimberg, 2006; Ollendick & Hirshfeld-Becker, 2002; Wittchen & Fehm, 2003). Thus, interactions between genetic predispositions, temperament, and/or cognitive factors can create vulnerabilities toward actual or perceived negative life events and signify potential precursors to SAD. In considering this, multiple pathways can lead to the onset of social anxiety (Beidel & Turner, 2007; Hudson & Rapee, 2000; Marteinsdottir et al., 2007).
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

From an aetiological perspective, early onset highlights family and school environments as noteworthy factors implicated in the development of clinical or subclinical and social anxiety, due to their significant influence on social and emotional development during childhood and adolescence (Chartier et al., 1998; Hudson & Rapee, 2000; Kearney, 2005; Rapee & Heimberg, 1997). Furthermore, in considering the nature of SAD and its early onset, adverse social encounters during this early developmental period are also important for understanding the development of social fears (Hackmann et al., 2000; Neal & Edelmann, 2003; Rapee & Spence, 2004; Stemberger et al., 1995). Therefore, the present study explored participants’ earliest social memory for particular types of affective experiences, content, and interactions with parents, peers, and other people, to identify potential risk factors associated with trajectories of social anxiety symptom severity.

2.6.1. Parental influences and family environment. A widely researched area has focused on parental factors associated with the development of SAD, with several reviews demonstrating links between SAD, parental behaviours and negative family environments (Alden & Taylor, 2004; Beidel & Turner, 2007; Elizabeth et al., 2006; Neal & Edelmann, 2003; Ollendick & Hirshfeld-Becker, 2002). Thus, in addition to familial influences of heritability, social learning within the family unit, negative parenting styles, or instances of maltreatment, can also lead to significant social fears (Beesdo, Knappe & Pine, 2009; Harvey et al., 2005; Hidaglo et al., 2001; Knappe et al., 2009b; Neal & Edelmann, 2003; Rapee & Spence, 2004). In particular, individuals with SAD describe their parents as having low emotional warmth, rejecting, critical, over-protective, controlling, and more likely to use shame or guilt as disciplinary tactics than parents of non-socially anxious individuals (Cunha et al., 2008;
Elizabeth et al., 2006; Festa & Ginsburg, 2011; Knappe, Beesdo-Baum, Lieb & Wittchen, 2012; Neal & Edelmann, 2003).

Of relevance to this study’s investigation of the social anxiety spectrum, Knappe and colleagues investigated particular parenting behaviours associated with SAD, as well as symptoms below diagnostic thresholds, and symptomatic social anxiety. Findings from this study revealed a continuous graded relationship between diagnostic thresholds of social anxiety and negative parenting styles. Consistent with previous research regarding parenting behaviours, rejection, overprotection, and low emotional warmth were strongly associated with threshold social anxiety (i.e., clinical SAD) in children and less consistently with subthreshold social anxiety (i.e., subclinical symptoms) and symptomatic social anxiety (Knappe et al., 2009b).

Hudson and Rapee (2000) noted, most studies utilise retrospective data as opposed to direct observation of parenting practices, thus questioning the accuracy of findings based on self-reports. However, various theorists propose the accuracy of events recalled from memory bear little importance because an individual’s attitudes, beliefs and personality structure, are influenced by their unique interpretation of personally meaningful past experiences (Bruhn, 1990; Fowler et al., 2000). The current study also adopted this position, that one’s perception and interpretation of parenting is more important for understanding underlying issues than the actual event. Based on this reasoning, substantial evidence exists regarding associations between social anxiety and negative parenting characteristics, which can interfere with healthy social and/or emotional development of children and lead to anxiety regarding future social interactions with other people (Alden & Taylor, 2004; Kearney et al., 2005; Lambert, 2006). However, the majority of the research within the literature on ‘parenting’, utilised samples comprising predominantly, or entirely mothers (Festa & Ginsburg, 2011; Knappe et al., 2009b; Neal & Edelmann, 2003).
In the past decade, empirical studies have focused on paternal influences on children’s social anxiety, since mothers and fathers have different parenting styles and unique relationships with their children (Bögels & Perotti, 2011; Bögels, Stevens & Majdandzic, 2011; Brook & Schmidt, 2008; Lambert, 2006). For example, fathers have been identified as particularly influential in promoting socialisation and autonomy in children, given their dominant role in conventional family units (Bögels & Perotti, 2011; Bögels & Phares, 2008; Lambert, 2006). Moreover, early memories of mother and father have been found to elicit different maladaptive schemas for individuals with subclinical social anxiety (Howell, 2009) and non-clinical student populations (Theiler, 2005). Thus, fathers are suggested to play a specific role in the development of social anxiety in children; however, the nature of this relationship in terms of influencing subclinical or clinical social anxiety remains unclear (Bögels & Perotti, 2011; Bögels et al., 2011; Knappe et al., 2012; Rork & Morris, 2009).

Further to this, childhood trauma and negative life events that occur in the family environment also increase risk for developing SAD (Lambert, 2006). Such factors reported within the literature involve; early separation from either parent (Ledley & Heimberg, 2006), parental divorce, parental violence, family conflict or verbal aggression between parents (Chartier et al., 1998; Chartier, Walker & Stein, 2001; Hidaglo et al., 2001; Marteinsdottir et al., 2007; Stein et al., 2010), and being raised by people with abusive behaviours (Bracik, Krysta & Zaczk, 2012). Thus, the majority of evidence described here suggests disrupted interactions with parents and negative family environments are influential risk factors associated with later social anxiety. This literature, guided the current study’s hypotheses relating to early memories of negative interactions with parents and current social anxiety symptom severity (See Section 5.2. Research Aims and Hypotheses relating to Social Anxiety Thresholds).
2.6.2. Peer influences and school environment. As children get older, peers have a greater influence on children’s behaviour and self-esteem, therefore challenges in social functioning can create a vicious cycle of problems that interfere with normal social and emotional development (Hudson & Rapee, 2000; Kearney, 2005). For instance, the emotionally shy or withdrawn child is likely to elicit greater experiences of neglect, rejection, victimization, or teasing from peers (Kearney, 2005). This may then influence, negative perceptions of oneself as unlikeable, fears of negative evaluation from others, increased anxiety in social or performance situations, social withdrawal and avoidance (Biggs, Vernberg & Wu, 2012; Erath, Flanagan & Bierman, 2007; Flanagan, Erath & Bierman, 2008; Ollendick & Benoit, 2012; Van Roy et al., 2009; Storch, Masia-Warner, Crisp & Klein, 2005). Alternatively, shy or behaviourally inhibited children who do not experience extreme anxiety with peers and whose parents or teachers help better manage emotions through more adaptive coping strategies, may reduce the impact of inhibited predispositions and prevent the cycle from occurring (Beidel & Turner, 2007; Neal & Edelmann, 2003; Ollendick & Hirshfeld-Becker, 2002).

This complex interaction between shy temperaments and peer rejection or neglect, makes it difficult to ascertain whether negative peer relationships are a cause or consequence of social anxiety although, it is likely a reciprocal interaction (Alden & Taylor, 2004; Elizabeth et al., 2006; Storch et al., 2005). Nonetheless, repeated exposure to peer rejection or victimisation during this crucial developmental period can negatively affect social and emotional functioning and create learned coping strategies of avoidance (Biggs et al., 2012; Erath et al., 2007; Flanagan et al., 2008). Socially anxious individuals often recall histories of teasing and bullying experiences from peers, as well as instances of being mocked or harshly criticised by a teacher (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003). Evidently, various studies indicate that these children and adolescents have less positive peer relationships and fewer
friendships (Biggs et al., 2012; Erath et al., 2007; Flanagan et al., 2008; La Greca & Lopez, 1998).

Nevertheless, a recent study found 62.2% of individuals with SAD reported negative relations with peers at school, while 19.9% reported good relationships with peers (Bracik et al., 2012). Furthermore, previous research found criticism from teachers as influential in the development of SAD (Chartier et al., 1998; Hackmann et al., 2000). However, Bracik et al. (2012) did not find evidence to suggest that teachers were an important feature of school environments for socially anxious individuals, since an approximately equal proportion of participants recalled good (26.4%) and bad (30%) relationships with teachers. Findings such as these highlight the fact that risk factors for developing social anxiety vary for different individuals, thus investigation into potential aetiological factors associated with varied symptom presentations is invaluable.

For instance, in addition to maltreatment from peers and childhood adversity in the school environment being a common occurrence among individuals with high social anxiety and clinical SAD (Flanagan et al., 2008; Hackmann et al., 2000; McCabe et al., 2003; Storch et al., 2005), other school factors have been implicated in the onset of SAD. These include, moving schools (Chartier et al., 1998; Harvey et al., 2005; Marteinsdottir et al., 2007), making a mistake when called on in class, and undesirable experiences of public speaking (Harvey et al., 2005; Stemberger et al., 1995). Thus, memories of adverse events in the school setting are important for identifying potential experiences that represent risk factors associated with later social anxiety. The aforementioned literature informed this study’s hypothesis regarding current social anxiety symptomology and early memories of negative peer interactions (See Chapter 5.2. Research Aims and Hypotheses relating to Social Anxiety Thresholds).
2.6.3. Adverse conditioning experiences and traumatic events. Empirical evidence relating to parents, family environment, and peer relationships are suggestive of multiple pathways that lead to social anxiety, with no one event determining the onset of the disorder for any one individual (Brook & Schmidt, 2008; Gazelle & Rubin, 2010; Hudson & Rapee, 2000; Ollendick & Benoit, 2012). Subsequently, various aversive or meaningful conditioning experiences, particularly embarrassing or humiliating social encounters (Hackmann et al., 2000; Hudson & Rapee, 2004; McCabe et al., 2003; Stemberger et al., 1995), such as being publicly criticised for aspects of one’s appearance (Harvey et al., 2005), have been implicated in the development of the disorder. Moreover, negative conditioning events seem particularly influential in the development of SAD as opposed to other anxiety disorders, as demonstrated by findings that 92% of individuals with SAD reported a history of teasing during childhood or adolescence, compared to 50% and 35% of individuals with obsessive-compulsive disorder and panic disorder, respectively. Moreover, these reported experiences were related to an earlier age of onset of the disorder and increased anxiety in social situations (McCabe et al., 2003).

On the other hand, Stemberger et al.’s (1995) study revealed a substantial number of participants with SAD did not report having experienced a particularly negative conditioning event, whereas 20% of participants with no psychological disorder recalled a traumatic event and did not develop SAD. A more recent study conducted by Harvey et al. (2005), also found only 13% of socially anxious individuals rated traumatic social experiences as the most important factor that led to social fears. However, the authors of this study suggested this incidence of potential conditioning experiences would be underestimated because participants were asked to identify the ‘most important’ factor associated with the onset of social anxiety.

Risk factors empirically related to the development of SAD typically relate to interpersonal adversity (Alden & Taylor, 2004; Pinto-Gouveia et al., 2006). However, as with
other forms of psychopathology, general risk factors and negative life events that occur in childhood, or later in life have also been associated with SAD in adulthood. Negative events include; mobbing or abusive incidents at school or work (Marteinsdottir et al., 2007), emotional abuse, neglect (Gren-Landell et al., 2011; Kuo, Goldin, Werner, Heimberg & Gross, 2011; Simon et al., 2009), physical and sexual abuse (Bruce, Heimberg, Goldin & Gross, 2010; Bracik et al., 2012; Chartier et al., 2001; Gren-Landell et al., 2011; Stein et al., 2010). However, evidence of sexual abuse is mixed as some studies show no relationship with social anxiety (Kuo et al., 2011), which may be due to the higher incidence of sexual assault in females than males (Chartier et al., 2001; Neal & Edelmann, 2003).

Furthermore, Bruce et al. (2013) investigated childhood maltreatment in a sample of 68 individuals with a primary diagnosis of SAD. Patients with histories of emotional neglect and abuse had greater social anxiety, less satisfaction with life and increased impairment over the course of treatment. Moreover, the number and types of maltreatment experienced by individuals has an additive effect on current social anxiety symptoms (Simon et al., 2009), highlighting the importance of cumulative conditioning experiences as opposed to a single direct conditioning event (Ingram, 2003) in the development of social anxiety (Ollendick & Hirshfeld-Becker, 2002; Rachmann, 2002; Rosenberg et al., 2010).

Considering the aforementioned findings from the literature presented thus far, it is not surprising that individuals with SAD report more negative life events during childhood compared to controls (Marteinsdottir et al., 2007; Stemberger et al., 1995). However, it is unknown why traumatic conditioning experiences are risk factors for onset of SAD in some but not all individuals. Life events, particularly interpersonal events, seem to play an important role in the development of social fears, as well as onset of SAD for some socially anxious individuals (Alden & Taylor, 2004; Marteinsdottir et al., 2007; Ledley & Heimberg, 2006). More
specifically, reviews of the literature point to interactions between heritability, temperamental factors, together with ongoing patterns of interpersonal relating, behavioural avoidance, negative social experiences, and cognitive interpretations of events, cumulatively produce the trajectory of SAD and its subclinical symptoms (Neal & Edelmann, 2003; Ollendick & Hirshfeld-Becker, 2002; Rapee & Spence, 2004; Ledley & Heimberg, 2006). Further to this, protective factors, degree of severity associated with negative life events, impact of direct or cumulative conditioning experiences and the interaction of particular risk factors likely influence the development of varied social anxiety symptom severity (Kearney, 2005; Lambert, 2006; Simon et al., 2009). The incidence of negative conditioning events and link to later social anxiety, guided this study’s hypothesis related to social anxiety symptom severity and incidence of negative social memories recalled in the current study (Refer to Section 5.2. Research Aims and Hypotheses relating to Social Anxiety Thresholds. p. 92).

2.7. Course of Social Anxiety Disorder

Social anxiety disorder is typically characterised by a chronic and unremitting course (Heimberg et al., 2000; Iancu et al., 2006; Ruscio et al., 2008), in which symptoms of social anxiety persist over time at both subclinical and clinical levels (Beesdo-Baum et al., 2012; Beard et al., 2010; Fehm et al., 2008; Merikangas et al., 2002; Van Velzen et al., 2000; Wittchen et al., 2000; Xu et al., 2011). To demonstrate this point, the average duration of SAD found across several retrospective and longitudinal studies from clinical and non-clinical populations, ranges from 16 to 29 years (Yonkers et al., 2003). Similarly, subclinical social anxiety symptoms have been reported to persist for an average duration of 18.6 years, providing overwhelming insight into the chronicity of subclinical symptoms that do not meet full criteria of SAD (Fehm et al., 2008).
Moreover, several of these studies found participants met criteria for SAD at different stages of assessment. These findings suggest individuals meet criteria for SAD at different points of their lives, which can depend on when social roles and expectations are required (Bögels et al., 2010; Gazelle & Rubin, 2010; Gren-Landell et al., 2009; Rapee & Spence, 2004). This evidence highlights the importance of detecting social anxiety below diagnostic thresholds, in order to monitor symptoms that may require early intervention (Bögels & Stein, 2009; Kessler, 2003; Kollman et al., 2006; Ruscio, 2010). As such, the impact of environmental influences on the development of the disorder, symptom severity, impairment, and course of SAD can depend on: the nature, frequency, and chronicity of life stressors, timing (i.e., critical stages of vulnerability or development), or the presence of a supportive relationship (APA, 2013; Beesdo-Baum et al., 2012; Chartier et al., 1998; Ingram, 2003; Ollendick & Hirshfeld-Becker, 2002; Rapee & Spence, 2004). If left untreated, the course of SAD is often chronic and impairing (Elizabeth et al., 2006; Gazelle & Rubin, 2010; Iancu et al., 2006; Neal & Edelmann, 2003; Rapee & Spence, 2004; Ruscio et al., 2008; Xu et al., 2011), and complete remissions are rare (Beesdo-Baum et al., 2012).

Furthermore, non-compliance, early dropout, as well as reluctance to engage in exposure and homework tasks, pose major difficulties in the treatment of SAD (Kuyken, et al., 2001; Rosenberg et al., 2010). It is also possible, that due to the nature of the disorder, individuals with more severe impairments avoid seeking treatment for emotional problems, due to fear of negative evaluation from health care providers (Ruscio et al., 2008; Sareen & Stein, 2000; Wittchen & Fehm, 2003). Thus, despite the severity and persistence of SAD, service utilisation for treatment is reportedly low and socially anxious individuals who seek treatment often present for other comorbid conditions (Faravelli et al., 2000; Lampe et al., 2003; Wittchen et al., 2000). For example, Ruscio et al. (2008) found approximately one third of individuals with lifetime
SAD received treatment specifically for SAD whereas the remaining two thirds received treatment for another mental health problem.

Even so, a trend within the literature suggests SAD is over-represented in younger individuals, suggesting that SAD may decline with age (APA, 2013; Fehm et al., 2008; Furmark et al., 1999; Kessler et al., 2005a; Lampe et al., 2003; Ruscio et al., 2008). Retrospective reports of individuals with SAD frequently attribute decreasing social fears to maturity (Chartier et al., 1998), supporting contentions that most individuals with SAD rate the peak severity of the disorder to have occurred in early adulthood, when pertinent decisions regarding partnerships, educational attainment, and career opportunities were prominent (Wittchen et al., 2000). Therefore, although a serious condition, SAD has been shown to decrease in severity or remit during adulthood and is therefore considered treatable (Karlsson et al., 2010; Stein & Gorman, 2001). However, reviews of the literature indicate that overall, evidence regarding the efficacy of treatment for SAD is mixed, with 40-50% of participants with SAD receiving individual or group Cognitive Behavioural Therapy, showing little or no improvement (Hofmann & Bögels, 2006; Mululo, Menezes, Vigne & Fontenelle, 2012).

2.8. Implications of Comorbid Social Anxiety Disorder

Patients with SAD suffer from considerable comorbidity with various psychological disorders (Faravelli et al., 2000; Hidaglo et al., 2001; Ohayon & Schatzberg, 2010). Reviews of community and clinical studies, report 50% to 80% of clinical SAD patients have at least one other mental disorder, most commonly another anxiety disorder, depression, or substance use disorders (Cox et al., 2000; Chartrand et al., 2011; Dozois & Frewen, 2006; Kessler et al., 1998; Lampe et al., 2003; Sareen & Stein, 2000; Wittchen & Fehm, 2003). Thus, due to the nature of SAD, individuals may feel apprehensive, depressed, or develop maladaptive coping behaviours,
such as alcohol or substance use, to alleviate their symptoms (Sareen et al., 2006; Wittchen & Fehm, 2003).

From this view, subclinical social anxiety in childhood or adolescence may signify a potential risk factor for developing other forms of psychopathology, (Beesdo et al., 2009; Brook & Schmidt, 2008; Faravelli et al., 2000; Wittchen, 2000). In support of this view, early symptoms of SAD at a subclinical level usually precede any other disorder and the co-occurrence of another psychological condition could trigger full expressions of SAD (Faravelli et al., 2000; Neufeld et al., 1999; Rapee & Spence, 2004; Wittchen & Fehm, 2003). Given its early onset in childhood or adolescence (Beesdo-Baum et al., 2012; Hudson & Rapee, 2010; Knappe et al., 2011), SAD may lead to other comorbidities. Alternatively, the incidence of comorbid SAD may simply reflect its early age of onset and may not be indicative of a causal relationship. Therefore, the relationship between SAD and other psychological disorders is complex and SAD may represent a secondary implication of other psychological conditions (Brown et al., 2001; Rapee & Spence, 2004).

Irrespective of whether SAD represents a primary or secondary condition, an important consideration when dealing with comorbid SAD and depression is that risk of suicide ideation and suicide attempts is increased (APA, 2013; Hidaglo et al, 2001; Sareen & Stein, 2000; Wittchen & Fehm, 2003). Furthermore, many studies have demonstrated overlap between SAD and depression in terms of symptom presentation and cognitive processes (Cox et al, 2000; Dozois & Frewen, 2006; Naragon-Gainey & Watson, 2011; Norton, Buhr, Cox, Norton & Walker, 2000). Therefore, assessments of SAD are incomplete without measurement of depression (Chiupka, Moscovitch & Beilak, 2012; Dozois & Frewen, 2006). From this view, it is important to assess whether SAD develops subsequent to other psychiatric disorders, such as depression (Hidaglo et al., 2001; Lampe et al., 2003; Rapee & Spence, 2004) because early
recognition of subclinical symptoms in treatment can prevent the detrimental effects confounded by comorbidity (Sareen & Stein, 2000; Wittchen, 2000; Wittchen & Fehm, 2003).

Another important issue relating to comorbidity is the great deal of conceptual and diagnostic overlap between SAD and APD (APA, 2013; Rosenberg et al., 2010; Wittchen & Fehm, 2003). Key features of both disorders relate to social inhibition, hypersensitivity to negative evaluation, preoccupation with being criticised or rejected by others, negative views of oneself as socially inept, and avoidance of interpersonal contact (APA, 2013). Furthermore, as mentioned in Section 2.3, numerous researchers conceptualise social anxiety on a symptomatic continuum, where APD constitutes a more severe variant of SAD rather than being a distinct condition (Brunello et al., 2000; Chambless et al., 2008; Faravelli et al., 2000; Wittchen & Fehm, 2003). Consequently, a large proportion of individuals who meet criteria for APD also meet criteria for SAD, resulting in more severe symptom severity, increased functional impairment, and lower remission rates (Carter & Wu, 2010; Hidaglo et al., 2001; Marteinsdottir et al., 2007; Rapee & Spence, 2004; Tillfors et al., 2004; van Velzen et al., 2000).

2.9. Summary of Chapter 2

Having reviewed the empirical literature, related to the nature and development of SAD, it is clear that social anxiety is an early onset disorder, greatly influenced by adverse social experiences or interactions with others. In particular, negative experiences and interactions within the family and school environment, embarrassing or humiliating social encounters, and negative life events have been implicated in the potential development of SAD. Subsequently, this study was interested in exploring features of past social situations from early in life, with the intent of identifying empirically relevant risk factors or negative conditioning experiences associated with SAD and subclinical expressions of the disorder.
Empirical evidence of aetiological factors presented in Chapter 2 (e.g., negative parental and peer experiences, social events resulting in anxiety, embarrassment and humiliation etc.), guided this pilot study’s exploration of characteristic features associated with the social anxiety spectrum. The following chapter presents the theoretical background and pertinent research that informed the research design of the current study, by introducing cognitive perspectives of SAD in terms of the role memories play the development and maintenance of SAD.

**Chapter 3: Theoretical Framework**

This chapter begins with a description of Clark and Wells’ (1995) cognitive model of SAD, with particular emphasis on memories of past social experiences as they apply to the model. Following this, cognitive theories are described in terms of schematic processes deemed to operate outside of conscious awareness and their influence on maladaptive beliefs that are either directly or indirectly related to psychopathology. The chapter concludes by presenting limitations of research on cognitive constructs and the importance of activating schemas in research, before introducing the influence of cognitive perspectives on the current study’s research design, and how early memory theories of personality were incorporated into the theoretical framework for this study.

**3.1. Clark and Wells Cognitive Model of Social Anxiety Disorder.**

Dominant cognitive models of SAD have provided a framework for outlining the development and maintenance of social anxiety symptoms (Clark & Wells, 1995; Hofmann, 2007; Rapee & Heimberg, 1997). In particular, Clark and Wells’ (1995) Cognitive Model of SAD propose that based on early experiences, patients with SAD develop various negative beliefs about themselves and their social performance, others, and the social world, that guide the
interpretation of future social encounters. As a result, prior to social encounters, thoughts tend to focus on memories of past social failures that influence negative images of possible outcomes. This anticipation before the social situation influences the expectation of poor performance, failure, and rejection, leading to intense anxiety and likely avoidance of the event (Clark, 2005).

If a feared situation is encountered, socially anxious individuals engage in self-focused attention, a particular type of internal self-processing in which increased awareness of somatic (i.e., anxiety) and cognitive (e.g., negative self-beliefs) symptoms lead to processing the self as a social object and contribute to a negative self-impression (Clark, 2005; Clark & Wells, 1995). Whilst engaging in self-focused attention, memories of past social failures influence distorted visual images of how socially anxious individuals think they appear to others when in feared social situations, which represents another source of negative information related to the self and maintains anxiety (Clark, 2005; Clark & Wells, 1995; Hofmann, 2007; Rapee & Heimberg, 1997). In addition, due to an increase in self-focused attention, there is a tendency toward reduced processing of external social cues, thus opportunities for recognising positive feedback from others can go unnoticed. Furthermore, engaging in self-focused attention during social interactions can interfere with one’s social performance and elicit negative response that confirms negative perceptions of oneself as socially incompetent (Clark & Wells, 1995; Clark, 2005).

After the social situation, individuals review their interaction in great detail. Biased processing of ambiguous social cues are remembered and interpreted negatively, and individuals become preoccupied by their negative self-perceptions. Moreover, due to meticulous self-monitoring during the social event, feelings of intense anxiety and negative self-perceptions appear prominent because they were strongly encoded in memory (Clark & Wells, 1995; Clark, 2005; Mellings & Alden, 2000). The recent social interaction is integrated with memories of past
instances of perceived social failure, which strengthens schemas relevant to social anxiety. Not surprisingly, the post-event review results in an unrealistically negative interpretation of the interaction and a persistent sense of shame (Clark & Wells, 1995; Clark, 2005; Helsel, 2005; Hofmann, 2007).

This cycle of pre and post event processing reinforces memories of negative social encounters and self-perceptions relating to poor social performance, preventing the disconfirmation of negative beliefs associated with the social self and assumptions that social events inevitably lead to negative outcomes (Alden & Taylor, 2004; Clark & Wells, 1995). More specifically, memories of past social failures (actual or perceived failure) influence negative beliefs that shape distorted, negative perceptions of one’s social self (Clark, 2005; Clark & Wells, 1995; Hofmann, 2007; Rapee & Heimberg, 1997), which has been supported by empirical research suggesting negative self-images based on earlier memories exacerbate and maintain symptoms of the disorder (Chiupka et al., 2012; Hackmann et al., 2000; Moscovitch, Garvic, Merrifield, Bielak & Moscovitch, 2011). Therefore, memories of adverse events are proposed to play an important role in the development and maintenance of SAD.

**3.2. Cognitive Theories of Social Anxiety Disorder**

According to cognitive theories, anxiety is experienced due to errors in thinking associated with overestimating physical or social threats and underestimating one’s ability to cope with the perceived threat (Beck, 1996; Beck, Rush, Shaw & Emery, 1985). These errors in thinking are influenced by events in memory, that shaped beliefs and assumptions of oneself and others, and become deeply embedded in a complex integration of schemas, which influences encoding and retrieval of emotional information from memory. (Beck, 1996; Clark, 2005; McGinn & Young, 1996; Williams, Watts, MacLeod & Matthews, 1997; Young, 1990).
Furthermore, in the case of SAD, threat is associated with social evaluation in that individuals fear they will come across as socially incompetent, foolish, or behave in ways that will elicit criticism, rejection or negative evaluation from others (Alden & Taylor, 2004; Chambless & Hope, 1996; Clark & Wells, 1995; Ollendick & Hirshfeld-Becker, 2002).

Therefore, early memories of past social events influence the interpretation of social situations as more threatening than they actually are, due to particular beliefs or dysfunctional schemas learned at an earlier period of life (Clark, 2005; Clark & Wells, 1995). To demonstrate this point, various studies have shown memory biases guide a number of cognitive distortions that occur before, during, and after social events, for both subclinical and clinical social anxiety groups (Clark, 2005; Hirsch & Clark, 2004; Mellings & Alden, 2000; Williams et al., 1997). More specifically, maladaptive beliefs characteristic of SAD involve: excessively high standards of social performance, self-critical appraisals based on unconditional negative beliefs about self-worth (Clark & Wells, 1995; Chambless & Hope, 1996; Stopa et al., 2013), and beliefs that others are inherently critical (Alden & Taylor, 2004; Stopa et al., 2013). Subsequently, dysfunctional schemas such as these serve to maintain and exacerbate pathological symptomatology (Beck et al., 1985; Beck, 1996; Clark & Wells, 1995; Ingram, 2003; Williams et al., 1997).

3.3. **Unconscious Schematic Processing**

Maladaptive schemas are believed to develop from stressful childhood experiences, or ongoing dysfunctional interactions with parents, siblings, and peers. Therefore, schemas comprise general belief categories related to memories of past events and represent broad, pervasive themes about oneself, relationships with others and the world, that become elaborated over time to influence profoundly fixed patterns of distorted thinking and behaviour (Beck,
1996; Bruhn, 1990; Ingram, 2003; McGinn & Young, 1996; Williams et al., 1997). More specifically, schemas entail the most intricate aspects of one’s self-concept (e.g., boring, inept, unlikeable, worthless) and view of others (e.g., critical, rejecting, inferior), and serve as templates for processing future experiences in a personally meaningful way (Beck et al., 1985; Clark, 2005; McGinn & Young, 1996; Williams et al., 1997).

Further to this, schemas comprise a network of cognitive, affective, motivational, and behavioural processes that can occur outside of conscious awareness, and become triggered in response to interpersonal, social, or environmental cues (Beck, 1996; Bruhn, 1990; Clark, 2005; Horowitz, 1994; Williams et al., 1997). Once meaning is assigned to a situation through cognitive schematic processing, congruent affective schemas become activated and produce emotional experiences that reinforce adaptive or maladaptive behaviours. From this view, schemas trigger dysfunctional thoughts that contribute to a great deal of emotional dysfunction, because once a particular schema is activated it produces heightened affective states that directly or indirectly relate to psychopathology (Beck, 1996; Clark & Steer, 1996; McGinn & Young, 1996; Schmidt & Joiner, 2004; Williams et al., 1997).

Furthermore, as with other cognitive structures (Brewin et al., 2010; Clark & Rhyno, 2005), maladaptive schemas exist on a continuum of dysfunction, with non-clinical populations demonstrating comparable but less pronounced cognitive biases than clinical samples (Schmidt & Joiner, 2004). Following from this reasoning, schemas comprise a network of associations that form the basic systems of personality and development of clinical disorders (Beck, 1996; Schmidt & Joiner, 2004; Young, 1999). For instance, in the case of SAD, social situations activate negative beliefs and assumptions (i.e., schemas) that lead to selective processing and interpretation of social events as more threatening than they actually are. These schemas directly relate to socially anxious concerns, such as fear of negative evaluation, embarrassment, or
humiliation, which triggers intense emotional reactions associated with anxiety (Alden & Taylor, 2004; Chambless & Hope, 1996; Clark & Wells, 1995; Ollendick & Hirshfeld-Becker, 2002). Moreover, it seems reasonable to assume that individuals with subclinical social anxiety would display similar but less rigid or prominent maladaptive beliefs and emotional reactions as these.

Further to this, Young’s (1999) clinical experience in schema focused therapy, identified several early maladaptive schemas that were investigated by Pinto-Gouveia et al., 2006), in relation to patients with SAD ($n=62$), other anxiety disorders ($n=41$), and non-psychiatric controls ($n=55$). Findings suggested, compared to patients with other anxiety disorders and controls, patients with SAD self-reported higher levels of maladaptive schemas linked to unsuccessful performance (failure), as well as schemas related to perceptions of others as cold (emotional deprivation), abusive (mistrust/abuse), rejecting (defectiveness/shame), and isolating (social isolation). Subsequently, patients with SAD have core beliefs of others as abusive, humiliating, and manipulating. These schemas relate to overarching themes of disconnection and rejection, categorised by expectations that one’s need for stable, trustworthy relationships will not be met. Based on these findings, Pinto-Gouveia and colleagues identified the need for cognitive models of SAD, to incorporate information regarding expectations of interpersonal relationships with other people.

3.4. Research on Cognitive Processes

Typically, research examining the content of cognitive processes, is believed to reflect the organisation of schemas. However, schema level processing can occur outside of conscious awareness (Beck, 1996; Bruhn, 1990; Howorwitz, 1994; McGinn & Young, 1996; Young, 1999) and may therefore not be accessible to self-examination or self-report (Chambless & Hope, 1996; Clark, 2001; Clark & Purdon, 1995). Generally, research investigating cognitive processes
in social anxiety has focused on encoding, storage, and retrieval of information, attentional biases, as well as conscious thought appraisals (Clark, 2001; Clark & Purdon, 1995; Williams et al., 1997). Moreover, experimental approaches typically assess the frequency, or degree to which negative cognitive content is associated with particular symptoms of a disorder. This type of research presents self-rated word lists, or statements of thought, to assess conscious appraisals regarding the frequency of negative beliefs, emotions, thoughts, or memories (Clark, 2001; Clark & Purdon, 1995).

However, these cognitive assessments assume questionnaire measures provide an accurate measure of an individual’s thoughts, which inevitably vary across a wide variety of situations (Chambless & Hope, 1996; Clark, 2001). Therefore, some researchers question the validity of data produced exclusively by self-report measures (Chambless & Hope, 1996; Clark, 2001; Clark & Purdon, 1995). For example, Wenzlaff and Wegner (2000) identified one criticism of self-report measures that seems particularly relevant to the study of social anxiety, in that the nature of self-reporting personal thoughts could potentially increase self-consciousness and as a consequence, influence socially desirable responses.

Moreover, Nisbett and Wilson (1977) reviewed evidence regarding unconscious processes and concluded that often, individuals who are asked to verbally report on cognitive processes are completely inaccurate. Further to this, individuals must be willing to accurately report their cognitions and this information is restricted to thoughts and beliefs accessible to conscious awareness (Chambless & Hope, 1996; Clark & Purdon, 1995). Thus, self-reports are problematic because people typically vary in their tendency to suppress unwanted thoughts, especially if it involves emotionally disturbing or negative personal information (Wenzlaff & Wegner, 2000). Even non-clinical individuals display moderate levels of natural resistance to thinking upsetting thoughts and may therefore endorse more positive cognitions (Clark, 2001;
Early memories and the social anxiety spectrum

Deeber et al., 2011). Consequently, responses to self-report measures may reflect an individual’s conscious and/or unconscious defence mechanisms and generate biased responses (Clark, 2001; Wenzlaff & Wegner, 2000).

Similarly, cue words or stimulus materials using adjectives are often utilised in studies to elicit memories (Hirsch & Clark, 2004; Morgan, 2010; Wenzel, Pinna & Rubin, 2004; Williams et al., 1997; Williams et al., 2007). However, a recent review of the literature on autobiographical memory and social anxiety recognised that studies examining memories of social threat, typically assume that situations or emotions specified by a cue word sufficiently activate a related memory (Morgan, 2010). Moreover, these memory tasks use pre-determined social threat cues that may not adequately capture the type of social threat experienced by all socially anxious individuals (Clark & Purdon, 1995; Wenzel et al., 2004). Thus, it is questionable whether single word cues are adequate for eliciting the degree of fear experienced in actual social encounters, and whether single words activate schemas (Heinrichs & Hofmann, 2001; Hirsch & Clark, 2004; Wenzel & Cochran, 2006).

Subsequently, it has been argued that experimental tasks must elicit social threat in order to activate negative beliefs and relevant fear structures that induce cognitive biases (Clark, 2001; Morgan, 2010; Tanner et al., 2006; Wenzel et al., 2004). Moreover, research investigating unconscious processes should activate inaccessible schemas relevant to the study (Clark, 2001; Clark & Purdon, 1995; Hirsch & Clark, 2004; Morgan, 2010). Thus, information related to the content of unconscious cognitive processes such as schemas, should be sought through additional research paradigms that employ both implicit and explicit techniques, or combine projective and self-report measures (Bruhn, 1990; Chambless & Hope, 1996; Clark, 2001; Fowler et al., 2000; Tanner et al., 2006; Theiler, 2005; Welburne et al., 2002). From this view, it seems especially important to utilise projective techniques for research on socially anxious samples, who have
been found to have trouble identifying and describing their emotions (Turk, Heimberg, Luterek, Mennin & Fresco, 2005).

3.5. Investigation of Cognitive Processes in the Current Study

This study aimed to overcome limitations of previous research on memory and other cognitive phenomenon, that have relied exclusively on self-report measures, cue words, or predetermined outcome variables to elicit memory (Clark, 2001; Hirsch & Clark, 2004; Morgan, 2010; Wenzel et al., 2004; Williams et al., 1997). To implement this methodology, consideration was given to various theoretical and empirical assertions in the development of this study’s research design. First, was the contention that social anxiety is dependent on particular schemas that remain latent until activated by relevant social stressors (Beck et al., 1985; Clark & Wells, 1995; Rapee & Heimberg, 1997). Further to this, was the notion that meanings related to unconscious schematic processing can be activated and accessed through memories (Bruhn, 1990; Clark & Rhyno, 2005; McGinn & Young, 1996). Thus, theoretical and empirical evidence suggests early memory probes are an effective projective technique for assessing character structure and clinical problems (Bruhn, 1990; Fowler et al., 2000; Mayman, 1968), as they represent current thoughts and core features of emotional distress (Bruhn & Schiffman, 1982a; Bruhn, 1990; Fowler et al., 2000).

Based on these assumptions, early memory probes were incorporated into this study’s research design, with the view that personally relevant memories would be more likely to elicit social threat than pre-determined cue words or word-lists, and thereby activate potentially dysfunctional schemas related to social anxiety. Moreover, early memory probes have been utilised in this research to counteract the limitations of relying exclusively on self-report data without an associated projective measure (Bruhn, 1995; Fowler et al., 2000). Therefore, this
study cued participants’ earliest social memory, as a projective technique used to elicit unconscious cognitive processes and affective reactions related to social situations, and generate qualitative data from self-narrative responses that could be analysed for meaningful schematic content.

The utility of theoretically derived early memory probes, provides an assessment design that can tap into conscious and unconscious paths of schematic processing (Bruhn, 1990), thus addressing limitations of self-report measures that only access information in conscious awareness (Clark, 2001; Clark & Purdon, 1995; Wenzel & Wegner, 2000). Subsequently, implementation of projective techniques in this study were designed to activate schematic processing, with the intent of revealing potential factors from past social situations relevant to current social fears (Bruhn, 1990). More specifically, memories were used as a means of exploring meaningful information related to developmental experiences, for individuals who developed self-reported symptoms corresponding to clinical and subclinical social anxiety, relative to non-socially anxious controls. The following chapter outlines theoretical and empirical evidence regarding memory probes and their use in the current study.

3.6. Theoretical Orientation of this Research Study

A prominent view of cognitive theories and practitioners, is that negative experiences early in life influence cognitive vulnerabilities toward developing psychological disorders such as SAD (Beck, 1996; Blatt & Maroudas, 1992; Clark & Wells, 1995; Young, 1999). Empirical evidence supports this theoretical contention, as indicated by findings that potentially harmful early interactions with parents, peers, adverse social encounters, and meaningful conditioning events, are associated with the development and onset of SAD (APA, 2013; Hackmann et al., 2000; McCabe et al., 2003; Harvey et al., 2005; Kearney, 2005; Stemberger et al., 1995).
However, cognitive theories of psychopathology focus on current life events, present concerns and cognitive distortions that cause distress (Beck et al., 1985; Clark, 2005; Rapee & Heimberg, 1997). Thus, potential predisposing factors that impinge upon emotional vulnerabilities are acknowledged, however the nature of such aetiological factors is not highlighted by theory or treatment interventions for psychological disorders (Blatt & Maroudas, 1992; Bruhn, 1985; Williams et al., 1997).

Thus, cognitive perspectives identify memories of past events as playing an important role in the development of SAD (Clark & Wells, 1995; Hofmann, 2007; Rapee & Heimberg, 1997), although little emphasis is placed on understanding the nature of childhood experiences, or attempting to interpret tacit factors from memories that influence the development of a particular disorder (Beck et al., 1985). In fact, Beck’s cognitive theory specifically asserts that core assumptions formed during childhood regarding the self and the world remain outside of conscious awareness (Beck et al., 1985; McGinn & Young, 1996). However, in order for theoretical models to provide a complete conceptualisation of SAD and its subclinical presentations, it seems particularly important to understand the nature of past social experiences that influenced dysfunctional schemas related to current social anxiety symptom severity.

Interestingly, various psychological theories suggest that early memories reveal key features of an individual’s upbringing such as familial and school environments, or significant life events (Bruhn, 1990; Mayman, 1968). This provides insight into how particular events or relationships affected people’s emotional state later in life (Bruhn, 1990; Bruhn, 1995; Fowler et al., 2000; Williams et al., 1997). Thus, when considering the early onset of SAD (Costello et al., 2005; Hudson & Rapee, 2000), exploration of childhood memories from this early developmental period, seems important for identifying and understanding historical influences, or potential conditioning experiences associated with the development of subclinical and clinical
social anxiety. The theoretical orientation of this research incorporated various strands of
psychoanalytic theories that influenced Bruhn’s Cognitive-Perceptual Theory (CPT) of
personality (Bruhn, 1990), which was used as a framework for analysing memories in the current
study.

In brief, the basic premise of CPT argues that early childhood memories reveal a great
deal of information related to the central core of emotional problems that may not be available to
conscious awareness. This theory highlights early memories as a vehicle for exploring
unconscious processes associated with core issues and concerns (Bruhn, 1990). The theoretical
convergence of Bruhn’s ideas with cognitive models of SAD presented in this chapter, intended
to encompass a unified and comprehensive formulation of thematic content associated with
earliest social memories for individuals with clinical and subclinical social anxiety, when
compared to non-socially anxious controls. Despite the relevance of cognitive theories in
understanding specific profiles of SAD, it provides limited information regarding the nature of
aetiological factors associated with the disorder (Blatt & Maroudas, 1992).

3.7. Summary of Chapter 3

Cognitive models propose memories of past events shape unconscious schemas related to
social situations, which triggers anxiety and development of SAD. These dysfunctional schemas
are triggered by social threat, thus research assessing cognitive structures (i.e., memory) should
activate unconscious schematic processing relevant to the research topic. Contentions that
schemas can be activated through memories and dialogue (Bruhn & Last, 1982; Bruhn, 1990;
McGinn & Young, 1996), were particularly relevant to the current study’s utilisation of memory
probes, intended to capture the essence of schematic processing, or historical influences
embedded in self-narratives of personally meaningful social situations (Bruhn, 1990; Bruhn,
1995). The following chapter will present early memory theories of personality, that were drawn upon as a means of exploring potentially tacit factors from thematic content of memories, for individuals with subclinical and clinical social anxiety, before presenting empirical evidence relating to the utility of memory probes and its relevance to research on social anxiety.

Chapter 4: Early Memories in relation to Personality and Psychopathology

“For what characterizes and individualizes us more than our memories?

Memories preserve the essence of what we have extracted from life’s experiences”

(Bruhn, 1995. p.196)

This chapter provides a brief overview of various psychoanalytic, psychodynamic, object relations, and attachment theories of personality, before introducing Bruhn’s Cognitive-Perceptual Theory (CPT) of personality, which informed the theoretical position of the current study. Throughout discussions of aforementioned theoretical perspectives, the role of early memories and unconscious processes in the development of personality, current concerns, and psychopathology is reviewed. In accordance with CPT, utilisation of early memory probes as a projective technique is discussed, with particular emphasis on the Early Memories Procedure (EMP) (Bruhn, 1990), as it had particular relevance to the rationale and experimental design adopted for this study.

Following this, research supporting the clinical utility of early memory probes is presented, with particular focus on empirical evidence related to memories and social anxiety. Throughout the review of memory theories and empirical research, factors such as parenting, family environment, and trauma are identified as pertinent to the development of psychopathology, which substantiates aetiological research findings presented in Chapter 2 (see
2.7 Aetiological Factors associated with Social Anxiety Disorder p.26). The chapter concludes by outlining the use of early memory probes in the current study, with reference to research pertaining to social anxiety that informed changes made to traditional Cognitive Perceptual (CP) views of early memory procedures adopted in the current study.

4.1. The Development of Early Memory Theories

Several psychological theories of personality emphasise the importance of past experience and unconscious processes in guiding the development of personality and psychopathology (Beck et al., 1985; Blatt & Maroudas, 1992; Bruhn, 1990; Fowler, Hilsenroth & Handler, 1995). More specifically, theoretical perspectives derived from traditional psychoanalytic principles have long proposed that both conscious and unconscious material from early childhood memories, involving caregivers, family environment, and negative events, are associated with the development of personality structure and psychological disturbance (Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn, 1990; Fowler et al., 1995; Fowler, Hilsenroth & Handler, 2000). The following discussion of personality theories demonstrates how the function of personality and current concerns (i.e., socially anxious concerns), can be understood through recollections of early childhood memories. First, a brief definition of early memory as viewed by this research is presented.

4.2. Early Memory as part of Autobiographical Memory

Early memories derive from autobiographical memory, in particular episodic or event memory of personally meaningful events in long-term memory (Acklin, Bibb, Boyer & Jain, 1991; Bruhn, 1990; Conway & Pleydell-Pearce, 2000; Demiray & Bluck, 2011; Thomsen, 2009; Williams et al., 2007). As such, autobiographical memory represents personal significance as it
consists of beliefs and opinions regarding events, as opposed to pure facts associated with events. Similarly, consciously accessible content from autobiographical memory is seen as unconsciously determined by an individual’s belief system and current self-perceptions (Bruhn, 1990; Conway & Pleydell-Pearce, 2000; Demiray & Bluck, 2011; Morgan, 2010).

From this view, autobiographical memory reflects an “identity to the self, especially in relation to others and to the world” and as a result, early memories reveal important information related to personality functioning (Bruhn, 1990, p.41). Moreover, autobiographical memory comprises a network of narratives, language, emotions, and imagery, and its analysis therefore involves cognitions and related affect (Rubin, 2009; Wenzel et al., 2004). This description of autobiographical memory has been accepted by various researchers (Acklin et al., 1991; Bruhn, 1990; Conway & Pleydell-Pearce, 2000; Demiray & Bluck, 2011; Morgan, 2010; Thomsen, 2009) and was adopted for this thesis.

4.3. Psychoanalytic and Psychodynamic Theories.

Freud initially presented the notion that unconscious ideas form the basis of an individual’s psychological symptoms and emotional experiences (Beck et al., 1985; Williams et al., 1997). Accordingly, Freud viewed the repression of certain childhood memories as necessary for healthy personality development. Repressed memories therefore represented a subjective product of the past, retained in the present to conceal important clinical information. In short, whether conscious or unconscious, early childhood experiences were viewed as determining the whole course of personality development and current functioning (Bruhn, 1990; Bruhn & Last, 1982; Fowler et al., 2000; Williams et al., 1997).
In contrast to Freud, Adler’s psychodynamic based view of early memories was more present focused, in suggesting that early memories are chosen due to their present relevance and continuity with past experiences (Bruhn, 1990; Bruhn & Last, 1982; Saunders & Norcross, 1988; Watkins, 1992). Thus, according to Adler, early memories were viewed as particularly important because from the vast impressions an individual encounters, only those remembered recollections impact upon the interpretation of life experiences (Bruhn, 1990; Bruhn & Last, 1982; Bruhn & Schiffman, 1982b). As such, the selection of events from memory, real or imagined, justify and validate existing beliefs of the self, the world, and the current situation (Acklin et al., 1991; Barrett, 1980; Bruhn, 1990; Bruhn & Last, 1982; Bruhn & Schiffman, 1982b; Fowler et al., 1995).

This conceptualisation of memory as selective, emphasised the diagnostic importance of early memories in representing current thoughts, attitudes, beliefs towards life, and emotional distress (Acklin et al., 1991; Barrett, 1980; Bruhn, 1990; Bruhn & Last, 1982; Bruhn & Schiffman, 1982b; Fowler et al., 1995; Watkins, 1992). From this view, early memories provide a personal narrative of an individual’s life and guide the meaning and understanding of particular circumstances (Bruhn, 1990; Bruhn & Last, 1982; Saunders & Norcross, 1988; Watkins, 1992). Moreover, early memories signify an individual’s perception of his or her life story and represent either adaptive or maladaptive attitudes that form the basis of healthy functioning or psychological distress (Bruhn & Last, 1982; Bruhn, 1990). Thus, projective content recalled from early memories should reveal important issues related to developmental themes associated with particular disorders such as SAD.

4.4. Object Relations and Attachment Theories.

Object relations and attachment theories emphasise the role of interpersonal experiences in early childhood, on personality organisation and psychological disturbance (Acklin et al.,
In line with both Freud and Adler, Mayman’s early memory theory integrated ego psychological and object relations perspectives, and proposed that an individual’s unconscious selection of memories confirms their ingrained perception of themselves and relationship with others (Acklin et al., 1991; Bruhn, 1990; Bruhn & Last, 1982; Fowler et al., 1995; Fowler et al., 2000; Mayman, 1968).

More specifically, themes associated with early memories characterise patterns in familial relationships, which are frequently repeated in a range of other life situations (Bruhn, 1990) and relationship patterns (Acklin et al., 1991). Therefore, early memories produce unconscious processes that reactivate experiences from childhood, when an individual is faced with similar emotional content (Acklin et al., 1991; Bruhn, 1990; Bruhn & Last, 1982). Further to this, Mayman (1968) contended that early memories were shaped by factors such as past life experiences, cultural milieu, personality and current life stress. Similarly, attachment theorists such as Bowlby believed that in addition to significant early experiences, environmental factors encountered throughout life are also important determinants in shaping personality and psychological health (Blatt & Maroudas, 1992).

However, the main focus of attachment theories is on the caregiver relationship, as essential for survival and healthy development (Bowlby, 1982; Ingram, 2003; Ledley & Heimberg, 2006). From this view, deviations from consistent, nurturing, and affectionate interactions with caregivers, influence insecure attachments and internal ‘working models’ of the self and others that unconsciously guide interpretation of future interpersonal situations. By definition, working models are conceptually similar to cognitive schemas, as they represent maladaptive representations of relationships that continue into adulthood (Blatt & Maroudas, 1992; Bowlby, 1982; Ingram, 2003; Ollendick & Benoit, 2012; Ledley & Heimberg, 2006). Moreover, inconsistent parenting, or caregiver responses characterised by insensitivity, absence,
or repeated experiences of neglect, can be stressful or even traumatic for an infant and subsequently affect personality development and future interpersonal relationships (Blatt & Maroudas, 1992; Bowlby, 1982; Ingram, 2003; Ollendick & Benoit, 2012; Ledley & Heimberg, 2006). Thus, negative interpersonal experiences with attachment figures during critical developmental periods lead to negative cognitive structures, which become activated in later stressful situations and increase the tendency toward maladaptive relations with others (Cunha et al., 2008; Ingram, 2003). This contention is particularly relevant to social anxiety, given the interpersonal nature of the disorder (Alden & Taylor, 2004).

4.5. Cognitive-Perceptual Theory of Early Childhood Memories

The current study was particularly interested in Bruhn’s model of personality: Cognitive Perceptual Theory, formulated to help inform theorists and researchers of how individuals perceive themselves, others, and the world (Bruhn, 1990). The CP model is a theory influenced by various aspects of Freudian, Alderian, ego-psychological, and cognitive perspectives (Bruhn, 1990). Like many variants of psychoanalytic theory, CPT views early memories as fantasies, or reconstructions of events, and whether false, distorted or accurate, reveal important clues about an individual’s phenomenological world, current difficulties, and psychological distress (Bruhn, 1990). The description of CPT provided here focuses on aspects of the model relevant to this study. For a complete review of CPT, the reader is directed to Bruhn (1990).

Cognitive-Perceptual Theory argues that a common misperception of early memories stems from traditional psychoanalytic theories, in that they directly or indirectly involve trauma. However, after having reviewed thousands of early memories in clinical practice, Bruhn found the majority of memories did not involve trauma. In contrast, early memories typically reflected
major life interests, expectations, preoccupations, and prominent aspects of an individual’s belief system and current world view (Bruhn, 1990). Thus, Bruhn argued that traumatic experiences do not necessarily have to be negative; instead, traumatic memories can provide an individual with a sense of resilience, direction, or determination, and thus serve as motivation for life goals (Bruhn, 1990). As such, given that people are raised by different families, come from different cultures, and are subjected to different life experiences, perception and later recollections are selective and individually determined by fears, needs, interests, major beliefs, personality, and present relevance, rather than trauma (Bruhn, 1985; Bruhn, 1990; Bruhn & Last, 1982).

Essentially, CPT emphasises a person’s innate need to grow and extend his or her array of competence, by considering how this process becomes derailed through perception and memory processes (Bruhn, 1990). This view reflects the importance of cognitive principles for describing early memories as utilising a somewhat stable set of schemas for perceiving the self, relationships, and the environment (Bruhn, 1985; Bruhn, 1990; Bruhn & Last, 1982; Fowler et al., 2000). Furthermore, an individual’s current belief system (i.e., a network of basic attitudes regarding the self, others, and world), determines how the past is reconstructed through the course of selective perception and later reconstruction of occurrences in memory (Bruhn, 1990).

Thus, while a great deal of information is processed, most is quickly forgotten and as a consequence, not all memories are seen as equally important. From this perspective, CPT adopts Adler’s position, in suggesting that early childhood memories are significant because only a few selected memories are retained from an abundance of childhood experiences (Barrett, 1980; Bruhn, 1990; Bruhn & Schiffman, 1982b; Saunders & Norcross, 1988). In a similar way, the older the memory, the more likely it is to be valuable because the further back in time, the less one recalls (Bruhn, 1990). In turn, earliest memories are seen to have the greatest diagnostic importance (Barrett, 1980; Bruhn, 1990; Bruhn, 1995; Bruhn & Schiffman, 1982b; Saunders &
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

Norcross, 1988), and were utilised in this study as a means of exploring the nature of past social influences on individuals with current social anxiety symptoms. Early memories can typically be brought into conscious awareness with minimal probing and are usually highly meaningful and emotionally charged. Conscious early memories may be completely or partially processed, whereas memories that have been repressed, such as unconscious traumatic memories, are usually too painful or overwhelming to process at that point of time. Moreover, much of what is recalled from memory is associated with the satisfaction or frustration of major needs (Bruhn, 1990).

4.5.1. Major unresolved issues. Bruhn identified several reasons why a particular memory may be important. “A memory may preserve a major lesson learned about the self, others, or the world, or it may focus on major issues that are unresolved and currently in process” (Bruhn, 1990, p.43). Major unresolved issues, or ‘issues in process’ relate to unmet needs that impede personal growth (Bruhn, 1985; Bruhn, 1990). When an individual has not developed the coping mechanisms to gratify major needs, these shortfalls are related to issues that are currently being worked through (i.e., issues in process), and manifest in early memories (Bruhn, 1990).

From this view, it is adaptive to focus on what is important and most pressing for healthy personality development. Accordingly, issues in process determine which early memories are available in consciousness and ‘energised’ at particular times (Bruhn, 1990; Bruhn, 1995). It is therefore not surprising that when issues are worked through, information in long-term autobiographical memory that is discrepant with an individual’s current belief system is forgotten. As such, unresolved issues reveal an individual’s current issues and view of life (Bruhn, 1990).

The CP model proposes that everyone works through particular issues. For some, these issues are not troublesome, however people who present with clinical problems are usually
caught up in major unresolved issues that can impact various aspects of life (Bruhn, 1990), which is often the case for individuals with SAD (Aderka et al., 2012; Fehm et al., 2008; Furmark, 2002; Iancu et al., 2006). To summarise, early memories are reconstructed stories about the past that reveal an individual’s present-day attitudes and unresolved issues (Bruhn, 1990). From this view, for individuals who are socially anxious, major unresolved issues from early social memories would relate to current socially anxious concerns. Thus, major unresolved issues are readily available in consciousness and represent one of several variables that determine priority in autobiographical memory (Bruhn, 1990).

4.5.2. Organisation of long-term autobiographical memory. Like CPT, this study adopted the position that autobiographical memory (and subsequently early memory) is adaptive, in that it reflects learning, organisation, coherence, and utility. Thus, present beliefs, expectations, and perceptions influence what is recalled from long-term memory, and in a similar way, what is recalled from childhood memory symbolises and substantiates current beliefs and perceptions (Bruhn, 1990). Further to this, early memories conform to the principle of utility (i.e., what is remembered is useful) and adaptation (i.e., what is remembered helps us function more effectively). From this view, memory is purposeful and directed, not random, otherwise the world would be a confusing place and it would be impossible to respond effectively to people or situations in daily life, let alone long-term functioning and planning (Bruhn, 1990).

In addition, CPT postulates that memory is organised around several principles: attitude, mood, category, time, person, place and activity. Bruhn acknowledged that other categories are deemed to exist, however these categories were theorised as being most important for determining personality organisation and identifying unresolved issues (Bruhn, 1990). Categories pertaining to attitude, mood, content, person, and place, will be described in further detail, as they seem particularly relevant to research pertaining to social anxiety. Importantly,
these organising principles were incorporated into a scoring system (Comprehensive Early Memory Scoring System) that was used to guide thematic analysis of early memories in this study. For a detailed outline of the CEMSS-R categories used for coding thematic content from memories in the present study, refer to section 6.8.1. The comprehensive early memory scoring system (CEMSS) and section 8.6.2. Scoring guidelines for tone, affect type, content and characters.

Attitude and mood were identified by Bruhn as the most important factors for organising information in memory, as they bear great influence on whether past experiences can be accessed from memory at all (Bruhn, 1990). For instance, once a powerful or influential attitude has been established (e.g., “I am boring, inept, unlovable” or “other people are critical”), an individual’s store of memories is organised around supporting these attitudes and beliefs. Thus, attitudes function to regulate the recall of past experience and also play a deep-seated role in shaping self-concept and personality organisation (Bruhn, 1990). Similarly, it is well known that recalling memories of past experiences discrepant with one’s present mood, may be difficult or even impossible (Bruhn, 1990). This example has been demonstrated by studies in which memories are selectively recalled according to current mood state (Bywaters, Andrade & Turpin, 2004; Witheridge et al., 2010). Empirical evidence related to memories and social anxiety is presented in detail in section 4.10. Empirical Research related to Memories and Social Anxiety.

According to CPT, content categories bring certain memories into awareness and also act as an organising principle in memory. Specific categories can reveal useful data for some people, or data that is not currently important for others (Bruhn, 1990). For example, if social situations were conceptualised as a content probe, this would elicit important information for socially anxious individuals but not for non-socially anxious individuals. In addition, information from person categories also has substantial adaptive value because this data reveals an individual’s
earliest schemas of the self, mother, father, sister, brother, teacher, that later generalise into schemas regarding women, men, authority figures, etc. Therefore, the earliest memory of mother and father assesses relationships with each parent, as well as more general attitudes toward women and men. Person category probes provide valuable insight into how individuals perceive others and what they expect from specific (i.e., loved ones), and general categories of people (e.g., authority figures) (Bruhn, 1990).

Likewise, place categories help organise memories that involve expectations related to places (e.g., school, home), or situations involving places (e.g., oral presentation school) (Bruhn, 1990). Place categories contain information about expectations of particular places and situations and may therefore elicit memories that reveal generalised attitudes of the self and others in social or interactional situations (place). Place categories such as the earliest memory of school, assesses attitudes toward achievement, mastery and independence. Moreover, early memories of social situations that occurred at school are likely to elicit attitudes regarding social performance, peer relationships and cooperation, as well as other general attitudes about the self, perhaps in terms of self-confidence, self-concept, competency, or likeability (Bruhn, 1990).

From a CP perspective, the meanings regarding an individual’s beliefs and issues in process are explicated by analysing needs, interests, wishes, fears, major unresolved issues, and so on (Bruhn, 1985; Bruhn, 1990). Thus, early memories provide a vehicle for exploring personality structure and historical influences on an individual’s current state (Bruhn, 1995). Overall, the CP model maintains that the most efficient method for exploring the organisation of the self is through early memories, which can be accessed through the Early Memories Procedure (EMP), a projective method that produces valuable thematic content (Bruhn, 1990). The EMP is outlined in more detail in Section 4.8 The Early Memories Procedure.
4.6. Memories for Adverse Social Experiences in Social Anxiety

Clark and Well’s (1995) model of SAD propose that cognitive biases associated with social anxiety develop as a result of early, negative social experiences. Further to this, memories of these adverse social experiences may be involved in the development of social fears, and reflect a traumatic conditioning episode. The review of aetiological factors associated with SAD in Chapter 2 (Section 2.6. Aetiological Factors associated with Social Anxiety Disorder), demonstrated environmental factors such as negative parenting (Beesdo et al., 2009; Beidel & Turner, 2007; Knappe et al., 2011; Ollendick & Benoit, 2012) and negative social experiences, particularly peer relations (Biggs et al., 2012; Erath et al., 2007; Flanagan et al., 2008; Ollendick & Hirshfeld-Becker, 2002; Husdon & Rapee, 2000; Ledley & Heimberg, 2006; Storch et al., 2005), as implicated in the development of social anxiety. Therefore, as might be expected research suggests that memories of being teased or bullied during childhood, is often associated with social anxiety in clinical (Hackmann et al., 2000; McCabe et al., 2003) and non-clinical populations (Edwards, Martin & Dozois, 2010; Roth, Coles & Heimberg, 2002).

More specifically, Hackmann et al. (2000) found that memories reported by patients with SAD frequently contained themes of adverse social events (e.g., being bullied, criticised, embarrassed or publicly humiliated), which clustered around the onset of the disorder. Hackmann and colleagues interpreted these findings linked to negative events, as influential in the development, or exacerbation of social anxiety symptoms. An investigation conducted by Harvey et al. (2005), into the learning history of SAD supports this view. It revealed that 84% of the SAD sample recalled an event that coincided with the beginning of their social fears. More specifically, findings revealed five most common situations potentially related to onset of social fears: change of school or workplace (51%), problems with peer group at school or work (51%),
being ostracised by peer groups or not fitting in (49%), difficulty doing well at school or work (47%) and being criticised by someone (44%).

Harvey et al. (2005), asked 55 individuals with SAD to recall and describe four social situations that occurred before the age of 14. These situations were based on a time when the participant did something embarrassing, felt very nervous, observed someone else doing something embarrassing, and observed someone else looking very nervous. Compared to non-anxious controls, when socially anxious participants recalled memories of being embarrassed or nervous, other people’s responses were rated as less positive. Thus, the role that other people play in memories were of particular importance. A review of these studies conducted by Morgan (2010), suggested socially anxious individuals may be more likely to recall, or draw on negative childhood experiences from memory, and this process could prevent individuals with social anxiety from updating their existing self-view. Furthermore, this review concluded that qualitative research approaches, which systematically categorise properties of social memories are important for future work in this area.

4.7. Early Memory Probes as a Projective Technique

Projective techniques typically involve presenting participants with relatively ambiguous stimuli, where responses are free choice and no right or wrong answers exist. The interpretation of responses provided by projective tests are conceived as reflecting core affective states, personality characteristics, and cognitive processes (Bruhn, 1990; Mayman, 1968; Saunders & Norcross, 1988). Several theorists suggest that the central core of an individual’s motivations that influence emotional problems, can be analysed from themes in early memories (Acklin et al., 1991; Bruhn, 1990; Bruhn & Last, 1982; Fowler et al, 2000). Moreover, CPT viewed the historical reality of memory as less important for understanding an individual, than their actual
interpretation of reality (Bruhn, 1990; Fowler et al., 2000). Subsequently, early memories allow for a clinically useful and empirically testable theory of early memory by emphasising the projective importance of memories (Acklin et al., 1991; Bruhn, 1990; Fowler et al., 2000).

In sum, Bruhn and others contended that early memory probes are an efficient projective technique for personality assessment without having to validate the memory for accuracy, because an individual’s personal spin of the memory reflects his or her unique personality (Acklin et al., 1991; Bruhn, 1990; Fowler et al., 2000; Saunders & Norcross, 1988). From this view, memories are thematic and exist because they are relevant. If a memory was not important, it would be pointless not memorable, and would therefore not be retained in long-term autobiographical memory (Bruhn, 1990). Thus, even if memory is distorted by unconscious factors, interpretation is still valid and provides reliable projective data (Acklin et al., 1991; Bruhn, 1990; Fowler et al., 2000).

4.8. The Early Memories Procedure

The EMP is a projective test of autobiographical memory, based on the assumption that recollection of events from memory reflect an individual’s personality and their unresolved issues that are currently active (Bruhn, 1990). Bruhn argued that “if events in autobiographical memory reflect the organization of personality, then there is warrant to conceptualise the EMP as a projective technique” (Bruhn, 1990, p.123). The EMP (Bruhn, 1990) was utilised, with its associated scoring system (See Section 6.8.1. The comprehensive early memory scoring system and 6.8.2. Scoring guidelines for tone affect type, content and characters), as a basis for exploring this study’s aims and hypotheses. Some changes were made to the EMP and CEMSS-R based on research relating specifically to social anxiety. These adaptations reflected a need to
effectively assess the target population, and will be highlighted throughout the discussion of Early Memory Probes and the Current Study (See Section 4.11).

The EMP incorporates probes for spontaneous memories (i.e., earliest memory, along with the next four memories that come to mind by association), as well as cues that elicit directed memories (i.e., early and recent memories of various types). For instance, directed memories involve; most important, clearest, or earliest memories from one’s lifetime (e.g., earliest memory of school, mother, father) (Bruhn, 1990). The directed memory categories comprising the EMP were based on Bruhn’s clinical experience with clients, whereby a large number of affectively laden and traumatic memories were obtained as a result of specifically requesting categories of directed memories. Bruhn found the vast majority of these memories had not been discussed before by the client and were not reported as spontaneous memories. However, he noted that this was not surprising given that many significant life events, such as marriage, death of a loved one, or failure for example, occur after childhood (Bruhn, 1990).

Therefore, clinical experience indicated that important memories can be brought into awareness when the right categorical probe is used (Bruhn, 1990). Consequently, Bruhn suggested that future research aiming to study early memory should consider the value of exploring other categories or subcategories (Bruhn, 1990; Last & Bruhn, 1992). It follows that to explore specific interpretations regarding an individual’s schemas for social situations, it would be appropriate to ask for memories of being in a social situation.

4.9. Empirical Evidence of Early Memory Probes in Research

The contention that early memories can probe specific themes and yield interpretable projective data has been demonstrated by numerous empirical studies (Acklin et al. 1991; Arnow & Harrison, 1991; Bruhn & Schiffman, 1982; Fowler et al., 1995; Fowler, Hilsenroth & Handler,
1995; Fowler et al., 2000; Last & Bruhn, 1983). Watkins (1992) reviewed 30 Alderian orientated early memory studies conducted between 1981 and 1990 to conclude that overall, present interpersonal behaviour was consistent with themes from early memories. In addition, compared to control groups, psychiatric patients had memories categorised by greater negative emotional tones, themes of fear or anxiety, and passivity. An additional finding across these studies revealed that the early memories of psychiatric patients became more positive over the course of treatment. However, after having reviewed the early memory literature, Watkins (1992), like others (e.g., Bruhn & Schiffman, 1982), suggested that in order to yield precise results that translate into more meaningful findings, future research should provide inter-rater reliability between memory ratings, as well as utilise pilot work for guiding study. These suggestions were incorporated in the execution of this research in order to provide meaningful interpretive data.

Interestingly, early memory probes have recently been utilised in research as a vehicle for eliciting a range of unconscious early maladaptive schemas specified by Young (1999) (Howell, 2010; Theiler, 2005). Findings such as these have particular relevance to this study, which assumed that eliciting early social memories and intrusive images that occur when anxious in social situations, would activate unconscious schematic processing related to social anxiety. Theiler (2005) investigated the efficacy of early childhood memories as indicators of current maladaptive schemas and psychological health. Early memories were employed as a means to assess unconscious schemas with self-reported schemas (Study 1) and psychological symptoms (Study 2). Results, based on four early childhood memories (i.e., two spontaneous memories and memories of mother and father), revealed a significant relationship between self-reported maladaptive schemas and maladaptive schemas from early memories. However, given findings that schemas in memories were not identical to self-reported schemas, it was suggested that schemas represented in early memories were tapping different sources of information than conscious self-reports. This study provided support for the notion that certain core maladaptive
schemas are unconsciously associated with early childhood memories, and can differentiate individuals with high levels of psychological symptoms, as well as individuals with high and low levels of self-reported maladaptive schemas.

An additional study explored potential aetiological factors associated with social anxiety by utilising five early memory probes related to: earliest memory, earliest memory of mother, father, school, and social situation, to elicit relevant maladaptive schemas related to each memory probe (Howell, 2010). Results that almost reached significance indicated that for highly socially anxious individuals, early memory probes of school elicited schemas related to defectiveness/shame, and probing memories of social situations elicited maladaptive schemas related to failure. It was likely that pathological maladaptive schemas were not as relevant for the non-clinical sample utilised, as one would expect in clinical samples. Thus, if considered preliminary evidence, an important finding from the pattern of results indicated that specific people or events in memory activated different unconscious maladaptive schemas.

4.10. Empirical Research related to Memories and Social Anxiety

An interesting area of research has started to examine the qualitative nature of memories for individuals with SAD and high social anxiety (i.e., subclinical levels of social anxiety). Accordingly, high socially anxious individuals have been found to retrieve memories in post-event processing conditions rated as significantly more negative and shameful, compared to memories of non-socially anxious individuals (Field et al., 2004). Further to this, Matos, Pinto-Gouveia and Gilbert (2013), investigated the nature of shame and shame memories in social anxiety, in a large non-clinical sample. The authors of this study differentiated between two forms of social anxiety or social wariness: Paranoid anxiety- malevolence of other people; and
Social anxiety- inadequacies of the self in relation to social acceptance and social position. Results of the study suggested internal shame was associated with social anxiety and external shame was associated with paranoid anxiety. Furthermore, shame memories were associated with paranoid anxiety but not social anxiety. Thus, findings regarding shame memories require further investigation.

Furthermore, Wenzel and Cochran (2006) examined memories by presenting automatic thoughts related to social anxiety and requested participants retrieve the first specific memory that came to mind. Findings revealed that when cued with socially phobic related automatic thoughts (e.g., others will criticise me) individuals with SAD retrieved significantly more memories categorised by anxiety, worry, and fear, compared to non-anxious controls. Similarly, Witheridge et al., 2010) explored the content of memories in relation to DSM disorder specific schema relevant content. Memory narratives were assessed for patients with SAD, major depressive disorder, and panic disorder with agoraphobia, who completed the Autobiographical Memory Test (AMT: Williams & Broadbent, 1986). Findings revealed patients with SAD reported memories containing more social evaluative content than memories from patients in major depression and panic with agoraphobia groups, however this difference was not significant. Furthermore, patients with SAD did not significantly differ from those with major depressive disorder in terms of autobiographical memories related to depressive or autonomy themes (i.e., fear of failure, worthlessness, perfectionism), although these themes were present to a greater degree in memories of the major depression group.

In one study conducted by D’Argembeau, Van der Linden, d’Acremont and Mayers (2006), individuals with SAD and non-anxious controls were asked to recall events (social and non-social) related to positive and negative affect. The SAD group recalled greater self-referential information when recalling social events (e.g., memory of thoughts and behaviour)
however there was no difference between the groups’ recollection of non-social events. Evidence consistent with these findings, was provided by Anderson et al., 2008), in which narrative content of autobiographical social memories characterised by embarrassment, shame, or humiliation were analysed among non-anxious controls and individuals with SAD. Findings revealed memories of socially anxious participants contained more negative self-beliefs and fewer references to other people, as well as greater self-conscious emotions and anxiety symptoms associated with social events, than the control group.

Recently, Stopa et al. (2013) conducted a qualitative analysis of interpersonal threat in nine participants with DSM-IV SAD. Participants were interviewed and asked to recall a recent distressing situation. Results of thematic analysis indicated that individuals with SAD often recalled memories of past events that elicited similar fears as the recent distressing situation, thus providing evidence for a relationship between memories of past events and current situations individuals with SAD found distressing. Furthermore, when reporting a recent time of distress, individuals with SAD typically reported feeling self-conscious and experienced emotional responses involving fear and anxiety. Qualitative analysis also revealed that when socially anxious participants reflected on their experience, a common theme involved perceived criticism from others, as well as problematic self-appraisals and judgements of the self, as evidence by self-critical descriptors, such as stupid, pathetic, or not normal. These qualitative studies showed that memories of past social events depicted themes theoretically and empirically related to social anxiety. Interestingly, Stopa et al. (2013) found despite Clark and Wells’ emphasis on self-focused attention, participants with SAD focused on others (source of threat) as well as themselves (object of threat). These results provide support for Rapee and Heimberg’s (1997) model of SAD, in which the external focus of attention during social situations was emphasised, in addition to self-focused attention (Stopa et al., 2013).
4.11. Early Memory Probes and the Current Study

Bruhn (1990) contended that a great deal of data obtained by the EMP cannot be measured via direct questioning because it is not available to consciousness. He also claimed that a set of early memories can specify central issues and the context in which these issues are likely to be evoked. Subsequently, spontaneous early memories can depict an unresolved issue (negative affect memory), or the memory can play out a scenario of whether a particular need was met (positive affect memory) (Bruhn, 1990). Furthermore, throughout Bruhn’s clinical experience, earliest or first memories of mother, father, and school were found to be particularly important (Bruhn, 1990), and as previously mentioned, earliest memories were viewed as special because they survived from an uncountable number of early experiences that were forgotten (Bruhn, 1990; Bruhn, 1995).

In addition, recent evidence has found that activating autobiographical memory for an event increases the accessibility of that type of memory (Pezdek & Salim, 2011). Based on these aforementioned points, as well as evidence that SAD is an early onset disorder (APA, 2013; Beesdo-Baum et al., 2012; Costello et al., 2005; Hudson & Rapee, 2010; Knappe et al., 2011; Van Roy et al., 2009; Ruscio et al., 2008), the experimental design of this study probed self-narratives related to participants’ earliest memory of being in a social situation. This study did not assess a set of early memories, as prescribed by the EMP (Bruhn, 1990). However, in line with CPT, the ‘earliest memory’ probe of a social situation created for this study was speculated to be particularly revealing of historical influences, core issues, current beliefs, fears, and expectations related to social interaction situations, for individuals with clinical and subclinical social anxiety (Bruhn, 1990; Bruhn, 1995).

Moreover, this probe was a directed memory of being in a social situation, which allowed for exploration of present attitudes and unresolved issues relevant to social anxiety. Additionally,
the broad nature of this memory probe for general ‘social situations’ allowed for recollection of a range of memories from several categorical probes specified by the EMP. For example, it seems intuitively obvious that eliciting a personally significant early memory of being in a social situation, would have major present-day relevance for socially anxious individuals but not controls (content). This early memory probe (earliest social situation) would also likely involve potential attitudes (e.g., I am socially inept) and mood (e.g., anxiety) associated with social anxiety. Furthermore, it seems reasonable to assume that early social memories would involve interactions with other people (i.e., mother, father, peers) (people). The projective meaning associated with these categories was outlined in section 4.5.2 (Organisation of long-term autobiographical memory).

The ‘directed’ memory probe (i.e., earliest social memory), was developed for this pilot study to activate schemas of social situations for individuals with self-reported social anxiety symptom severity. However, Bruhn and Schiffman’s (1982a;b) studies on punishment memories demonstrate that in order to ascertain whether preliminary evidence obtained from ‘directed’ social memories reflect equivalent results to those obtained from ‘spontaneous’ social memories, an independent study would need to be conducted.

Research utilising early memories have typically focussed on predicting group membership from early memories (Acklin et al. 1991; Arnow & Harrison, 1991; Bruhn & Schiffman, 1982b; Davidow & Bruhn, 1990; Last & Bruhn, 1983; Last & Bruhn, 1985; Theiler, 2005; Tobey & Bruhn, 1983). For example, Fowler et al. (1995) confirmed the clinical utility of early memory cues, by producing projective responses that significantly discriminated between a non-clinical control group and clinical patients. The clinical group’s memories contained instances of victimisation from malevolent adults, more negative affect, and simplistic characterisations of the self and others, in comparison to richer, more complex memories of the
non-clinical control group. However, Bruhn and Schiffman (1982a) noted a common methodological error in early memory research occurs when inappropriate measures are used to predict variables such as social anxiety threshold groups for example. A predictive model implies a large amount of certainty, which is impossible to attain especially for new early memory research conducted on homogenous samples (i.e., social anxiety) (Tobey & Bruhn, 1992). Moreover, the scoring system utilised for this study (i.e., CEMSS-R) was not designed for this purpose (Bruhn, 1995).

Therefore, as recommended by Bruhn and colleagues, this study explored the thematic content of early memories, by utilising the early memories scoring system (i.e., CEMSS-R) in conjunction with pilot work that aimed to develop codes and categories that were specifically related to the sample’s responses (Bruhn & Schiffman, 1982a; Davidow & Bruhn, 1990; Last & Bruhn, 1992; Tobey & Bruhn, 1992). Subsequently, early memory data was explored for common themes relating to historical influences or potential risk factors associated with each social anxiety threshold group, as opposed to predicting social anxiety symptoms (Tobey & Bruhn, 1992). Moreover, memory narratives obtained from this study were interpreted with the view that one’s earliest memory of being in a social situation has the potential to reveal meaningful information related to schematic processing of social situations, and/or capture the essence of potential conditioning experiences associated with current self-reported clinical or subclinical social fears.

4.11.1. Affect type and early memories. From a CP perspective, early memories should be analysed for affect because emotions associated with particular memories are likely to provide insight into how individuals perceive their major unresolved issues (Bruhn, 1990; Bruhn, 1995). Furthermore, when changes occur in the plot line of the memory, changes in affect may reflect the presence or absence of coping mechanisms (Bruhn, 1990). Thus, affect is believed to
enable the expression of meaning, or messages from early memories, and can reflect negative affect memories (i.e., frustration of needs) or positive affect memories (i.e., need satisfaction) (Bruhn, 1985). Negative affect memories are characterised by: a negative interaction, a failed mastery experience, loss or rejection, responding to a stressful situation with avoidance, bad judgement, problems with impulse control, or a situation that cannot be controlled or resolved by the individual (Bruhn, 1985; Bruhn, 1990). Therefore, negative affect memories express fears, tension, uncertainty, and major unresolved issues (Bruhn, 1985; Bruhn, 1990).

On the other hand, positive affect memories express wishes and gratified needs. Characteristics of positive affect memories include: focus on positive interactions with others coupled with the strongest emotion being positive, overcoming an obstacle, an indication of learning, determination, or increased coping skills from a negative memory (Bruhn, 1985; Bruhn, 1990). Thus, positive affect memories can be a reminder of situations that provide satisfaction or inspiration, can stabilise mood by providing hope during stressful times, or serve as a defence mechanism, such as avoiding painful issues or depressive affect (Bruhn, 1981; Bruhn, 1985; Bruhn, 1990). Conversely, neutral affect memories usually indicate a lack of awareness of emotions or feelings, affective blocking, or in extreme cases, an inability to feel emotions. Unclear or vague memories, from a CP view, result from withdrawn psychic energy from the early memory, which often occurs when an individual is not completely ready to address the issues entrenched in the memory. Therefore, unclear early memories are typically associated with less insight or awareness and more powerful conflicts associated with addressing the issue in process (Bruhn, 1990).

Subsequently, the EMP requires that individuals identify and rate the strongest feeling associated with their early memory (Bruhn, 1990). However, it was suggested by Bruhn that this approach may only work well for individuals who are in touch with their feelings (Bruhn, 1990).
Studies have found that individuals with SAD report being less likely than controls to understand their emotions and have more difficulty describing emotions (Turk et al., 2005). Socially anxious individuals have also been described as more likely than non-socially anxious individuals, to attempt to control or suppress their emotions (Glick & Orsillo, 2011). Thus, rather than using self-reported affect ratings, scoring of projective content seemed appropriate for scoring early memory and intrusive image narratives in the current study.

**4.11.2. Overgeneral memory and social anxiety.** Instructions of the EMP request a specific memory of a one-time event. The rationale for this decision was based on research showing general memories contain different elements to those of specific autobiographic events (Bruhn, 1990). In this way, general or ‘pattern’ memories refer to similar activities repeated over a number of occasions and form a mental representation of the ‘average’ event (Thomsen, 2009). Thus, Bruhn and others argue, that as opposed to memory of recurrent events (i.e., general memory), only memories of one-time specific events provide information that can be analysed for projective information (Bruhn, 1990; Bruhn, 1995; Fowler et al., 1995; Williams et al., 1997).

Research into the phenomenon of overgeneral memory, has found that early traumatic experiences and even early negative events, can affect autobiographical memory by influencing the tendency toward overgeneral, or categorical (i.e., every time I attend a party) retrieval of events from memory (William et al., 1997). Williams and others have proposed that retrieval of general memories may act as a defence against recollection of specific negative events. In this way, specific memories evoke precise images that produce more intense distress whereas general memories minimise negative affect, by producing less-focussed emotional pain (Raes, Hermans, Williams & Eelen, 2006; Williams et al., 1997). Furthermore, even in non-clinical samples, overgeneral memory bias has been associated with an avoidant coping style under conditions of
threat (Deeber et al., 2012), which is characteristic of individuals with social anxiety (APA, 2013).

Empirical evidence has shown individuals with depression, as well as a history of trauma, demonstrate difficulty recalling specific personal events from memory (Hermans et al., 2004; Kleim & Elbers, 2008; Williams et al., 1997; Williams et al., 2007). However, mixed evidence exists regarding overgeneral memory retrieval in socially anxious individuals, with most studies reporting no association between social anxiety and an overgeneral memory bias, instead several studies show individuals with social anxiety recall detailed specific events from memory related to negative social experiences (Chiupka et al., 2012; Hackmann et al., 2000; Heidenreich, Junghanns-Royack & Strangier, 2007; Moscovitch et al., 2011; Wenzel, Jackson & Holt, 2002).

Interestingly however, Dickson (2004) investigated autobiographical memory in socially anxious individuals, by priming participants (i.e., Self-focus vs. Other-focus) during an impromptu speech. Results indicated no memory deficits in socially anxious individuals compared to non-socially anxious controls when asked to focus on others during the speech. However, when primed to self-focus, socially anxious participants showed greater levels of overgenerality for memories of positive cues but not negative cue words, than non-socially anxious participants. This finding was replicated in a sample of non-clinically socially anxious individuals who exhibited poor detail for positive memories and images (Moscovitch et al., 2011). Based on these findings, data from general memory and image narratives were included in analyses of qualitative data in this study because excluding general narratives may have resulted in an overestimation of negatively valanced memories and/ or images.

Further to this, based on the foundation of schema theories and clinical practice, which conceptualise schemas as unconscious templates relevant to an individual’s belief system and perception of the world (Beck, 1996; McGinn & Young, 1996; Schmitdt & Joiner, 2004), this
study assumed that general memories can provide interpretable projective information regarding schematic processing. From this view, schemas capture the essence of an individual’s present situation (Bruhn & Last, 1982). Moreover, the early memory probe developed for this study aimed to elicit information relevant to significant early social experiences, that may have influenced beliefs or assumptions related to social interactional situations. Thus, it was speculated that probing a personally relevant memory of being in a social situation (i.e., earliest social situation), would activate schematic processing relevant to social situations, and if applicable, social anxiety (Bruhn, 1990; Clark & Wells, 1995; Young, 1999).

4.12. Summary of Chapter 4

The review of early memory theories presented in chapter 4 demonstrates the importance of unconscious processes and early memories in the development of personality, psychopathology, and current concerns. To summarise, the current study adopted the position that early memories are a reliable projective technique with clinical utility and diagnostic value. Therefore, this research utilised the premise of CPT for interpreting narrative generated from memory and imagery probes in the current study. Moreover, empirical evidence suggests that memories of socially anxious individuals typically involve negative affect, as well as themes related to fear, anxiety, self-consciousness, shame, and importantly, adverse social experience, particularly with peers. Findings from the literature on memories and social anxiety, guided the hypotheses of the current study. Note, aforementioned empirical evidence depicts comparisons between nonclinical social anxiety and control groups, and clinical social anxiety with control groups, as opposed to comparisons of groups representing the entire spectrum.
Chapter 5: Rationale, Aims and Hypotheses of the Present Study

This chapter begins by providing an overview of the current study’s investigation of early memories, for potential clues that represent indicators for differentiating clinical from subclinical social anxiety presentations, based on early social encounters. Following this, the early onset of SAD and role of negative conditioning events are presented in terms of revealing potential historic information associated with self-reported SAD and subclinical social anxiety symptoms. The rationale for using early memories as a vehicle for exploring factors representative of the social anxiety spectrum follows, before concluding with this study’s aims and hypotheses, derived from theoretical and empirical evidence reviewed in the introduction section of this thesis.

5.1. Overview of the Current Study

Recently, there has been a movement towards conceptualising SAD as a dimensional construct along a continuum of severity instead of a categorically distinct entity (Aderka et al., 2012; Kollman et al., 2006; Ruscio, 2010), with research suggesting dimensional (i.e., quantitative) rather than categorical (i.e., discriminate) distinctions between clinical SAD and symptoms below diagnostic thresholds (Chambless et al., 2008; Fehm et al., 2008; Filho et al., 2010; Furmark, 2002). These studies typically report quantitative differences between subclinical and clinical groups, in terms of; number of feared situations, symptom severity, comorbidity, frequency of negative cognitions, and family history (Chartrand et al., 2011; Fehm et al., 2008; Knappe et al., 2011; Merikangas et al., 2002; Van Roy et al., 2009). Moreover, despite some recent evidence suggesting that emotional and cognitive tendencies associated with fear of negative evaluation, represent boundaries between social anxiety thresholds (Weeks et al., 2010),
few studies support categorical distinctions (Kachin et al., 2001; Kley et al., 2012; Mululo, Menezes, Vigne & Fontelle, 2012).

However, no known study to date, has explored indicators of the social anxiety spectrum based on projective techniques that elicit narrative responses, in a sample with subclinical and clinical social anxiety symptoms compared to non-socially anxious controls. Refer to the Method Section for specific variables explored from early memories (Section 6.9. Scoring Procedures for Coding Early Memories). Therefore, the main objective of this study was to investigate the nature of potential influences associated with the social anxiety spectrum, by utilising projective techniques and thematic analysis of content from memory narratives. Despite an abundance of evidence describing aetiological determinants of SAD (Beidel & Turner, 2007; Brook & Schmidt, 2008; Elizabeth et al., 2006; Ollendick & Hirshfeld-Becker, 2002), vulnerability factors differentiating clinical from subclinical symptom presentations are not well understood. In order to classify social anxiety as a spectrum disorder, a comprehensive understanding of aetiological pathways that lead to the social anxiety spectrum is essential for accurate diagnosis (Karlsson et al., 2010; Kollman et al., 2006; Ruscio, 2010). Thus, the current study explored several categorical (i.e., interactions with specific people, particular life events) and quantitative variables (i.e., degree of negative affect, frequency of negative events), to identify potential markers from early memories that distinguish diagnostic boundaries between clinical and subclinical presentations of social anxiety. Thematic analysis of early memory narratives, intended to identify (1): common characteristics underlying subclinical and clinical symptoms of the social anxiety spectrum, and (2): categorically distinct features of the disorder, representing potential indicators for differentiating boundaries between diagnostic thresholds.

5.1.1. Early onset and negative conditioning experiences. To date, various studies have provided evidence that the onset of SAD typically occurs in childhood or adolescence
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

(Costello et al., 2005; Knappe et al., 2011; Merikangas et al., 2002; Van Roy et al., 2009) and likely develops from a combination of predisposing vulnerabilities, cognitive biases, and environmental factors (Hudson & Rapee, 2010; Beidel & Turner, 2007). It is also commonly recognised that the onset of SAD may follow stressful or socially traumatic experiences (APA, 2013; Erwin et al., 2006; Harvey et al., 2005; Marteinsdottir et al., 2007). Thus, negative life events or social experiences that occur early in life, have been identified as influential factors in the development of SAD (Clark & Wells, 1995; Hackmann et al., 2000; McCabe et al., 2003).

However, despite the growing awareness and understanding of SAD, information regarding key aspects that distinguish clinical expressions of the disorder is lacking (Ruscio et al., 2008). Moreover, several aetiological determinants exist for different individuals (Beidel & Turner, 2007; Gazelle & Rubin, 2010; Hudson & Rapee, 2000), especially in relation to clinical and subclinical presentations (Knappe et al., 2009b; Ruscio et al., 2008). Thus, recognition of important events recalled from memories of early social encounters for individual’s with self-reported social anxiety symptom severity, can increase knowledge regarding current classification of SAD and help improve understanding of symptoms above and below diagnostic thresholds. This information is invaluable for informing individualised formulation and refined treatment plans (Glick & Orsillo, 2011; Ruscio, 2010). Discovery of personally meaningful experiences associated with the development of social fears is also important for predicting individuals at risk of acquiring the disorder (Chartier et al., 1998; Hudson & Rapee, 2000; Bögels & Stein, 2009). Further to this, recognition of individuals with subclinical symptoms, who experience a certain degree of distress or impairment in social situations, is advantageous for socially anxious individuals in the general community who would benefit from short term-intervention (Dell’Osso et al., 2003; Fehm et al., 2008; Filho et al., 2010; Ruscio et al., 2008).
It follows, when considering early onset (APA, 2013; Beesdo-Baum et al., 2012; Costello et al., 2005; Hudson & Rapee, 2010) and influential conditioning experiences (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003; Stemberger et al., 1995) in the development of SAD, family environments, parent, and peer relationships are particularly important given their significance on child and adolescent socialisation during crucial developmental periods (Hudson & Rapee, 2000; Kearney, 2005). Moreover, investigation of social and interpersonal encounters early in life seem important for gaining a more complete understanding of boundaries between SAD and symptoms below diagnostic thresholds.

**5.1.2. Investigation of earliest social memory.** Aetiological research has largely relied on retrospective accounts of self-reported responses to questionnaire measures. However, some researchers suggest commonly used self-reports of aetiology are inaccurate because this method for gathering historical information assumes individuals can accurately report the cause of their symptoms, which is often not the case (Chambless & Hope, 1996; Clark, 2001; Clark & Purdon, 1995). Therefore, a potentially useful approach for examining common experiences associated with social anxiety symptom presentations is to evaluate thematic content from earliest social memories. In view that, cognitive models of SAD emphasise memories of past social encounters as influential in the development and maintenance of the disorder (Clark & Wells, 1995; Rapee & Heimberg, 1997). This study was particularly interested in the notion that; schematic processing can be activated and accessed via memories (Clark & Rhyno, 2005; McGinn & Young, 1996), projective qualities are embedded in the structure of memories, and ‘earliest’ memories reveal meaningful information related to current psychological issues (Bruhn, 1985; Bruhn, 1990; Mayman, 1968).

Therefore, based on several lines of reasoning, memories were utilised as a means of revealing features of early social experiences associated with clinical and subclinical social
anxiety symptoms, relative to a non-socially anxious control group. When considering early onset of SAD and negative implications of adverse conditioning events in the development of social fears, content from early memories can provide insight into the nature and causes of social anxiety and identify potential factors that compromised healthy development (Bruhn, 1990). Therefore, early memory probes were utilised as a projective technique for revealing potential factors involved in the development of social anxiety symptom severities. In this way, thematic analysis of content revealed in self-narratives allowed for exploration of personally meaningful themes associated with current social anxiety at and below diagnostic thresholds.

Subsequently, findings from this study have the potential to add to a recent body of literature as to whether SAD is best conceptualised as a continuum with varied degrees of severity, or if clinical SAD is distinct from symptoms below diagnostic thresholds (Merikangas et al., 2002; Knappe et al., 2009b; Ruscio, 2010). This study also has the potential to substantiate cognitive models regarding the influence past memories of social events, have on the development of SAD (Clark & Wells, 1995; Rapee & Heimberg, 1997), and can extend findings to less severe symptomatology. Further to this, findings generated from early memory probes can provide preliminary evidence for effective use of probes as projective techniques in research on socially anxious samples.

5.2. Research Aims and Hypotheses relating to Social Anxiety Thresholds

The main objective of this study was to explore thematic content from earliest social memories, in a sample of participants with self-reported symptoms of social anxiety ranging from normal to pathological. More specifically, this pilot study aimed to explore and identify common and/or distinguishing features of past social situations, to inform boundaries between diagnostic thresholds and extend knowledge regarding classification of SAD as a spectrum
disorder. Support for conceptualising SAD as a categorically distinct condition, would suggest that memory narratives of the clinical group, contain well-defined features distinct to subclinical and control groups. In contrast, evidence for dimensional approaches of social anxiety as a spectrum disorder, would reveal similar core issues signified from memories of clinical and subclinical groups compared to controls, with more frequent, intense, or harmful themes associated with the SAD group.

The latter dimensional approach informed this study’s hypotheses, which viewed subclinical and clinical social anxiety as representing similar underlying interpersonal issues that vary in degree rather than type (Kachin et al., 2001). Furthermore, comparison with a psychologically healthy control group was considered necessary for realistic interpretation of findings from this pilot study (Blöte et al., 2009; Leon, Davis & Kreamer, 2011). For instance, early memories of non-socially anxious individuals would be expected to contain more positive themes related to healthy development than memories of subclinical socially anxious participants and individuals with diagnosable SAD.

The introductory section of this thesis reviewed theoretical, empirical, and clinically relevant features of social anxiety, which related to this study’s research questions and hypotheses. In particular, the nature of early social interactions with parents and peers, emotional reactions, conditioning experiences, and cognitive thoughts were explored to identify characteristic features of the social anxiety spectrum and potential markers of SAD. Therefore, memory narratives were analysed according to CEMSS-R (Last & Bruhn, 1992) categories: overall affective tone, interactions with others, affect type, and content or process themes.

The first hypothesis related to the overall affective tone projected from earliest social memories. Empirical evidence suggests, individuals with SAD and subclinical social anxiety recall significantly more negative memories than non-socially anxious control groups.
(Hackmann et al., 2000; Moscovitch et al., 2011; Wenzel et al., 2002). Moreover, in considering individuals with SAD exhibit more rigid and pronounced maladaptive schemas than non-clinical socially anxious individuals and healthy controls (Brewin et al., 2010; Clark & Rhyno, 2005; Schmidt & Joiner, 2004), it was hypothesised that:

**Hypothesis 1**) The overall tone of earliest social memories recalled by the clinical SAD group, would contain more themes signified by greater degrees of negative affect, than memories of subclinical social anxiety and control groups, respectively.

Further to this, specific types of interactions with other people can act as adverse conditioning experiences or protective influences in the development of social anxiety (Kashdan et al., 2013; Kearney, 2005; Lambert, 2006). However, empirical evidence regarding the lasting impact particular relationships have on the potential development of social anxiety is limited beyond that of parents and peers (Harvey et al., 2005; Morgan, 2010). Theoretically, it is important to understand how interactions with specific people influence social anxiety symptom severity (Harvey et al., 2005; Morgan, 2010; Pinto-Gouveia et al., 2006). Therefore, earliest social memories were explored according to the overall affective tone of social interactions. Based on research suggesting, negative interactions with others play a prominent role in the development of SAD and social anxiety in non-clinical populations (Hackmann et al., 2000; Neal & Edelmann, 2003; Rapee & Spence, 2004), it was hypothesised that:

**Hypothesis 2**) Earliest social memories of individuals with self-reported clinical SAD, would reveal more themes depicting negative interpersonal experiences than memories of individuals with subclinical symptoms and no social anxiety, respectively.
A wealth of empirical evidence supports theoretical contentions, suggesting that negative parenting characteristics of mothers and fathers are associated with the development of SAD and subclinical symptoms. More specifically, evidence from clinical and non-clinical socially anxious samples of children, adolescents, and retrospective reports of adults, suggest links with negative parenting behaviours or rearing styles (Alden & Taylor, 2004; Bögels & Perotti, 2011; Brook & Schmidt, 2008; Beidel & Turner, 2007; Elizabeth et al., 2006; Hudson & Rapee, 2000; Rork & Morris, 2009). Therefore, it was hypothesised that:

**Hypothesis 2a and 2b** Individuals with clinical SAD and subclinical social anxiety respectively, would recall more early memories involving negative interactions with their mother (H2a) and father (H2b), compared to the control group.

Negative interpersonal experiences with peers during childhood and adolescence are often reported as influential factors implicated in the development of social fears and SAD (Beidel & Turner, 2007; Biggs et al., 2012; Erath et al., 2007; Flanagan et al., 2008; Ledley & Heimberg, 2006; Storch et al., 2005). Research studies investigating autobiographical memory, report adults with SAD and subclinical social anxiety often recall memories categorised by a history of teasing, bullying, or victimisation (McCabe et al., 2003; Harvey et al., 2005;). Therefore, based on evidence that social anxiety varies in degree of severity rather than type of social fears (Ruscio, 2010), it was hypothesised that:

**Hypothesis 2c** Individuals with clinical SAD and subclinical social anxiety respectively, would recall more themes from early memories containing negative peer interactions, compared to non-socially anxious individuals.
Qualitative research methods adopted for this study were primarily exploratory and aimed to provide detailed findings from memory narratives based on the samples responses. Thematic content from personally meaningful social situations was analysed for potential indicators of emotional experiences (affect categories) and life events (content and process themes), representing common features of clinical and subclinical social anxiety, as indicated by self-reported symptom severity. Therefore, the second research question posed for this study is as follows:

**Research Question 1)** To explore similarities and differences in main types of affect signified from earliest social memories of individuals with clinical and subclinical social anxiety symptoms, compared to the control group.

**Research Question 2)** To explore similarities and differences regarding main types of content or process themes, associated with earliest memories of social encounters, for individuals with clinical and subclinical social anxiety symptoms, compared to a control group.

In sum, early memory research and literature on social anxiety informed research questions and hypotheses posed by this study. The majority of empirical studies reviewed in the introduction, utilised quantitative research techniques to investigate the social anxiety spectrum. These studies typically report findings from statistical tests conducted on predetermined variables of interest, which compare either clinical or subclinical groups with non-socially anxious controls (Clark & Purdon, 1995; Wenzel et al., 2004). This study’s research design, was the first to compare thematic content from earliest social memories, across three groups representative of the social anxiety spectrum (i.e., SAD, subclinical social anxiety, controls).
Chapter 6: Method

6.1. Participants

A total of 213 respondents from university and community populations voluntarily completed the questionnaire designed for this study (a complete copy of the questionnaire is presented in Appendix C). Details outlining methods for recruiting participants are described in Section 6.10. Procedure. Data screening procedures identified three participants with missing data on measures used to determine inclusion criteria for the final sample (i.e., social anxiety, depression and/or trait anxiety). One participant’s responses on all selection measures reflected a non-acquiescence response set (Cohen & Swerdlik, 2005; Tabachnick & Fidell, 2013), eight participants did not complete the early memory section of the questionnaire and a further eight participants’ responses were general thoughts as opposed to a distinct memory of an event. Data was omitted from these participants prior to all analysis, resulting in 193 participants with complete questionnaire data, eligible for screening into social anxiety threshold groups.

Demographic information was obtained from the total sample with completed questionnaires (N= 193), in relation to; gender, age, current employment and relationship status, student status and if applicable, level of education. For these participants, ages ranged from 18 to 70 years (M= 25.33, SD= 10.69) with 136 women (age: M=25.48, SD=11.14) and 57 men (age: M=24.96, SD=9.61). Sixty-nine percent were employed and 88.6% were students enrolled in; Year 12 at secondary school (1.6%), a diploma (2.6%), undergraduate degree (75.6%), and postgraduate degree (8.8%), with missing data regarding education status for one participant. The remaining sample (10.9%) from the general community were not enrolled in study. Fifty-one percent of the sample was single, 46.7% were in a committed relationship, married or de-facto relationship and 2.6% were divorced, separated or widowed.
6.2. Sampling Methods and Procedures

The primary research aims of this pilot study, were to identify a wide range of themes from earliest social memories and explore potential links with current social anxiety symptoms, at and below diagnostic thresholds. Therefore, a non-clinical population with self-reported symptom severity corresponding to the social anxiety spectrum, was deemed appropriate for this study. Details regarding group allocation are outlined in Section 6.4 Selection Criteria for Social Anxiety Threshold Groups). Furthermore, the student and community sample recruited for this study, allowed exploration of similarities and differences between clinical and subclinical social anxiety presentations in comparison with a non-clinical control group. The final sample comprising this study, demonstrated the high prevalence of subclinical and clinical social anxiety experienced by individuals in the general community (Brunello et al., 2000; Sareen et al., 2006). Thus, results are not limited to severely affected treatment seeking patients with SAD (Chartier, et al., 1998; McLean, Asnaani, Litz & Hofmann, 2011).

An additional point of relevance to this study, was theoretical and empirical evidence suggesting social anxiety signifies a dimensional construct, with no clear boundaries for demarcating diagnostic thresholds (Clark & Wells, 1995; Knappe et al. 2009b; Ruscio, 2010). This poses difficulties for research that attempts to differentiate distinct subgroups of social anxiety based on cut-off scores derived from scales with continuous levels of measurement (Blanco et al., 2002; Brunello et al., 2000). Furthermore, cut-off scores developed from validity studies often suggest comparable representations of psychiatric populations, but do not necessarily distinguish clinical from subclinical cases (Furmark, 2002). Therefore, the accuracy with which true clinical cases are identified in research can be problematic (Heimberg et al., 1992; Mattick & Clarke, 1998). These methodological difficulties are acknowledged in the
Introduction (Section 2.3.2. Diagnostic thresholds of social anxiety) and Method (Section 6.4 Selection Criteria for Social Anxiety Threshold Groups).

To address limitations associated with classifying distinct subgroups of social anxiety from cut-off scores on metric scales, a diagnostic tool for identifying DSM-IV-TR SAD (SPSQ; Furmark et al., 1999) was incorporated as a selection measure for the SAD group to increase the accuracy of detecting true clinical cases (Ruscio, 2010). Furthermore, the theoretical framework adopted by this study suggests, the accuracy with which socially anxious participants report their subjective experience of ‘distress or functional impairment’ is equally important as actual distress or impairment necessary for a diagnosis (Refer to Section 4.5. Cognitive Perceptual Theory of Early Childhood Memories). Therefore, in line with DSM criterion, extreme distress and/or functional impairment (APA, 2013) was a key marker for distinguishing group inclusion for the clinical subgroup in this study. In addition, two psychometrically sound measures utilised by several empirical studies to detect social anxiety in clinical and non-clinical populations (Brown et al., 1997b; Heimberg et al., 1992; Mattick & Clarke, 1998), were also included in the diagnostic section of the questionnaire to maximise accurate case allocation into social anxiety threshold groups.

These sampling and screening procedures identified three independent groups indicative of symptom severity corresponding to the social anxiety spectrum. The clinical SAD group reported marked distress, anxiety, or avoidance of social situations, and/or impairment in relationships, social, academic, or occupational functioning caused by social anxiety symptoms (n= 40); The subclinical social anxiety group were characterised by high anxious arousal experienced in some social or performance situations, in the absence of extreme distress, or interference in routine areas of functioning (n= 51). Lastly, the non-clinical control group self-
reported no social anxiety, or developmentally and situationally appropriate anxiety in social situations, as well as normal ranges of trait anxiety and depression \((n=39)\).

6.3. Selection Measures for Social Anxiety Groups

The diagnostic section of the questionnaire contained a battery of scales measuring social anxiety, as well as depression and trait anxiety. The Phobia Screening Questionnaire (SPSQ; Furmark, Tillfors, Everz, Marteinsdottir, Gefvert & Fredrickson, 1999) identified clinical levels of social anxiety, and two companion scales measured social interactional anxiety: The Social Interaction Anxiety Scale (SIAS), and performance anxiety; the Social Phobia Scale (SPS) (Mattick & Clarke, 1989). Due to the high comorbidity between social anxiety, depression and trait anxiety (Dozois & Frewen, 2006; Norton et al., 2000), the Depression and Anxiety subscales of the Depression, Anxiety and Stress Scales (Lovibond & Lovibond, 1995), were utilised to measure the incidence of these symptoms in the total sample and control for high levels of depression and anxiety in the non-psychiatric comparison group.

6.3.1. Social phobia screening questionnaire (SPSQ). The SPSQ (Furmark et al., 1999) contains similar assessments of SAD to diagnostic interviews that evaluate types of social fears specified by the DSM (Brunello et al., 2000; Neufeld et al., 1999). Thus, the SPSQ is designed to measure diagnostic thresholds of SAD and was administered to assess self-reported social anxiety of participants, using DSM-IV criteria (APA, 2000). The SPSQ evaluated diagnostic features of SAD, by asking participants to rate their level of distress on a scale ranging from 0 (no distress) to 4 (severe distress), in relation to 14 potentially phobic situations. Of these phobic situations, five depicted performance situations (e.g., speaking in front of a group) and the remaining nine signified interactional situations (e.g., initiating a conversation with someone unfamiliar). Six diagnostic questions assessed DSM-IV SAD criteria A-D, based on self-reported responses regarding one or more phobic situations that elicits fear. To assess the
level and nature of distress associated with social and/or performance situation(s), these 14 situations were presented together with item one to six, as a referenced point for each diagnostic question. If the phobic situations were not identified as distressing, a check-box option ‘none of the above situations’ was endorsed by participants, which was an exclusionary criterion for the SAD group in the current study.

Criterion A was assessed by item 1 ‘In one or more of the following situations I fear that something embarrassing or humiliating will happen to me’ and item 2 ‘In the following situations I fear that others will notice that I’m nervous’. Criterion B was measured by item 3 ‘In the following situations I always become uncomfortably nervous (pounding heart, muscle tension etc.), Criterion C (item 4) ‘In the following situations my fear is greater than justified’. Item 5 ‘I begin to worry in advance when I know that I’m going to face the following situations’ and item 6 ‘Due to the discomfort I avoid these situations whenever I can’ assessed (Criterion D). Criterion E was assessed with a yes/no question in relation to the discomfort or functional impairment of social anxiety in occupational, academic, leisure or social activities.

Criterion F states that duration of symptoms must be at least six months if the individual is under the age of 18 years. All participants were aged between 18 and 70 years old, therefore this criterion was met. For Criteria G and H, a yes/no response indicated whether participants were currently using illegal substances, or whether currently taking medication for another psychiatric disorder. In the case of a positive response to another psychiatric disorder, the participants were asked to briefly state the nature of their problem. Information regarding the presence of a general medical condition was not obtained.

6.3.1.1. Psychometric Properties of the SPSQ. Furmark et al.’s (1999) validation study of the SPSQ comprised 2000 participants (1000 male, 1000 female) randomly selected from a community based registry in Sweden. Cronbach’s alpha coefficient of .90 was
reported for the 14-item social distress scale. The distress scale was also significantly correlated with the SPS ($r = .77$) and SIAS ($r = .79$), indicating adequate concurrent validity. A more recent investigation of psychometric properties for the SPSQ in a sample of 753 Swedish university students revealed alpha’s coefficient of .85 for the 14-item distress scale. Similar results were also found for convergent validity with moderate correlations between the SPSQ, SPS ($r = .71$) and SIAS ($r = .77$) (Tillfors & Furmark, 2007).

The validation study of the SPSQ conducted by Furmark et al. (1999), was based on evaluations of an experienced psychiatrist, using the Structured Clinical Interview, which corresponds to DSM-IV criteria of SAD. It revealed that the SPSQ correctly classified 35 from 36 individuals as having Social Phobia and correctly identified 19 of 20 normal controls as not having social phobia. There was one case where the questionnaire identified one participant as having social phobia and he/she did not meet the impairment criterion in the interview. Thus, Furmark et al. reported the sensitivity of the questionnaire as 100% and the specificity as 95%, based on the SCID interview as a reference.

### 6.3.2. Companion scales: SIAS and SPS

The development of the SIAS and SPS by Mattick and Clarke (1989) included an initial pool of 164 items based on clinical interviews and existing anxiety inventories. These items were reviewed in terms of relevance to social interaction fears or scrutiny by others and were reduced to 79 items. The remaining items were administered to a large Australian sample of individuals diagnosed with DSM-III-R criteria for Social Phobia (n= 243), 481 college students, 315 community volunteers and a small sample of patients with Agoraphobia and Simple Phobia. Further examination of item responses resulted in 20 social interaction (SIAS) and 20 observational (SPS) items (Mattick & Clarke 1998).

The SIAS comprises 20-items that measure behavioural, cognitive and affective responses to a variety of social interaction situations. It assesses fears of general social
interactions, including but not limited to feeling extreme distress when initiating or maintaining conversations with strangers, friends or potential partners (Heimberg et al., 1992; Mattick & Clarke, 1998). For each item participants are asked to indicate the degree to which they feel the statement is characteristic or true, ranging from 0 (*not at all characteristic or true of me*), 1 (*slightly characteristic or true of me*), 2 (*moderately characteristic or true of me*), 3 (*very characteristic or true of me*) to 4 (*extremely characteristic or true of me*). An example item is number 7 ‘When mixing socially, I am uncomfortable’. Item numbers 5 ‘I find it easy to make friends my own age’, 9 ‘I am at ease meeting people at parties etc.’ and 11 ‘I find it easy to think of things to talk about’ are reverse scored. Each item is then summed to provide a possible score ranging from 0 to 80, with higher scores indicating a higher level of social interaction anxiety.

The SPS is a 20-item self-report scale, which measures a person’s anxiety in relation to anticipation of being observed or actually being observed by other people in social or performance situations. It assesses fear of being scrutinised during regular activities, including but not limited to eating, drinking, writing and being looked at (Mattick & Clarke, 1998). An example is item number 20 ‘I feel awkward and tense if I know people are watching me’. Responses are scored on a 5-point likert scale ranging from 0 (*not at all characteristic or true of me*), to 4 (*extremely characteristic or true of me*). All items are then summed to yield a total score between 0 and 80, with higher scores indicating greater anxiety about being observed.

6.3.2.1. *Psychometric properties and validity of the SIAS and SPS.* Evidence suggests the SIAS and SPS are good measures to discriminate between clinical groups of anxiety and a normal community sample (Brown et al., 1997b; Mattick & Clarke, 1998). Brown (1997b) also reported on the sensitivity and specificity of the scales and found that the SIAS correctly identified 86% of actual SAD cases (true positives) and the SPS identified 76% of SAD cases. The number of cases without SAD who were correctly identified (true negatives) were 70% for
the SIAS and 72% for the SPS, thus the overall efficiency of the tests were 75% for the SIAS and 73% for the SPS. Furthermore, various studies provide support for the validity of these companion scales SIAS and SPS (Heimberg et al., 1992; Mattick & Clarke, 1998).

Convergent and divergent validity was reported in findings where the SIAS was related to measures of social interactional anxiety and the SPS was highly associated with measures of performance and observational fear (Heimberg et al., 1992; Mattick & Clarke, 1998). Construct validity has been reported by Peters (2000), that found the SIAS and SPS to be highly and significantly correlated to other measures of social anxiety. The SIAS and SPS have also shown good discriminant validity. In Mattick and Clarke’s (1998) study, patients with Social Phobia scored higher than patients with agoraphobia, simple phobia and the control group. Brown et al. (1997b) also reported patients with Social Phobia scored higher on the SIAS and SPS than patients with any other anxiety disorder and normal control participants. There was one exception on the SPS, where patients with Social Phobia did not score higher than patients with panic disorder with agoraphobia.

A validation study by Heimberg et al. (1992) was conducted to support the use of the SIAS and SPS in the assessment of individuals with social phobia. The final clinical sample comprised 66 outpatients from New York who met DSM-III-R criteria for SP and did not have comorbid diagnoses of major depression, bipolar disorder, psychotic disorder or current alcohol or drug dependence. Participants were classified into generalised and non-generalised subtypes; those who feared a number of social/observational situations but were not functionally impaired comprised the non-generalised subtype. Fifty community volunteers were also included to form a control group. Results of the study found the SIAS was more strongly related to measures of social interactional anxiety and the SPS was more strongly associated with measures of performance and observation fears. The SIAS discriminated among participants with generalised...
and non-generalised SP however, this discrimination was not evidenced by the SPS. Nevertheless, as expected participants with generalised SP scored higher on the SIAS (general social interaction fears) and both groups (generalised and non-generalised SP) obtained elevated scores on the SPS, which assesses more specific fears of being observed by others.

Research has also shown strong support for the psychometric properties of the SIAS and SPS. In Mattick and Clarke’s (1998) Australian study comprising participants with DSM-III criteria for various anxiety disorders and student/community controls, Cronbach’s alpha ranged from .88 - .93 for the SIAS and .89 - .94 for the SPS. For both scales, test-retest correlation coefficients were above .90 after one and three month intervals. The SIAS and SPS have also demonstrated adequate internal consistency when administered in an online format, in non-clinical groups (SIAS; \( \alpha = .86-.93 \) and SPS; \( \alpha = .89-.93 \)) (Hedman et al., 2010; Hirai, Vernon, Clum & Skidmore, 2011). These reliability estimates are comparable to psychometric investigations in paper-pencil formats, with Cronbach’s alpha found to be .90 for the SIAS and from .91-.93 for the SPS, in non-clinical samples (Heimberg et al., 1992; Osman, Gutierrez, Barrios, Kopper & Chiros, 1998) and a clinical social phobia group; SIAS (\( \alpha = .86 \)) and SPS (\( \alpha = .90 \)) (Heimberg et al., 1992).

**6.3.3. Depression anxiety and stress scales (DASS).** The DASS (Lovibond & Lovibond, 1995) is a self-report measure comprising three 14-item sub-scales to assess states of depression, anxiety and stress. The DASS addresses core symptoms of both depression and anxiety and discriminates between the two. The depression subscale assesses symptoms of hopelessness, dysphoria, lack of interest, self-depreciation, apathy, anhedonia, and devaluation of life. An example item is ‘I felt pretty worthless’. The anxiety subscale measures physiological arousal, subjective experiences of anxious feelings, and situational anxiety. The item ‘I felt terrified’ is an example (Lovibond & Lovibond, 1995). The depression scale comprise item
numbers, 2, 4, 7, 8, 10, 11, 14, 16, 18, 21, 22, 24, 25 and 28, the remaining items from 1 to 27 comprise the anxiety scale. Participants rate the degree to which they experienced each state over the past week on a four-point likert scale from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time). For each subscale, scores are summed to comprise a total score, with a possible range of 0 to 42. Higher scores reflect increased levels of each emotional state.

The DASS criteria for normal levels of depression are scores less than 10, 10 to 13 represents mild depression, 14 to 19 represents moderate, and severe depression represents scores of 20 plus. Normal levels of anxiety are less than seven, mild levels between seven and nine, moderate levels between 10 and 14 and severe levels are represented by scores over 15. These cut-off scores for severity ratings were based on percentile scores derived from normative data of Lovibond and Lovibond’s (1995) original scale development, in non-clinical, predominantly student samples and have been replicated in non-clinical community samples (Crawford & Henry, 2003).

6.3.3.1. Psychometric Properties of the DASS. Depression and anxiety subscales have shown good internal consistency, with alpha coefficients of .91-.96 for depression and .84-.89 for anxiety, in both clinical and non-clinical samples (Brown, Chorpita, Korotitsch & Barlow, 1997a; Lovibond & Lovibond, 1995). Various studies have also reported excellent internal consistency of the DASS subscales in clinical and non-clinical groups, finding it to be a reliable and valid measure for assessing depression and anxiety (Antony, Beiling, Cox, Enns & Swinson, 1998; Brown et al., 1997a). Crawford and Henry’s (2003) study, comprised a large sample of 1771 community participants and found excellent reliability, which has been replicated by the online internet administered format of the DASS with 1138 undergraduate students (depression: \( \alpha =.95 \) and anxiety: \( \alpha = .93 \)) (Zlomke, 2009).
Adequate convergent validity for the DASS has been reported, with support for the scales as indicators of depression and anxiety (Antony et al., 1998; Brown et al., 1997a; Crawford & Henry, 2003). However, the results of Antony et al. (1998) and Crawford and Henry’s (2003) normative studies provided less compelling evidence for discriminant validity compared to convergent validity. For instance, the DASS depression subscale significantly correlates with other well-validated measures of depression (e.g., Beck Depression Inventory) and DASS anxiety significantly correlates with validated measures of anxiety (e.g., Beck Anxiety Inventory). Nonetheless, given the high comorbidity between anxiety and depression these correlations would be expected (Brown et al., 1997a; Lovibond & Lovibond, 1995).

6.4. Selection Criteria for Social Anxiety Threshold Groups

Theoretically and empirically defined criteria and cut-off scores were used to determine group inclusion into clinical SAD (SPSQ; Furmark et al., 1999) and subclinical social anxiety subgroups (SPS and SIAS; Brown et al., 1997b; Heimberg et al., 1992). In addition, a non-psychiatric control group served as a comparison group deemed necessary for true representation of the social anxiety spectrum. To ensure normal ranges of social anxiety, depression and trait anxiety in this non-socially anxious comparison group, social anxiety measures (i.e., SPSQ, SIAS, and SPS), and Depression and Anxiety subscales of the DASS (Lovibond & Lovibond, 1995), were used to statistically control for these traits (Refer to Section 6.4.3). Section 6.4.4. describes demographic characteristics of SAD, subclinical social anxiety, and control groups comprising this study.

6.4.1. SAD group criteria. Furmark et al. (1999) suggest assessment of social anxiety is conducted with a good measure of content validity that assesses symptoms of SAD defined by DSM criteria (Clark et al., 1997). Thus, participants in the current study were required to rate at least one of 14 potentially phobic situations from the SPSQ, as 3 (extreme) or 4 (severe) on the
social distress scale, to satisfy criteria for the clinical SAD group. For clinical group inclusion, it was required that one or more of these distressing situations related to diagnostic questions criteria A-D and self-reported functional impairment or distress (criterion E) was also a prerequisite that represented a measurable indicator for distinguishing clinical and subclinical subgroups of social anxiety. Given contentions that public speaking fear is an isolated/specific phobia (Blöte et al., 2009; Eng et al., 2000), participants who reported isolated distress in public speaking/performing situations were not included in the SAD group. Instead, participants whose distress was extreme or severe in relation to ‘speaking or performing in front of a group of people’, were only included in the SAD group if at least two additional social situations were endorsed as moderately distressing.

As stated in the DSM-IV-TR, diagnostic criteria G and H specifies that a diagnosis of SAD should not be better accounted for by another Axis I disorder, the direct physiological effects of a substance, or a general medical condition (APA, 2000). Nevertheless, empirical evidence has shown that strict application of organic exclusion criteria G and H, do not significantly change the estimated incidence of SAD (Pelissolo et al., 2000; Wittchen & Fehm, 2003). Furthermore, SAD rarely occurs in its isolated form and is often comorbid with other psychological disorders and substance use (Cox et al., 2000; Chartrand et al., 2011; Dozois & Frewen, 2006). Thus, data from participants who reported another psychiatric disorder or current substance use (criterion G) were not excluded from the clinical SAD group, as the current study adopted the position that comorbidity is a common presentation of the disorder (Dozois & Frewen, 2006).

Self-reported responses on the diagnostic screening tool (SPSQ; Furmark et al., 1999) and scores from a combination of empirically validated measures of social interaction and performance anxiety, revealed 40 of 130 participants met DSM-IV-TR diagnostic criteria for
SAD. Thirty-three participants from the SAD group were women (age: $M=26.12$, $SD=12.88$) and seven men (age: $M=23.71$, $SD=3.45$), with ages ranging from 18-70 years. In addition, nine (22.5%) participants with SAD, reported comorbid psychiatric conditions including depression, anxiety disorders (not specified), ADHD, PTSD, bipolar disorder, and schizophrenia. Six participants (15%) also disclosed current substance use, indicating comorbid conditions, and/or substance use for almost half of the clinical group. Therefore, the clinical threshold group signified the upper extreme of the social anxiety spectrum, which is associated with more severe symptoms, distress, impairment and comorbidities that warrant a diagnosis (APA, 2013).

**6.4.2. Subclinical social anxiety group criteria.** The subclinical social anxiety group was determined from theoretically defined cut-off scores on the SIAS and SPS (Mattick & Clarke 1989), which assesses heightened anxiety and/or avoidance in social interactions or social performance situations. Heimberg et al.’s (1992) validity study found that; community volunteers obtained significantly lower scores on the SIAS and SPS than a socially phobic group; 82% of participants with DSM-III-R diagnosis of SAD scored one standard deviation, at or above the mean SIAS score of the community sample, and; 73% of the DSM-III-R SAD group scored equal to or one standard deviation above the community samples’ mean SPS score. Thus, a ‘case’ was defined as having SAD if they scored one standard deviation above the community samples’ mean score on either the SIAS (mean ≥ 34) or SPS (mean ≥ 24). This strategy has been utilised by other researchers to define cases of SAD (Brown et al., 1997b) and was used to determine cases of subclinical social anxiety in the current study. Note that Heimberg et al.’s normative study was based on DSM-III-R criteria not DSM-IV-TR criteria.
However, participants in this study were suitable for the subclinical group only if self-reported scores on the SPSQ (Furmark et al., 1999) did not meet criteria for DSM-IV-TR diagnosis.

Therefore, it seems reasonable to assume that cut-off scores prescribed by Heimberg et al. (1992), signifies symptom severity below diagnostic thresholds that represents the middle range of the spectrum. Despite this study’s sample containing a large proportion of students, Heimberg et al.’s community sample mean was used to define subclinical cases one standard deviation above the mean, because a slightly higher number of participants met cut-off scores for group inclusion using this criterion. Moreover, Heimberg et al.’s (1992) study revealed that mean scores did not differ between community and student populations, for the SIAS (community sample: $M=19.9$, $SD=14.2$, student sample: $M=19.5$, $SD=14.2$) or SPS (community sample: $M=12.5$, $SD=11.5$, student sample: $M=13.4$, $SD=9.6$).

Subsequently, participants who obtained a mean score of 34 and above on the SIAS or 24 and above on the SPS, comprised the subclinical social anxiety group in the current study. and formed the subclinical group, characterised by less frequent and severe symptomatology than the clinical group, whose mean scores on the SIAS ($M=49.44$) and SPS ($M=37.36$) were substantially higher than mean cut-off scores for determining cases of subclinical social anxiety. Moreover, subclinical symptoms did not cause extreme or severe distress, and/or impairment in functioning. Of the 51 participants in the subclinical social anxiety group that met cut-off criteria on either SIAS or SPS, 36 were women (age: $M=23.54$, $SD=8.73$) and 15 were men (age: $M=24.00$, $SD=9.29$), ranging from 18-53 years.

**6.4.3. Control group criteria.** The control group were carefully selected to represent psychologically healthy individuals comparable to the lower end of the social anxiety spectrum. For inclusion in the control group, participants scores on the SPSQ indicated no current
symptoms or diagnosis of SAD, no past diagnosis of SAD, and no current diagnoses of any psychological disorder. An additional pre-requisite, was that mean scores on both social anxiety measures were to be equal to or below mean scores reported from Heimberg et al.'s. (1992) community sample (SIAS: $M=20$ and SPS: $M=13$). Scores on the DASS were also required to be within normal ranges on depression (0-9) and anxiety (0-6) subscales. This non-socially anxious comparison group, consisted of 39 participants, 25 women (age: $M=31.21$, $SD=14.93$) and 14 men (age: $M=29.29$, $SD=13.76$) that ranged in age from 18-66 years.

6.4.4. Demographic characteristics of social anxiety threshold groups. Despite the high incidence of women reflected among social anxiety threshold groups in Table 1 ($N=130$), it should be noted that the majority of the total sample recruited for this study ($N=193$) comprised women (women: $n=136$, men: $n=57$). Demographic characteristics pertaining to each social anxiety threshold group are described below. Table 1 presents the proportion of men and women comprising the final sample of participants in social anxiety threshold groups.

Table 1.

Proportion of Men and Women in Social Anxiety Threshold Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>No social anxiety (control)</td>
<td>35.9%</td>
<td>64.1%</td>
<td>39</td>
</tr>
<tr>
<td>Subclinical social anxiety</td>
<td>29.4%</td>
<td>70.6%</td>
<td>51</td>
</tr>
<tr>
<td>Clinical SAD</td>
<td>17.5%</td>
<td>82.5%</td>
<td>40</td>
</tr>
</tbody>
</table>

$N=130$
A chi-square test was conducted to compare the proportion of men and women (categorical variable) comprising social anxiety threshold groups (categorical variable). It revealed no significant gender differences for individuals with varying degrees of social anxiety, $\chi^2 (2) = 3.46, p = .177$. Note, chi-square assumptions dependent on sample size were met for demographic variables relating to: gender, education and employment, suggesting sufficient power to detect significant differences between social anxiety groups should one exist. Table 2 displays demographic characteristics of each social anxiety threshold group, in relation to mean age, education, employment, and relationship status.

Table 2

<table>
<thead>
<tr>
<th>Summary of Demographics for Social Anxiety Threshold Groups</th>
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<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>SAD</strong> <em>(N=40)</em></td>
</tr>
<tr>
<td>25.70 (11.78)</td>
</tr>
<tr>
<td>87.5%</td>
</tr>
<tr>
<td>67.5%</td>
</tr>
</tbody>
</table>

As can be seen in Table 2, social anxiety threshold groups were characteristically similar across all demographic variables, especially clinical and subclinical groups. Two separate chi-square tests were conducted to compare the proportion of social anxiety threshold groups on categorical variables; education and employment status. No significant differences were found in relation to current enrolment in study, $\chi^2 (2) = .64, p = .73$, or employment, $\chi^2 (2) = 2.47, p = .29$, for individuals with varied degrees of social anxiety. Inferential statistics and assumptions related to chi-square tests are described in Section 7.2.1. Chi-square assumptions testing.
A one-way between groups analysis of variance (ANOVA) was conducted, to compare the average age (continuous variable) of social anxiety threshold groups (categorical variable). Levene’s test showed violations in the homogeneity of variance assumption, thus Welsh adjustment was applied for a robust test of equality of means. Despite reaching statistical significance the strength of this relationship was very weak, $F(2, 73.89) = 3.51, p = .04, \eta^2 = .06$. Furthermore, observed power (.71) of effect size indicated a moderate strength difference in mean age of social anxiety groups. Post-hoc comparisons using Tukey HSD adjustment revealed no significant differences in mean age between groups. The Results Section explains assumptions of ANOVA, with consideration of potential influences of Type I or Type II error on results (Refer to Section 7.2.2. Analysis of variance and assumptions testing).

As part of the selection criteria for the non-psychiatric control group (Section 6.4.3. Control group criteria), all non-socially anxious controls were required to score within normal ranges on the Depression and Anxiety subscales of the DASS (See Section 6.3.3 for details outlining DASS cut-off scores). However, based on the high co-occurrence between SAD, depression, and anxiety (Chartrand et al., 2011; Chiupka et al., 2012; Dozois & Frewen, 2006), these exclusionary criteria did not apply for clinical and subclinical threshold groups. For instance, 10% of the clinical SAD group reported trait anxiety within normal ranges, and 22.5% reported normal ranges of depressive symptoms. The subclinical group reported lower levels of trait anxiety and depression compared to the SAD group, with 51% having normal levels of trait anxiety and 54.9% reporting normal levels of depression. Table 3 below presents the proportion of social anxiety threshold groups who reported mild to severe trait anxiety and depression, as measured by the DASS Anxiety and Depression subscales (Lovibond & Lovibond, 1995).
Table 3

Trait Anxiety and Depression reported by Clinical and Subclinical Social Anxiety Groups

<table>
<thead>
<tr>
<th></th>
<th>SAD (N=40)</th>
<th>Subclinical Social Anxiety (N=51)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Trait Anxiety</td>
<td>17.5 %</td>
<td>11.8%</td>
</tr>
<tr>
<td>Moderate Trait Anxiety</td>
<td>30%</td>
<td>23.5%</td>
</tr>
<tr>
<td>Severe Trait Anxiety</td>
<td>42.5%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Mild Depression</td>
<td>15%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Moderate Depression</td>
<td>10%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Severe Depression</td>
<td>52.5%</td>
<td>17.6%</td>
</tr>
</tbody>
</table>

N= 91

Table 3 shows that a higher proportion of the clinical SAD group reported severe levels of trait anxiety and depression than the subclinical group. To compare depression and trait anxiety scores (continuous variable) for subclinical and clinical social anxiety threshold groups (categorical variable), two independent-samples t-test were conducted. There was a significant difference in depression scores $t(89) = 4.65, p = .000$ (two-tailed) for individuals with clinical ($M = 20.55, SD = 11.68$) and subclinical symptoms ($M = 10.03, SD = 9.88$). There was also a significant difference in mean trait anxiety scores, $t(89) = 4.36, p = .000$ (two-tailed), for clinical ($M = 15.63, SD = 8.77$) and subclinical groups ($M = 8.00, SD = 7.96$). The effect size for analyses of depression ($d = .93$) and trait anxiety ($d = .92$) exceeded Cohen’s (1988) convention for a large effect ($d = .80$). Thus, individuals with self-reported clinical SAD symptoms in the current study, reported a higher degree of depression and trait anxiety, than participants with subclinical symptoms.
6.5. Research Design

This pilot study employed a mixed method research design, with quantitative and qualitative research methods. The vast majority of research findings reported in the social anxiety literature is based on self-report measures and quantitative research methods (Clark, 2001; Wenzel et al., 2004). Therefore, the experimental design of the current study was largely informed by qualitative research approaches, to extend a wealth of empirical evidence from quantitative research studies. In line with theoretical contentions, that social cues trigger cognitive and emotional processes, which activate potentially dysfunctional schemas (Beck, 1996; Bruhn, 1990; Bruhn, 1995; Bruhn & Last, 1982) related to social anxiety (Clark & Wells, 1995), this study’s experimental task incorporated a projective technique.

To implement this methodology, an early memory probe was utilised as a means of revealing potentially unconscious schematic processing of social situations that may not be consciously accessible via self-report measures (Chambless et al., 1996; Clark, 2001). Details regarding the use of social threat tasks in research investigating cognitive biases, can be referred to in Chapter 3 (See section 3.3. Unconscious Schematic Processing, and section 3.4. Research on Cognitive Processes). This memory probe generated self-narratives relating to earliest social memories and was considered an appropriate method for eliciting social threat and activating schemas relevant to social anxiety (Bruhn & Last, 1982; Clark, 2001; Morgan, 2010). Furthermore, thematic analysis of the rich qualitative data obtained from memory narratives explored common and/or distinctive themes associated with each social anxiety threshold group.

All participants completed the self-report questionnaire developed for this study, which comprised four main sections. Section A; demographic questions relating to age, gender, education, employment, and relationship status, Section B; the Early Memory Probe designed to cue participants’ earliest memory of a social situation, Section C; an Intrusive Imagery Task, and
Section D; diagnostic and screening measures used to establish experimental groups (See Section 6.3. Selection Measures for Social Anxiety Threshold Groups). The questionnaire sections relevant to this study’s aims and hypotheses are presented here. A flow chart of the experimental design is presented in Figure 1, to demonstrate the qualitative research methods this study adopted to explore the social anxiety spectrum.
Figure 1. Visual map of this pilot study’s research design and thematic content of qualitative data.
6.6. Quantitative and Qualitative Research Methods

Many features distinguish qualitative from quantitative research. For instance, qualitative questionnaire measures elicit participants’ beliefs rather than researchers’ preconceived enquiries, typically assessed via quantitative questionnaire measures (Clark, 2001; Chartier et al., 1998; Teijlingen & Hundley, 2002). Qualitative research studies also use open-ended questions and free response items that permit exploration of ideas and meaningful interpretation of results (Chartier et al., 1998; Liamputtong & Ezzy, 2005; Mack, Woodsong, MacQueen, Guest & Namely, 2005). Furthermore, qualitative research approaches offer enormous interpretative value that can assist inferences made from quantitative data and provide invaluable direction for future research (Mack et al., 2005).

Subsequently, the present study adopted projective techniques to probe earliest social memories and generate a large amount of rich qualitative data in the form of self-narratives. Thematic analysis of textual data obtained from memory narratives, intended to reveal patterns and trends indicative of personally meaningful information and potentially unconscious schematic processing of social situations (Bruhn, 1990a; Clark & Wells, 1995). Early memory narratives were explored for; content themes, specific types of emotions, the nature of interactions with other people, and the presence of specific types of people. In considering this, qualitative research approaches were suitable for analysing potential links between earliest social memories and social anxiety symptom severity.

Qualitative research methods are often incorporated as an initial step for empirical research related to; unexplored topics, unique research designs, and/ or different methodologies of recruitment used to collect and analyse data. Further to this, qualitative pilot data can be extremely informative in establishing larger-scale questionnaire surveys or quantitative phases of the study, refining potential issues associated with the research design and ultimately providing
invaluable insights for future research that cannot be obtained from quantitative data (Leon et al., 2011; Teijlingen & Hundley, 2002). Important factors relevant for planning, analysing, reporting and interpreting results from pilot studies such as this, are discussed in Section 6.6.1 below.

### 6.6.1. Pilot studies, statistical power, sample, and effect size

The current study is the first to utilise early memory probes, as an innovative approach for exploring potential clues associated with the social anxiety spectrum. Pilot studies such as this can accomplish a range of important functions necessary for developing a good study design. These include; evaluating novel applications and approaches of assessment, different methodological procedures, and pre-testing research instruments (e.g., questionnaire measures or interview schedules) in new target populations or homogeneous samples (Bruhn & Schiffman, 1982a; Leon et al., 2011; Teijlingen & Hundley, 2002). For instance, the order and wording of questions or response items and/or distribution and collection of questionnaires might be piloted, as well as validation of pre-existing scoring systems or procedures (Teijlingen & Hundley, 2002). Furthermore, an important element of any good pilot study’s research design, is the assignment of a healthy comparison group to an unknown experimental condition (Leon et al., 2011).

Therefore, this study incorporated a non-socially anxious control group in order to; accurately address the research aims and objectives by demonstrating more realistic group comparisons with each outcome variable (i.e., early memory codes). Additional factors to consider in relation to pilot studies, involve statistical power and sample size (Pallant, 2007; Tabachnick & Fidell, 2013; Teijlingen & Hundley, 2002). Statistical power is the likelihood of finding significant results should one exist. However, the likelihood that a study will find significant results, is largely dependent on sample size (Leon et al., 2011; O’Keefe, 2007; Sullivan & Feinn, 2012). In this way, sample size and power largely influence two kinds of inferential errors and the validity of research findings due to their impact on: Type I error, which
involves wrongly concluding a significant result when there is no actual difference in testing conditions; and Type II error, failing to detect a significant result in small samples (Leon et al., 2011; O’Keefe, 2007; Sullivan & Feinn, 2012).

Subsequently, small sample sizes of less than 100 participants may yield a medium or large effect size, but may not find a significant result due to the study being underpowered (Leon et al., 2011; Sullivan & Feinn, 2012; Tabachnick & Fidell, 2013). Effect size is the main finding of a quantitative study and described as the strength of the difference between groups based on the sample, regardless of whether the result is significant (Leon et al., 2011; Pallant, 2007; Sullivan & Feinn, 2012; Tabachnick & Fidell, 2013). However, given that pilot study’s are typically exploratory venues, many pilot studies are underpowered due to exploration of several outcome variables, which requires recruitment of extremely large samples to provide meaningful inferential statistics. For example, sample sizes of at least 150 to 300 observations per outcome are required to detect significant differences between groups. Subsequently, sample size is usually determined by the feasibility and/or pragmatics of recruiting participants (Leon et al., 2011; Sullivan & Feinn, 2012; Teijlingen & Hundley, 2002).

Similarly, the exploratory nature of this pilot study involved analysis of the entirety of themes relevant to CEMSS-R coding categories: Affect Type, Content/Process Themes, and Characters (Last & Bruhn, 1992), identified from early memory narratives. A between-subjects research design was implemented to compare the large number of emerging sub-codes across three independent social anxiety threshold groups, which involved multiple comparisons with several outcome variables (i.e., EM codes). This type of research design, reduces the likelihood of detecting significant results due to small subsets of participants for each early memory theme under analysis (Leon et al., 2011; Pallant, 2007; Teijlingen & Hundley, 2002). Therefore, this study provided preliminary evidence of themes from earliest social memories that may be
associated with current social anxiety symptom severity. In contrast, themes related to the overall affective tone of the memory and the nature of social interactions recalled, were scored from the total samples memory narratives. Thus, findings according to these themes demonstrated sufficient statistical power to detect significant results related to the overall tone projected from memories and the valence of social interactions with other people.

A related issue is that unlike other types of research studies, pilot studies are not obligated to conduct a priori power analysis for estimating adequate sample sizes for recruitment, because the number of participants required to achieve adequate statistical power cannot be determined without a measure of effect size from existing literature, or a theoretical rationale to predict clinically meaningful estimates (Leon et al., 2011; Teijlingen & Hundley, 2002). In considering this, it is important to note inaccuracies in between treatment group effect sizes and inferential statistics of pilot data obtained from small sample sizes (Leon et al., 2011; Teijlingen & Hundley, 2002). For instance, effect size relevant to target samples or focus groups are not the same as the true population effect size. Inferential statistics proposed by pilot studies are not representative of preliminary hypothesis tests since the gap in knowledge regarding particular interventions, methods, and/or specific patient populations, are unknown at the time the study and is often the motivator for conducting research (Leon et al., 2011; O’Keefe, 2007; Teijlingen & Hundley, 2002).

Thus, despite widespread use of prior pilot data to determine sample sizes for hypothesis testing studies, difficulties arise when inferential statistics from past studies are used to determine suitable sample sizes for a pilot study, due to differences in research designs and population samples across empirical studies (Leon et al., 2011; Teijlingen & Hundley, 2002). In sum, pilot data generates statistical outcomes that can guide future research in larger samples, which can then increase the accuracy of detecting clinically meaningful and significant results.
(Leon et al., 2011). Addition factors of relevance to this study that can influence statistical power involve; the nature and level of measurement for variables of interest (e.g., nominal, interval, ordinal), and the type of statistical tests used to analyse the data.

6.6.2. Statistical analysis of early memory codes. Despite empirical evidence demonstrating the dimensionality of social anxiety symptom severity (Clark, 2001), the DSM classifies SAD as a distinct condition from nonclinical populations (APA, 2013). Therefore, this criterion informed the conceptualisation and measurement of social anxiety threshold groups as categorically distinct in the current study. Similarly, certain sub-codes from early memory coding categories (IVs) represent seemingly ordered levels of measurement in terms of severity ratings (e.g., mild, moderate, severe). In considering this, particular early memory variables were transformed into ordinal scale data (Lehmkuhl, 1996) because the main aim of this study was to explore trends or patterns of thematic content signifying ordered scores (i.e., mild, moderate, severe) of each sub-code (e.g., anxiety, depression, guilt-shame).

Similar to Richards, Bruhn, Lucente and Casey’s (2014) study, ‘Affect Type’ and ‘Content/Process’ themes were measured as categorical variables, despite limitations that categorical variables often have a small number of possible values and violate assumptions of normality (Lehmkuhl, 1996; Pallant, 2007). Thus, post-hoc analyses utilised nonparametric tests such as chi-square, for nominal (categorical) and ordinal (ordered) scaled data in the current study (Lehmkuhl, 1996; Pallant, 2007). This approach was considered appropriate, since nonparametric methods are used to analyse categorical data, small sample sizes, or when assumptions of parametric tests such as normal population distributions, are violated (See Section 7.2.1. Chi-square and assumptions testing).
One of the main limitations of nonparametric tests, is reduced statistical power in detecting significant results compared to parametric tests that hypothesise around population parameters, based on the assumption that the sample is normally distributed (Lehmkuhl, 1996; Pallant, 2007). However, if one or more of the underlying parametric test assumptions is violated, the power advantage may be negated (Lehmkuhl, 1996). Therefore, parametric tests (i.e., t-tests and analysis of variance: ANOVA) were used to compare total mean scores of social anxiety threshold groups, on scales with interval or continuous levels of measurement (i.e., Social Anxiety, Depression, Trait Anxiety, Overall EM Affect Rating).

### 6.7. Projective Technique: Earliest Social Memory Probe

The early memory probe developed for this study was largely influenced by Bruhn’s CPT and the EMP (Bruhn, 1990) (Refer to Section 4.5. Cognitive-Perceptual Theory of Early Childhood Memories and Section 4.8. The Early Memories Procedure). The theoretical underpinnings of this research speculate that probing ‘Earliest Memories of a Social Situation’ would reveal the essence of personality structure, historical influences, and/ or current concerns (Bruhn, 1995) related to self-reported social anxiety, for individuals with clinical and subclinical symptoms respectively. In turn, early memory narratives were analysed for potential themes associated with past social encounters that may be consciously or subconsciously linked to current social anxiety, when compared with a non-socially anxious control group. This early memory probe was a projective technique employed to elicit unconscious schematic processing, revealing of social experiences that may have influenced social anxiety in adulthood (Bruhn, 1985; Bruhn & Last, 1982). Subsequently, each participant was asked to recall their earliest memory of being in a social situation, in accordance with the following instructions from Bruhn’s EMP (Bruhn, 1990).
What is the earliest memory that comes to mind in relation to being in a social situation. Choose an event that you actually remember (leave out instances that someone told you about, that you don’t actually recall). Also, be sure that it is a specific one-time event (“I remember one time…”), and not a recurrent event (“I always used to…”). Please describe in as much detail as your recollection of the event permits. Remember to include how the memory begins for you and how it ends as well as how you felt about what happened.

Participants recorded early memory responses verbatim. This text was analysed for its projective and thematic content according to the scoring system adapted for this study. The scoring methods and procedures used for coding early memory themes are outlined in preceding sections of the Methodology (See Section 6.8. Thematic Analysis of Qualitative Data and Section 6.9. Scoring Procedures for Coding Early Memories).

6.7.1. Scoring thematic data using the early memories procedure. Instructions from the EMP outlined above, prompted participants to retrieve a specific memory of being in a social situation, as opposed to a memory of a recurrent social situation. This was in line with Bruhn’s (1990) contention, suggesting only memories of one-time specific events contain information revealing of significant projective content. However, an opposing view could argue that recollections of general memories that signify potentially recurrent events, conveys important information relevant to schematic processing and invaluable projective data associated with potentially unconscious themes. Furthermore, empirical evidence suggests an overgeneral memory bias for positive content displayed by socially anxious compared to non-anxious individuals during priming conditions (Dickson, 2004; Moscovitch et al., 2011). Therefore,
general or pattern memories generated by the early memory probe were retained for thematic data analysis in the current study.

Findings that individuals with SAD have more difficulty understanding and describing their emotions than non-socially anxious individuals (Turk et al., 2005), influenced deviation from the original EMP (Bruhn, 1990) in the current study, as did contentions that self-reported data is limited to information in conscious awareness (Chambless & Hope, 1996; Clark, 2001; Clark & Purdon, 1995). Thus, thematic content projected from memory-narratives was scored instead of self-reported ratings of the strongest emotion in the memory. Furthermore, the original version of the EMP assesses a set of spontaneous early memories in order to discover major unresolved issues (Bruhn, 1990; Bruhn, 1995). However, this study collected data from one ‘directed’ memory probe per participant.

The directed memory probe utilised for this study was purposefully created for the target population (social anxiety). Such that, earliest social memories were speculated to reveal potential influences, conditioning experiences, or core issues similar to that of ‘spontaneous’ memories. This directed memory (i.e., social situation) intended to reveal meaningfully relevant themes associated with current socially anxious concerns for individuals with self-reported social symptoms reaching clinical and subclinical levels, compared to themes recalled by non-socially anxious participants (Bruhn, 1990; Bruhn, 1995).

6.7.2. Validity of the early memories procedure. The early memory literature presents a range of vignettes that convincingly demonstrate the clinical utility of early memory probes and their use in research is supported as an effective projective measure (Fowler et al., 1995; Fowler et al., 2000). More specifically, several empirical studies provide impressive evidence for early memories in predicting and discriminating between characteristics of group
participants. These predictions include: locus of control stance (Bruhn & Schiffman, 1982), degree of psychopathology in children (Last & Bruhn, 1983), classification of delinquency (Davidow & Bruhn, 1990), pathological symptoms among psychiatric outpatients (Acklin et al., 1991), and differentiation of diagnostic groups (Acklin et al., 1989; Arnow & Harrison, 1991; Last & Bruhn, 1985).

More recently, a reliability study conducted by Bruhn and colleagues administered the EMP in written format as opposed to the traditional oral administration. This was similar to procedures used for obtaining early memory data in the current study. The EMP is a valid means of collecting data for assessment and therapy (Richards et al., 2014). Therefore, this projective technique seemed useful for investigating boundaries between social anxiety symptom severities in the current study.

6.8. Thematic Analysis of Qualitative Data

Memory narratives were explored for personally meaningful themes (conscious or unconscious) via thematic content analysis of textual data (Liamputtong & Ezzy, 2005). The initial screening and coding of text involved a top-down deductive process, using a pre-existing scoring manual, the Comprehensive Early Memory Scoring System Revised (CEMSS-R; Last & Bruhn, 1992). Details of CEMSS coding categories relevant to this study, are outlined below in Section 6.8.1 and 6.8.2. In line with recommendations for qualitative research, the existing scoring system was adapted to reflect themes relevant to this study’s homogeneous sample of participants with self-reported social anxiety (Bruhn & Schiffman, 1982a; Liamputtong & Ezzy, 2005). It is also recommended that a valid projective procedure must not superimpose theoretical biases of the investigator (Bruhn & Schiffman, 1982a).
Therefore, to minimise potential bias related to preconceived ideas of the researcher, the entire range of themes from the manual were coded during the initial screening phase, despite low frequencies of particular items. This inductive process, guided qualitative data analysis by the principal researcher, a provisional psychologist completing a doctorate in clinical psychology. It involved, familiarisation with the data, systematic identification and grouping of content themes, development and evaluation of new sub-codes/ categories, and several scoring trials to ensure that modified sub-codes signified accurate conceptualisations of thematic content generated by the sample (Braun & Clarke, 2006; Chartier et al., 1998; Liamputtong & Ezzy, 2005). Details of scoring procedures are presented in Section 6.9. Scoring Procedures for Coding Early Memories.

6.8.1. The comprehensive early memory scoring system (CEMSS). The CEMSS was developed (Last & Bruhn, 1983) and revised by Bruhn and colleagues (CEMSS-R: Last & Bruhn, 1992), to effectively score and analyse early memories in research. The CEMSS-R provides a detailed description of several pre-defined categories relevant to clinical populations, which permit detailed analysis of autobiographical memory (Bruhn, 1995; Tobey & Bruhn, 1992). The current study implemented the CEMSS-R, to systematically identify and score themes generated from a socially anxious sample. Of particular interest, were coding categories with conceptual, theoretical, or empirical relevance to symptoms and/or aetiological factors associated with SAD (Affect Type, Content and Process Themes, and Characters). Subsequently, the CEMSS-R (Last & Bruhn, 1992) was utilised as a means of exploring textual data and to assist with qualitative analysis of projective information.

6.8.2. Scoring guidelines for tone, affect type, content and characters. Each early memory narrative was coded according to the overall affective tone of the memory (i.e., EM Affect Rating). Scores were measured on a continuous scale ranging from 1 (very negative) to 7
(very positive). Textual data was also coded for the main type of affect projected in the memory (categorical variable). In line with CEMSS-R guidelines for coding affect types (Last & Bruhn, 1992), if more than one type of affect was identified, the most prominent or strongest feeling inferred in the memory was scored. This study’s thematic analysis indicated that CEMSS-R Affect Categories (Last & Bruhn, 1992), captured clinically relevant emotional content associated with social anxiety.

However, CEMSS-R guidelines state that codes should only be scored for emotions claimed to be felt by the participant. Scoring procedures adopted by this study differed for two main reasons: First, SAD has been associated with difficulty describing emotions, reduced understanding of emotional states (Turk et al., 2005), as well as efforts to control or suppress emotions (Glick & Orsillo, 2011) (Refer to Section 4.11.1. Affect type and early memories). Second, this study implemented projective techniques to elicit conscious and potentially unconscious schematic processing, which may not be available to conscious awareness or self-report (Chambless & Hope, 1996; Nisbett & Wilson, 1977). Therefore, memory narratives were scored according to explicit and implicit affect types inferred from textual data.

Content and process themes are considered crucial for understanding the meaning of memories in terms of self-communication (Richards et al., 2014). Thus, each memory narrative was explored for the content and process theme that best applied. In line with exclusionary criteria, only one code was scored for each memory. In the instance that two content categories applied, the primary or most pressing part of the memory determined which code was scored (Bruhn, 1990; 1995; Last & Bruhn, 1992). Content and process themes relevant to this study entailed; three positive content categories, six negative content categories, and one neutral category.
The presence of particular people (i.e., characters) from memories, were analysed according to CEMSS-R scoring instructions, which stipulate the use of multiple codes per memory when more than one person is identified (Last & Bruhn, 1992). Original scoring guidelines state that character codes only apply to people involved in the action of the memory, whereas no code is specified for people(s) referred. In the current study, scoring procedures deviated from these instructions because patterns in the data revealed that characters often signified important meaning in the narrative without being directly involved in the action of the memory. Thus, if specific characters had a direct impact on the participant’s thoughts, feelings, or actions in the memory, and/or signified clinically relevant information (e.g., witnessing marital conflict). These amendments to CEMSS-R scoring procedures for coding characters seemed warranted, to accurately describe and explore potential themes associated with the nature of interactions recalled from earliest social memories.

Further to this, considering interactional anxiety is an underlying feature of SAD (Alden & Taylor, 2004), each character was scored according to the overall affective tone of the social interaction (i.e., positive, negative, neutral, not applicable). Thus, in addition to scoring the presence of specific people, the nature of interactions with each character was analysed across social anxiety threshold groups. This amendment to CEMSS-R scoring procedures, allowed exploration of meaningful information related to early social interactions, for individuals with self-reported social anxiety symptom severity.

6.8.3. Psychometric properties of the CEMSS. Reliability estimates for the original CEMSS (Last & Bruhn, 1983) have been reported by Bruhn and colleagues across studies. For instance, two psychologically naive judges scored 188 early memories and produced inter-rater reliability at 92.6% for 48 items. Agreement between judges for major coding categories ranged from 64.2% to 100% and disagreements regarding differences in ratings were easily resolved
(Last & Bruhn, 1983). Similarly, 94.1% inter-rater reliability was found for various CEMSS-R (Last & Bruhn, 1992) coding categories and agreement of individual items ranged between 81.1% and 100% (Bruhn, 1995). Subsequently, both original and revised versions of the CEMSS have shown adequate to excellent inter-rater reliability. Further to this, compared to experienced clinical psychologists, classification of children using the CEMSS has consistently outperformed the clinical raters. Moreover, inter-rater reliability of early memories between two judges was 74% prior to discussion, however reliability estimates for these codes increased to 90% agreement following discussion between raters (Bruhn & Schiffman, 1982b), demonstrating the clinical utility to the CEMSS-R in research.

More recently, one study reported reliability statistics for administration of the CEMSS-R in written format (Richards et al., 2014). This is particularly relevant to the current study, which adopted similar means of obtaining textual data from memory narratives. Findings indicated average inter-rater reliability estimates across five raters for; Affect Categories .66 (SD=.37) and Content and Process themes .63 (SD=.30). Inter-rater reliability was not conducted for Characters based on little or no between-rater coding variance, given that scoring consisted of counting the presence of people and allocating obvious codes for particular relationships or characters (Richards et al., 2014).

6.9. Scoring Procedures for Coding Early Memories

To avoid biased results toward predetermined outcome variables, the initial scoring phase conducted by the principal researcher, involved rigorous screening of memory narratives according to sub-codes comprising Affect Type, Content / Process Themes, and Characters. Sub-codes scored at least once were retained for analysis, whereas codes that did not appear in the text were eliminated prior to further analysis of qualitative data. To accurately describe emotions from earliest social memories, the secondary scoring phase entailed meticulous analysis of
textual data for theoretically and conceptually relevant themes associated with social anxiety (e.g., fear of negative evaluation, social failure) (APA, 2013; Hackmann et al., 2000; Weeks et al., 2010). Subsequently, themes unique to the sample were incorporated into the preliminary scoring guide for further evaluation. Furthermore, several pre-defined codes were modified for this study (Bruhn & Schiffman, 1982a; Liamputton & Ezzy, 2005).

Following this, the preliminary scoring guide was trialled by the principal researcher, to score each memory narrative, according to the best fitting sub-code from Affect Types and Content/ Process Themes. Each code included in the scoring guide was given equal weight during this process and the researcher was blind to group classification. To assess the validity of pre-existing CEMSS-R sub-codes and evaluate whether newly developed items were conceptually sound, an inter-rater reliability (IRR) analysis was conducted for a proportion of memory narratives. This IRR trial, permitted valuable discussion between raters regarding; clarification and/or disagreement regarding particular scores and codes, evaluation of new sub-codes and thoughtful consideration of new and pre-existing sub-codes described thematic data. The final list of sub-codes from coding categories used to score early memories in this study, are presented in Section 6.9.2.

**6.9.1. Inter-rater reliability of early memory codes.** This study’s investigation of thematic content from early memories was the first known study conducted on a homogeneous sample of socially anxious participants. Thus, establishing reliability for CEMSS-R scoring categories and new codes developed for this target sample was necessary to provide preliminary evidence for the population of interest (Tobey & Bruhn, 1995). An inter-rater reliability analysis was performed to determine consistency amongst raters for codes that emerged from a proportion of EM narratives. The co-researcher, a clinical psychologist with expertise in SAD and several years of experience working in academia, used the preliminary scoring form
described in Section 6.9, to independently code 25% of memory narratives blind to group classification.

One of the main strengths relating to the development of the CEMSS-R, is that items comprising the scoring system require minimal rater inference and the likelihood of acceptable reliability is maximised (Last & Bruhn, 1992). To reduce bias associated with subjective scoring and interpretation of data, ‘content variables’ comprising the CEMSS-R were used as a basis for scoring early memories in the current study, as these categories (i.e., affect, characters, content) are proposed to require the least subjective inferences when scoring. This increases the validity of preliminary findings from this study, due to minimal personal interpretation of these variables (Last & Bruhn, 1983; Last & Bruhn, 1985).

To evaluate the agreement between independent raters’ scores for EM variables measured on ordinal scales, Spearman’s rho correlation coefficient was conducted as a measure of strength between the association. Spearman’s rho is the nonparametric equivalent test to Pearson’s ‘r’ correlation coefficient and is also used as a measure of interrater reliability (IRR), as an alternative to weighted Kappa statistic. In comparison to unweighted Kappa, weighted Kappa accounts for near misses in agreement between raters, on ordinal variables measured on Likert scales (e.g., mild, moderate, severe) (Pallant, 2009; Tabachnick & Fidell, 2013). Thus, spearman’s rho correlation coefficient was computed as a means of establishing IRR for Overall EM Affect Rating, scored from 1 = very negative to 7 = very positive). It showed a strong, positive and significant correlation between rater 1 and rater 2, ρ = .94, n= 33, p =.000 (two-tailed). Thus, good consistency was found in relation to the tone projected from early memories.

An IRR analysis using Cohen’s unweighted Kappa statistic was performed on 25% of data (N=33) for Affect Types, to determine internal validity of EM codes. The level of agreement between rater 1 and rater 2 was κ = .89 (SD = .06), p =.000, n = 33 (95% CI = 0.83 - 0.95),
indicating a good level of reliability for the most prominent type of affect, using the preliminary scoring form. Table 4 below, demonstrates the frequency of Affect Types coded by rater 1 and rater 2, as well as interrater reliability estimates for sub-codes comprising Affect Types. For ordinal variables, scored 1 = mild, to 3 = severe (i.e., anxiety, depression, guilt-shame) Spearman’s rho correlation is reported, and Kappa statistics is reported for nominal variables.

Table 4

Frequencies and Cohens Kappa for Affect Categories Scored for IRR

<table>
<thead>
<tr>
<th>Affect Types</th>
<th>Rater 1</th>
<th>Rater 2</th>
<th>Inter-rater Reliability (IRR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>10</td>
<td>10</td>
<td>ρ = .88, p &lt; 0.01 (two-tailed)</td>
</tr>
<tr>
<td>Depression</td>
<td>2</td>
<td>2</td>
<td>ρ = 1.0, p &lt; 0.01 (two-tailed)</td>
</tr>
<tr>
<td>Anger</td>
<td>1</td>
<td>1</td>
<td>κ = 1.0 (SD= .00), p=.000</td>
</tr>
<tr>
<td>Guilt-Shame</td>
<td>2</td>
<td>2</td>
<td>ρ = 1.0, p &lt; 0.01 (two-tailed)</td>
</tr>
<tr>
<td>Embarrassment</td>
<td>4</td>
<td>5</td>
<td>κ = .76 (SD= .15), p=.000</td>
</tr>
<tr>
<td>Self-Conscious</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Pride</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Happiness</td>
<td>5</td>
<td>6</td>
<td>κ = .50 SD = .12 (p=.000)</td>
</tr>
<tr>
<td>No Affect</td>
<td>2</td>
<td>2</td>
<td>κ = 1.0 SD = 00 (p=.000)</td>
</tr>
<tr>
<td>Hurt</td>
<td>3</td>
<td>2</td>
<td>κ = .58 (SD = .21), p=.000</td>
</tr>
<tr>
<td>Worthless</td>
<td>2</td>
<td>3</td>
<td>κ = .79 (SD = .79), p=.000</td>
</tr>
</tbody>
</table>

N= 33

Table 4 shows perfect agreement between raters for Affect Types; Depression, Guilt-Shame, Anger, and No Affect. However, the frequencies with which these codes were endorsed was very low and reliability estimates should be interpreted with caution. Note, sub-codes; self-conscious, hurt, and worthless were developed for this study. There was strong IRR for EMs rated for the level of severity of scoreds for Anxiety, and moderate consistency between raters for Affect Types; Embarrassment, Hurt, and Worthless. As seen in Table 4, the code Self-
conscious and Pride were endorsed by Rater 1 but not rater 2. Thus, IRR was not conducted for these codes, instead discussion between raters revealed that self-consciousness was a defining feature of the sub-code ‘shyness’ (Embarrassment Category). Thus, ‘shyness’ was labelled Subconsciousness in the current study. Furthermore, one memory scored for Pride, was found to equally fulfil criterion for Affect Type ‘Happiness’. The medium strength association between raters for Happiness was partially influenced by rater 1 having scored this EM as ‘Pride, and also due to inconsistency between raters in relation to the level of happiness depicted in the memory, resulting in elimination of ‘Pride’ from the final scoring manual.

An IRR analysis was also performed using Cohen’s unweighted Kappa statistic, to establish IRR for Content and Process Themes for 25% of EM data (N=33). The level of agreement for codes scored from Content/Process Themes was almost perfect, $\kappa = .93$ (SD = .05), $p = .000$, $n = 33$, (95% CI 0.88 - 0.98). This indicated high levels of agreement between rater 1 and rater 2 for main types of content themes identified from the preliminary scoring form. Table 5 presents the frequency of Content and Process Themes coded by rater 1 and rater 2, with Cohen’s Kappa statistics reported for these nominal variables.
Table 5

*Frequencies and Cohens Kappa for Content-Process Themes Scored for IRR*

<table>
<thead>
<tr>
<th>Content/ Process Themes</th>
<th>Rater 1</th>
<th>Rater 2</th>
<th>Kappa Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickness</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Separation/ Abandonment</td>
<td>2</td>
<td>2</td>
<td>( \kappa = 1.0 (SD=.00), p = .000 )</td>
</tr>
<tr>
<td>Mastery-Failure</td>
<td>8</td>
<td>7</td>
<td>( \kappa = .92 (SD=.08), p = .000 )</td>
</tr>
<tr>
<td>Loss (EM Trust)</td>
<td>1</td>
<td>1</td>
<td>( \kappa = 1.0 (SD=.00), p = .000 )</td>
</tr>
<tr>
<td>Rejection</td>
<td>6</td>
<td>6</td>
<td>( \kappa = .80 (SD = .112), p = .000 )</td>
</tr>
<tr>
<td>Rule Breaking</td>
<td>1</td>
<td>1</td>
<td>( \kappa = 1.0 (SD=.00), p = .000 )</td>
</tr>
<tr>
<td>Bizarre or Delusional Content</td>
<td>1</td>
<td>1</td>
<td>( \kappa = 1.0 (SD=.00), p = .000 )</td>
</tr>
<tr>
<td>Successful Mastery</td>
<td>5</td>
<td>5</td>
<td>( \kappa = .88 (SD=.10), p = .000 )</td>
</tr>
<tr>
<td>Interactions with Others</td>
<td>5</td>
<td>6</td>
<td>( \kappa = .79 (SD=.13), p = .000 )</td>
</tr>
<tr>
<td>Succorance</td>
<td>2</td>
<td>1</td>
<td>( \kappa = .65 (SD=.00), p = .000 )</td>
</tr>
<tr>
<td>Fear of Negative Evaluation/ Embarrassment</td>
<td>2</td>
<td>2</td>
<td>( \kappa = 1.0 (SD=.00), p = .000 )</td>
</tr>
</tbody>
</table>

\( N = 33 \)

Of the codes from Content and Process Categories scored by both raters, Table 5 shows perfect agreement between raters for themes related to: separation/ abandonment, loss, rule breaking, bizarre content and fear of negative evaluation. There was also a strong level of agreement found for; mastery-failure, rejection, successful mastery and moderate agreement for succorance and interactions with others. The final content and process themes for this study, which derived following discussion between raters, are presented in Section 6.9.2 below.

In relation to scoring procedures related to Character codes, which consisted of allocating obvious codes for particular relationships or characters, inter-rater reliability was not conducted for these variables. (Richards et al., 2014). Overall, inter-rater reliabilities of CEMSS-R codes, were similar to those reported by previous studies (See Method Section 6.8.3. Psychometric properties of the CEMSS). It should be noted that only a proportion of codes were identified in the 25% of EM narratives scored for IRR, thus findings from codes without reliability estimates
represent preliminary evidence and should be interpreted with caution, as results require replication in socially anxious samples. Nonetheless, findings relating to all codes are presented in the Results, to provide valuable information for directing future research.

6.9.2. Affect, content and character codes. Following inter-rater reliability analysis, codes comprising the preliminary scoring form, were discussed and reviewed amongst raters. A complete list of items comprising Affect Types relevant to the current study are presented below in Table 6.
### Table 6

**Affect Categories and Severity Sub-codes**

<table>
<thead>
<tr>
<th>Affect Category</th>
<th>Code = 1</th>
<th>Code = 2</th>
<th>Code = 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Mild discomfort, apprehension or nervousness</td>
<td>Moderate anxiety, distress or fear</td>
<td>Severe anxiety or panic</td>
</tr>
<tr>
<td>Depression</td>
<td>Mild sadness, depression, abandonment or loneliness</td>
<td>Moderate depression, loneliness or emptiness</td>
<td>Deep sadness, despair or grief</td>
</tr>
<tr>
<td>Anger+</td>
<td>Mild irritability or annoyance</td>
<td>Moderate anger or frustration</td>
<td>Hatred +</td>
</tr>
<tr>
<td>Guilt-Shame</td>
<td>Mild regret or shame</td>
<td>Moderate guilt or shame</td>
<td>Overwhelming guilt or shame</td>
</tr>
<tr>
<td>Embarrassment+</td>
<td>Self-consciousness +</td>
<td>Embarrassment</td>
<td>Humiliation</td>
</tr>
<tr>
<td>Emotional Pain++</td>
<td>Intimidated ++</td>
<td>Hurt ++</td>
<td>Worthless ++</td>
</tr>
<tr>
<td>Positive Affect+</td>
<td>Mild satisfaction or contentment</td>
<td>Moderate happiness or pleasure</td>
<td>Excited++</td>
</tr>
<tr>
<td>No Affect+</td>
<td>Neutral+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* + signifies modifications to CEMSS-R. ++ signifies new codes created.

Several items comprising Affect Types from the CEMSS-R (Last & Bruhn, 1992) were retained in their original form (Bruhn, 1989). Particular items were modified to improve conceptual relevance of coding categories related to the sample. Changes from the scoring system included: substitution of the original sub-code Rage for Hatred (Anger Category); inclusion of a sub-code to encapsulate Excitement (Positive Affect Category); and modification to guidelines for scoring Shy (Embarrassment Category) (Bruhn, 1989), which was replaced with
‘Self-Conscious’. Further to this, themes characterised by feeling Hurt (1= disappointed, 2= offended, 3= hurt) and Worthless (1= intimidated, 2= rejection, 3= worthless), were coded during the initial scoring phase and refined to signify ‘Emotional Pain’, which ranged in degree of severity (1= intimidated 2= hurt, to 3= worthless). Similar to Affect Type, Content and Process Themes were largely based on sub-codes comprising the CEMSS-R (Last & Bruhn, 1992). Relevant sub-codes comprising negative content and process themes are presented in Table 7 below.
Table 7

*Negative Content and Process Categories and Codes comprising the Final Scoring Form*

<table>
<thead>
<tr>
<th>Negative Categories</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sickness +</td>
<td>1= Sickness</td>
</tr>
<tr>
<td></td>
<td>2= Bizarre or Delusional Content +</td>
</tr>
<tr>
<td>Loss +</td>
<td>1= Parental Separation</td>
</tr>
<tr>
<td></td>
<td>2= Betrayal ++</td>
</tr>
<tr>
<td>Separation- Abandonment</td>
<td>1= Accidental separation or being lost</td>
</tr>
<tr>
<td></td>
<td>2= Intentional separation</td>
</tr>
<tr>
<td>Master - Failure +</td>
<td>1= Failure to achieve Social Goal ++</td>
</tr>
<tr>
<td></td>
<td>2= Failure to achieve Non-social goal</td>
</tr>
<tr>
<td>Rejection +</td>
<td>1= Rejection from Peers</td>
</tr>
<tr>
<td></td>
<td>2= Fear of Negative Evaluation ++</td>
</tr>
<tr>
<td>Impulse Control- Rule Breaking +</td>
<td>1= Participant has no control over their physical self</td>
</tr>
<tr>
<td></td>
<td>2= Participant is angry, aggressive or nasty +</td>
</tr>
<tr>
<td></td>
<td>3= Other is angry, aggressive or nasty ++</td>
</tr>
<tr>
<td></td>
<td>4= Participant doesn’t respect rules or limits</td>
</tr>
<tr>
<td></td>
<td>5= Other’s don’t respect rules or limits ++</td>
</tr>
<tr>
<td>Other ++</td>
<td>1= General or vague ++</td>
</tr>
</tbody>
</table>

*Note:* + signifies changes to CEMSS-R (Last & Bruhn, 1992). ++ signifies new codes created.

Due to low frequencies of scores for particular codes scored for content and process themes, Impulse Control and Rule Breaking were pooled into an overarching category based on conceptual similarities. Similarly, Bizarre Material was combined with Sickness to depict issues related to illness. Further modifications to the scoring scheme entailed: development of codes to signify Betrayal (Loss Theme), Failure to achieve Social Goals (Mastery-Failure Theme), and Fear of Negative Evaluation (Rejection Theme). Note that pre-existing codes ‘Participant is
Aggressive’ or ‘Other people are Aggressive or Nasty’ (Impulse Control- Rule Breaking), were scored for Anger or Nastiness experienced by the participant or to the participant. However, overt aggression or threatening behaviour was not a key feature of these items in the current study. Memories containing limited information, general events, or neutral themes were coded ‘General or Vague’ in the current study, whereas Bruhn’s (1989) scoring system codes such data as ‘Not Scorable’. Positive Content and Process themes identified through thematic analysis of memory data, are presented in Table 8 below.

Table 8

*Positive Content and Process Categories and Codes comprising Final Scoring Form*

<table>
<thead>
<tr>
<th>Positive Categories</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful Mastery</td>
<td>1= Achieved Social Goal ++</td>
</tr>
<tr>
<td></td>
<td>2= Achieved Non-social Goal oriented activity</td>
</tr>
<tr>
<td>Interactions with Others+</td>
<td>1= Happiness of being with friends</td>
</tr>
<tr>
<td></td>
<td>2= Co-operative Interactions with others ++</td>
</tr>
<tr>
<td>Succorance+</td>
<td>1= Helped, cared for, or treated Kindly</td>
</tr>
<tr>
<td></td>
<td>2= Receiving a Gift +</td>
</tr>
</tbody>
</table>

*Note:* + signifies changes to CEMSS-R (Last & Bruhn, 1992). ++ signifies new codes created.

Scoring procedures identified an additional sub-code, which signified Successful Mastery in terms of Achieving Social Goals. Further amendments to the scoring scheme entailed merging items with low frequencies of scores (e.g., Receiving a Gift) with conceptually similar items (e.g., Succorance). The coding category ‘Interactions with Others’ was adapted to describe common themes involving social interactions with others. Traditional scoring procedures coded
‘Cooperative play with peers’ for thematic content revealing happiness or feeling good about playing with peers (Bruhn, 1989). However, thematic analysis of memory narratives discovered common trends relating to social interactions that were differentiated into sub-codes; ‘Cooperative Interactions with Others’ (i.e., children or adults) and ‘Happiness being with Friends’ during social interactions.

A number of changes were made to the original CEMSS-R character codes and additional items were created to describe certain people recalled from earliest social memories. Table 9 below displays character codes scored from the samples memory narratives.

Table 9

<table>
<thead>
<tr>
<th>Code</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Mother</td>
</tr>
<tr>
<td>B.</td>
<td>Father</td>
</tr>
<tr>
<td>C.</td>
<td>Other Family Members (grandparents, cousins, uncles or aunts, siblings*)</td>
</tr>
<tr>
<td>D.</td>
<td>Peers (or, friends and team-mates ++)</td>
</tr>
<tr>
<td>E.</td>
<td>Teachers +</td>
</tr>
<tr>
<td>F.</td>
<td>Other People ++ (non-specific reference to another person)</td>
</tr>
<tr>
<td>G.</td>
<td>Self-focus</td>
</tr>
<tr>
<td>H.</td>
<td>Not applicable ++ (no mention of other people)</td>
</tr>
</tbody>
</table>

Note: + signifies changes to CEMSS-R (Last & Bruhn, 1992). ++ signifies new codes created.

As seen in Table 9, codes for Mother and Father were retained in the original format (Last & Bruhn, 1992), however due to low frequencies of scores for siblings in the current study Siblings were coded with Other Family Members. The CEMSS-R also specifies a code to
describe Non-Family Members such as friends or teachers. However, previous research suggests that teachers have been recalled from memories in clinical and non-clinical samples comprising socially anxious participants (Chartier et al., 1998; Hackmann et al., 2000). Thus, despite low frequencies of Teachers scored in this study, a separate code was created to explore these potential links. Further to this, modifications to the code Peers included relationships with ‘friends’ and ‘team-mates’.

Furthermore, thematic analysis revealed patterns of themes from memories of socially anxious participants, which represented complete self-focus despite memories recalled depicting early social interactions with others. Therefore, to capture this phenomenon revealed from textual data of clinical and subclinical social anxiety groups, a code was developed to signify Self-Focus in early social memories. For memory narratives in which general reference was made to a person or persons, a code was developed to describe Non-specific references to significant or influential people whose relationship to the participant (if any), was not described in the memories text. Lastly, memory narratives containing no reference to other people were coded Not Applicable (N/A).

6.10. Procedure

Participants were recruited through multiple avenues, including the researcher’s social network from the general community, which generated recruitment via snow-ball sampling. In addition, first year introductory psychology classes from a Melbourne based University were invited to complete the questionnaire for this study, in exchange for course credit toward University requirements associated with participation in the Research Experience Program (REP). The questionnaire designed for this study was available in hard copy format and online at Swinburne University’s REP webpage, with a web-link to the questionnaire
Students were informed of the study during lectures and tutorials, in which hard-copies of the questionnaire were distributed and information regarding access to the weblink was made available. A sealed envelope was provided with hard-copy formats and students were advised by the researcher and/or tutors of the secure location in which questionnaire could be returned. Students were also invited to recruit friends and family members in exchange for further course credit if they wished to do so (See Appendix C for Questionnaire).

An advertisement briefly describing the nature of the study, was placed in the Swinburne Psychology Clinic’s newsletter, as well as an internet website devoted to psychological research ‘Social Psychology Network’ (www.socialpsychology.org). The study was advertised from December 2010 to May 2011, with a web-link to the online questionnaire for voluntary participation. Flyers advertising the study were also incorporated into assessment packages of potential participants applying for eligibility into a Social Anxiety Group program, conducted at a Melbourne based University (i.e., Swinburne University of Technology). An information sheet containing a description of the study was included with each questionnaire and completion was considered a demonstration of informed consent (See Appendix B for Information Statement).

The information statement clearly stated that participation was voluntary, anonymous, and confidentiality was assured. It informed potential participants of the time required to complete the questionnaire (i.e., approximately 30 to 60 minutes) and provided two telephone numbers to counselling services made available if participation in the study resulted in any distress. All participants who voluntarily completed the survey were 18 years of age were free to withdraw at any time. Swinburne University Higher Research Committee granted ethical approval for the study (See Appendix A for Ethics) and data was collected over a nine month period.
Chapter 7: Results

The results chapter presents data screening, assumption testing, and descriptive statistics of the final sample comprising clinical, subclinical and control groups (N=130). Followed this, findings related to the study’s main aims and hypotheses are presented, in terms of patterns of results found from thematic content of earliest social memories for each social anxiety threshold group. Evidence for conceptualising SAD as a categorically distinct condition would reveal categorically different themes between clinical and subclinical groups. On the other hand, if social anxiety represents a spectrum disorder, findings would suggest similar core features underlying subclinical and clinical social anxiety groups, with clinical SAD signified by greater frequency and severity of symptomatic and vulnerability factors.

7.1. Data Screening

The data were analysed using SPSS® version 20 for Windows®. Prior to analysis, incomplete questionnaires containing missing data from the early memory section (i.e., memory narrative) were omitted. Furthermore, data screening procedures were conducted on the total sample for errors and missing values. Participants with a large proportion of missing data on measures for diagnostic or group inclusion criteria such as the SPSQ, SIAS, or SPS were also deleted prior to analyses, resulting in 193 cases comprising the final dataset (See Method Section 6.1 Participants). A missing values’ analysis was conducted on the SPSQ, SIAS, SPS, and Depression and Anxiety subscales of the DASS and revealed no pattern to the distribution of missing variables. Since variables were missing completely at random (MCAR), a conservative approach was taken for handling missing data, in which case each value was replaced with the variable mean for each measure, as recommended by Tabachnick and Fidell (2013).
7.2. Preliminary Analyses

The primary focus of the current study was to utilise qualitative research methods for identifying themes from early memory narratives across social anxiety threshold groups; SAD, subclinical social anxiety, and no social anxiety. To test the research aims and hypotheses, crosstabulations were produced to assist exploration of common and distinctive themes that emerged from thematic analysis of early memory data. Chi-square tests were the main statistical analyses used to compare the dependent variable (i.e., social anxiety groups) on several independent variables measured on nominal or ordinal scales (i.e., interactions with others, affect categories, content and process themes). Analysis of Variance (ANOVA) were conducted to compare mean scores on continuous variables (i.e., age, overall affect rating) across social anxiety threshold groups (DV). Preliminary analyses were performed to ensure no violations of normality, linearity, and homoscedasticity assumptions (Refer to Section 7.2.2. Analysis of variance assumption testing).

7.2.1. Chi-square and assumptions testing. Chi-square analyses examine relationships between two categorical variables. Chi-square assumptions require expectancy values of at least 5 in each cell, for sufficient power to detect significant results. Chi-square analyses were not conducted for variables with less than 80% of cells containing expected frequencies of five or more, due to increased risk of Type II error and power of analyses to detect significant differences in themes between social anxiety threshold groups (Pallant, 2007; Tabachnick & Fidell, 2013). For demographic variables and EM themes denoting the total samples’ responses (e.g., tone of social interactions, negative interactions with peers), assumptions dependent on sample size were not violated. Thus, chi-square analyses were conducted to confirm patterns of themes that emerged across social anxiety threshold groups.
Due to the nature of this exploratory study, EMs were coded for all themes identified during the initial coding phase, resulting in a large number of independent variables relative to the total sample size ($N=130$). Thus, chi-square analyses for the majority of sub-codes from coding categories; Affect, Content, and Character, violated chi-square assumptions dependent on sample size. In the instance chi-square statistics indicated significant results, Cramer’s V was used to describe the degree to which these variables varied between social anxiety threshold groups (Pallant, 2007).

7.2.2. Analysis of variance assumption testing. Data was screened for violations in statistical assumptions prior to conducting ANOVAs. Outliers were screened for each social anxiety threshold group separately, with no outliers identified for the control group. Some evidence of univariate outliers in SAD and subclinical social anxiety groups were expected, for this target sample comprising various degrees of symptom severity. However, potential outliers did not deviate markedly from the mean. Inspection of histograms, normal probability plots of standardized residuals, skewness and kurtosis statistics, revealed normal distributions. The Kolmogorov-Smirnov statistic indicated no violations of normality assumptions for SIAS and SPS scores of social anxiety measures for; clinical SAD, subclinical social anxiety, and no social anxiety threshold groups.

Pallant (2007) suggests violations of normality assumptions should not cause major problems if groups contain thirty or more participants, which was the case for all groups in the current study. Furthermore, ANOVA is robust to violations in homogeneity of variance assumptions if groups have reasonably similar sample sizes. In the instance that Levene’s test was significant and violated this assumption, the Robust Tests of Equality of Means (Welsh) was consulted (Pallant, 2007; Tabachnick & Fidell, 2013).
7.3. Scale Properties

Reliability analysis was conducted on two samples: the total samples responses \((N=193)\) and the final sample comprising; SAD, subclinical social anxiety and control groups \((N=130)\). Reliability estimates were similar between both samples, thus estimates reported represent the final sample comprising this study’s analyses. Good to excellent reliability was found for the SPSQ distress scale \((\alpha = .93)\), companion scales; SIAS \((\alpha = .95)\) and SPS \((\alpha = .95)\), Depression \((\alpha = .97)\) and Anxiety \((\alpha = .94)\) subscales of the DASS. In addition, relationships between the SIAS total score, SPS total score, and SPSQ total distress score was investigated on the final sample’s scores \((N=130)\) using person product-moment correlation coefficient. There was a strong relationship between the SIAS and SPS \((r = .82 \ p = .000)\), the SPSQ and SIAS \((r = .89 \ p = .000)\), as well as the SPSQ and SPS \((r = .84 \ p = .000)\) thus demonstrating excellent convergent validity.

7.4. Descriptive Statistics for Social Anxiety Threshold Groups

Eighty-seven participants from the final sample \((N = 130)\) scored above cut-off criteria on selection measures for social anxiety threshold groups (i.e., SIAS or SPS). Of these 87 participants, 37 also met criteria for SAD based on responses to the diagnostic measure. However, scores from two of 40 participants who met clinical thresholds of DSM-IV-TR SAD, did not reach cut-off criteria on the SIAS or SPS, which Heimberg et al. (1992) proposed for determining cases of SAD. Thus, the SPSQ correctly classified 38 of 40 participants as having SAD and two cases went undetected based on scores from the SIAS and SPS. These two participants whose scores were below the recommended threshold on the SIAS and SPS, were allocated to the clinical SAD group based on responses to the SPSQ indicating ‘significant distress or impairment’ (Refer to Section 6.4.1. SAD group criteria).
Investigation of the sensitivity and specificity of these measures, was reported in Brown’s (1997b) large scale validation study. The SIAS correctly identified 86% of actual SAD cases (true positives), and the SPS identified 76% of true SAD cases. Furthermore, cases without SAD who were correctly identified (true negatives) were 70% for the SIAS and 72% for the SPS. Thus, the overall efficiency of these tests was 75% for the SIAS and 73% for the SPS. Means, standard deviations and ranges of self-reported scores on social anxiety measures are presented in Table 10 (SIAS) and Table 11 (SPS).

Table 10

Means, Standard Deviations and Ranges of Scores on the SIAS for Social Anxiety Groups

<table>
<thead>
<tr>
<th></th>
<th>SIAS</th>
<th>Actual Range</th>
<th>Scale Range</th>
<th>95% CI</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Min</td>
<td>Max</td>
<td></td>
</tr>
<tr>
<td>Clinical SAD</td>
<td>49.44</td>
<td>13.35</td>
<td>15</td>
<td>72</td>
<td>45.17 - 53.71</td>
</tr>
<tr>
<td>Subclinical social anxiety</td>
<td>34.75</td>
<td>9.70</td>
<td>12</td>
<td>55</td>
<td>31.85 - 37.30</td>
</tr>
<tr>
<td>No Social Anxiety</td>
<td>11.21</td>
<td>4.73</td>
<td>0</td>
<td>19</td>
<td>9.67 - 12.74</td>
</tr>
</tbody>
</table>

\(N = 130. \text{ Note: SIAS= Social Interaction Anxiety Scale. The highest score obtained on the SIAS by the control group was 20 due to cut-off criteria for group inclusion.}\)

As can be seen in Table 10, mean scores relating to social interaction anxiety were highest for the clinical group, followed by subclinical and control groups respectively. Note, inclusion criteria for the control group in the present study, specified cut-off scores equal to or below Heimberg et al.’s (1992) community mean on the SIAS and SPS. This resulted in lower levels of social interaction and performance anxiety for the control group compared to the community sample in Heimberg et al.’s study. However, non-socially anxious controls in the current study had comparable scores to the community population in Brown et al.’s (1997b) validation study of the SIAS (\(M= 14.3, SD= 11.0\)) and SPS (\(M= 6.3, SD= 4.9\)). Similarly, the clinical group in the present study resembled Heimberg et al.’s socially phobic sample (SIAS:}
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

\( M = 49, \ SD = 15.6 \) and SPS: \( M = 32.8, \ SD = 14.8 \), providing supporting evidence for the efficacy in the SIAS and SPS for determining subgroups of social anxiety in research. Table 11 presents descriptive statistics for social anxiety threshold groups in relation to the SPS.

Table 11

**Means, Standard Deviations and Ranges of Scores on the SPS for Social Anxiety Groups**

<table>
<thead>
<tr>
<th></th>
<th>SPS</th>
<th>Actual Range</th>
<th>Scale Range</th>
<th>95% CI</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical SAD</td>
<td>37.36</td>
<td>13.73</td>
<td>Min 7</td>
<td>Max 73</td>
<td>0-80</td>
</tr>
<tr>
<td>Subclinical social anxiety</td>
<td>31.04</td>
<td>10.69</td>
<td>Min 11</td>
<td>Max 67</td>
<td>0-80</td>
</tr>
<tr>
<td>No Social Anxiety</td>
<td>6.74</td>
<td>3.80</td>
<td>Min 0</td>
<td>Max 13</td>
<td>0-13</td>
</tr>
</tbody>
</table>

\( N = 130. \) Note: SPS = Social Phobia Scale. Based on inclusion criteria for the control group, the highest score obtained on the SPS was 13.

Table 11 reveals similar patterns of scores on the SPS as the SIAS (Table 10), which demonstrate higher levels of self-reported performance anxiety for clinical and subclinical social anxiety groups, compared to non-socially anxious controls respectively. To compare mean scores on the SIAS and SPS (continuous variables) across social anxiety threshold groups (categorical variable), two one-way between groups ANOVA’s were conducted using Welch Robust Test of Equality of Means. A significant difference was found between groups for mean scores on the SIAS, \( F (2,74.01) = 220.25, \ p < .001, \ \eta^2 = .70 \) and SPS, \( F (2,69.19) = 184.78, \ p < .001, \ \eta^2 = .61 \). (Observed power = 1.0). Thus, post hoc analyses were conducted for SIAS and SPS to determine which groups differed significantly on measures of social interaction anxiety and performance anxiety.

Tukey HSD tests revealed that as expected, the clinical SAD group scored significantly higher on the SIAS \( (p < .001) \) and SPS \( (p = .013) \) than subclinical and control groups \( (p < .001) \), respectively. Furthermore, significant differences were also found between subclinical and
control groups for the SIAS and SPS ($p < .001$). Thus, selection measures used to determine social anxiety threshold groups in the current study, exemplified apparent distinctions in symptom severity between experimental groups, despite methodological limitations of classifying continuous sub-groups from continuous scales of measurement (Furmark, 2002). The following section describes the qualitative research approach of analysing early memories across social anxiety threshold groups.

7.5. Thematic Content from Earliest Social Memory of Social Anxiety Groups

The primary aim of the current study was to explore thematic content from participants’ earliest memory of being in a social situation, in order to examine themes that may represent conscious or unconscious influences on pathways for social anxiety symptoms at and below diagnostic thresholds. In particular, themes from early memory narratives were analysed to explore potential indicators representing common and/or distinguishing features of clinical and subclinical social anxiety, when compared to a control group. Thus, qualitative data obtained from early memory narratives, was explored according to broad categories specified by the CEMSS-R (Last & Bruhn, 1992): Overall Affective Tone, Characters, Affect Categories, and Content or Process themes.

The total samples memory narratives ($N=130$), were scored according to its overall tone (H1) and nature of social interactions (H2). Thus, assumptions of statistical tests dependent on sample size were met, allowing sufficient power to detect significant results that supported hypotheses. For additional hypotheses (i.e., negative interactions with parents H2a and H2b) and research questions (i.e., types of emotional states, life events, adverse conditioning experiences, interactions with particular people), several themes transpired from subsets of memory narratives, which limited the power of statistical tests to detect significant differences between
groups. Therefore, findings relating to these themes represent preliminary evidence of trends in the data, which lied in the expected direction.

7.6. Hypothesis 1: Affective Tone of Earliest Social Memory

Overall Affect Rating ranged from 1 to 7 (ordinal variable), with higher scores indicating greater degrees of positive affect. A one-way between-groups ANOVA was conducted to explore differences between Social Anxiety Threshold Groups (categorical variable) and underlying Affective Tone of early memories (N=130). A statistically significant difference was found between Social Anxiety Threshold Groups and mean Affect Rating $F(2, 127) = 7.61, p = .001, \eta^2 = .107$. Observed power .94 Findings revealed support for the hypothesis that (H1): earliest social memories of individuals with clinical SAD were associated with greater degrees of negative affect, than individuals with subclinical social anxiety and no social anxiety respectively. Planned contrasts explored differences between social anxiety threshold groups and the overall tone of early memories, using Bonferroni adjustment to reduce the risk of Type I error (Pallant, 2005).

Results indicated, earliest social memories of the clinical SAD group ($M=2.93, SD= 1.31$) denoted significantly greater degrees of negative affect, than the control group ($M= 4.03, SD= 1.33$) but not the subclinical group ($M=3.53, SD= 1.16$), $F (1, 127) =10.97, p = .001$, which did not differ significantly from controls. This demonstrated a higher proportion of early social memories signified by an increasingly negative tone, supporting dimensional approaches for conceptualising social anxiety. The proportion of social anxiety threshold group, whose memories were rated according to affective tone are presented in Table 12 below.
Table 12

Rating of the Overall Tone from Earliest Memory of being in a Social Situation

<table>
<thead>
<tr>
<th>Affective Tone Rating</th>
<th>SAD (n=40)</th>
<th>Subclinical Social Anxiety (n=51)</th>
<th>No Social Anxiety (n=39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Negative</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Moderately Negative</td>
<td>47.5%</td>
<td>21.6%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Mildly Negative</td>
<td>17.5%</td>
<td>29.4%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Neutral</td>
<td>15%</td>
<td>29.4%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Mildly Positive</td>
<td>10%</td>
<td>13.7%</td>
<td>23.1%</td>
</tr>
<tr>
<td>Moderately Positive</td>
<td>5%</td>
<td>5.9%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Very Positive</td>
<td>0%</td>
<td>0%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

N=130 total sample of participants

As seen in Table 12, 70% of affect ratings for individuals with SAD were negative. Thus, individuals with clinical symptoms were more likely to describe early memories of social situations projective of a mild negative to very negative affective tone, compared to individuals with subclinical social anxiety (51%) and no social anxiety (43.6%). Moreover, early social memories with a very negative tone were only recalled by a small proportion of individuals with SAD, who also recalled more moderately negative social situations than individuals with subclinical social anxiety and no social anxiety, respectively. Overall, individuals with SAD recalled earliest memories of being in a social situation that were predominantly negative in affective tone.

For individuals with subclinical social anxiety, early memories were most often projective of a mild negative or neutral affective tone. In fact, neutral valanced memories of social situations were almost twice as common for individuals with social anxiety symptoms
below diagnostic thresholds (24.9%), compared to individuals with SAD (17.5%) and no social anxiety (15%). In comparison, individuals with no social anxiety most often recalled early memories with mild negative, mild positive and neutral affect, respectively. A similar proportion of individuals with SAD (15%) and subclinical social anxiety (19.6%) recalled positive social situations, however as might be expected, non-socially anxious individuals were most likely to recall positive social situations, with a greater degree of positive affect (38.5%). Examples of early memories per negative affect rating are presented below in Table 13, followed by examples of neutral and positive affect memories (Table 14).
Table 13

Narrative Examples of Earliest Social Memories Scored for Negative Affect Ratings

<table>
<thead>
<tr>
<th>Affective Tone Rating</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Very Negative</td>
<td>&quot;I remember when going to my grandmother’s to work on her farm. There was a fish fry with lots of people from the community. I felt they were all looking at me and they knew. They knew how nasty I was, but they didn't care. I was ashamed and felt dirty&quot; (SAD group)</td>
</tr>
<tr>
<td>2. Moderately Negative</td>
<td>&quot;When I started becoming friends with a particular group, they were all talking about something and when I went to contribute, it was completely off topic and irrelevant. It was so embarrassing” (SAD group)</td>
</tr>
<tr>
<td>3. Mildly Negative</td>
<td>&quot;I remember my first night of Year 7 school camp, we had to make a circle and tell everyone about ourselves. When it came to my turn to speak, I quickly said my name, were I lived and that I had a sister. I spoke for a minute and felt myself going red. I didn't elaborate on my interests or my dislikes, whereas many others did and they told about themselves in a humorous way. After each person had their turn at speaking we could either stay and get to know other people or turn in for the night. I decided to turn in for the night” (subclinical social anxiety group)</td>
</tr>
</tbody>
</table>
Table 14

Narrative Examples of Earliest Social Memories Scored for Neutral and Positive Affect Ratings

<table>
<thead>
<tr>
<th>Affective Tone Rating</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Neutral</td>
<td>&quot;I was about 7 yrs old and I remember going on a plane to Italy to visit my grandparents&quot;. (subclinical social anxiety group)</td>
</tr>
<tr>
<td>5. Mild Positive</td>
<td>“I remember one time when I first started primary school, I arrived early to school and saw only one other person. So the boy and his older sister came up to me and we automatically became friends. It made me feel at ease meeting new people” (control group)</td>
</tr>
<tr>
<td>6. Moderate Positive</td>
<td>&quot;I remember one time when I was seven, I was out shopping with friends and we were running around playing hide and seek, it was fun and kept us amused&quot; (control group)</td>
</tr>
<tr>
<td>7. Very Positive</td>
<td>&quot;I remember when I was about 3 or 4 years old, some people came to visit our family. My parents had bought me a red, round small hand bag. One of the visitors asked to have a closer look at my new handbag, he put a two shilling coin in the bag and gave it back to me. I was very pleased because with that amount of money I could buy a BIG bag of my favourite lollies at the milk-bar&quot; (control group)</td>
</tr>
</tbody>
</table>

7.7. Hypothesis 2: Tone of Interactions with Characters

It was also hypothesised that memories recalled by the SAD group, would contain a greater proportion of themes involving negative interactions with others, compared to subclinical and control groups. Thus, early memories were scored for the presence of particular ‘characters’ and categorised according to the overall Tone these Interactions with each specific character (i.e., positive, negative, neutral, or no interactions). Tone of interactions with specific Characters (IV categorical variables) were compared for individuals with varied degrees of self-reported
social anxiety symptoms (DV categorical variable). A chi-square test was performed and revealed a significant difference between social anxiety threshold groups and affective tone of social interactions recalled from earliest social memories, $\chi^2 (6) = 12.79, p = .046$. The strength of this relationship was small (Cramer’s $V = .22$), indicating no significant difference between clinical and subclinical social anxiety groups, for negative social interactions with others ($N=130$). Table 15 demonstrates the proportion of early memories containing negative, positive, neutral, and no interactions, across each social anxiety threshold group.

Table 15

<table>
<thead>
<tr>
<th>Tone of Interaction</th>
<th>SAD Group ($n=40$)</th>
<th>Subclinical Group ($n=51$)</th>
<th>Control Group ($n=39$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>17.5% $^a$</td>
<td>25.5% $^a$</td>
<td>41% $^a$</td>
</tr>
<tr>
<td>Negative</td>
<td>60% $^a$</td>
<td>37.3% $^a,b$</td>
<td>23.1% $^b$</td>
</tr>
<tr>
<td>Neutral</td>
<td>12.5% $^a$</td>
<td>19.6% $^a$</td>
<td>20.5% $^a$</td>
</tr>
<tr>
<td>No Interaction</td>
<td>10% $^a$</td>
<td>17.6% $^a$</td>
<td>15.4% $^a$</td>
</tr>
</tbody>
</table>

*Note. N=130. The proportion of groups with the same subscript ($^a,b$) do not differ significantly from each other at the .05 level.*

As seen in Table 15, a large proportion of individuals with SAD recalled social situations categorised by negative interpersonal interactions. More specifically, earliest social memories of the SAD group involved significantly more negative social interactions than the control group but not the subclinical group. Moreover, the proportion of negative social interactions recalled by the subclinical group were not significantly different from clinical or control groups. These findings demonstrate that greater social anxiety symptom severity was associated with a greater
tendency for socially anxious individuals to recall negative interactions. Patterns in the data also revealed a tendency for non-socially anxious individuals to recall more positive interactions than individuals with subclinical and clinical social anxiety respectively, however contrary to what might be expected this difference was not significant.

Nonetheless, patterns of results relating to positive or negative interaction with others corresponded to social anxiety symptom severity. In addition, there was no significant difference between social anxiety threshold groups and the proportion of memories containing neutral or absent interactions. Subsequently, findings relating to ‘characters’ coded from negative ($N=52$) and positive ($N=36$) social interactions will be presented in detail, as they likely have the greatest interpretive value. The proportion of social anxiety threshold groups whose earliest social memory involved negative and positive interactions with specific people, are presented below in Table 16.
Table 16

*Negative and Positive Interactions with Specific Characters from Earliest Social Memory*

<table>
<thead>
<tr>
<th>Character</th>
<th>Negative Interaction</th>
<th></th>
<th>Positive Interaction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SAD</td>
<td>Subclinical</td>
<td>Control</td>
<td>SAD</td>
</tr>
<tr>
<td></td>
<td>(n =24)</td>
<td>(n =19 )</td>
<td>(n=9)</td>
<td>(n =7)</td>
</tr>
<tr>
<td>Mother</td>
<td>7.5%</td>
<td>3.9%</td>
<td>2.6%</td>
<td>-</td>
</tr>
<tr>
<td>Father</td>
<td>5%</td>
<td>2%</td>
<td>2.6%</td>
<td>-</td>
</tr>
<tr>
<td>Family Members</td>
<td>2.5%</td>
<td>3.9%</td>
<td>2.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Teachers</td>
<td>2.5%</td>
<td>2%</td>
<td>2.6%</td>
<td>-</td>
</tr>
<tr>
<td>Peers</td>
<td>37.5%&lt;sub&gt;a&lt;/sub&gt;</td>
<td>29.4%&lt;sub&gt;a&lt;/sub&gt;</td>
<td>7.7%&lt;sub&gt;b&lt;/sub&gt;</td>
<td>15%</td>
</tr>
<tr>
<td>Other People</td>
<td>7.5%</td>
<td>-</td>
<td>7.7%</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* Negative interactions $N=52$, Positive interactions $N=36$. Subscripts are presented for chi-square analyses conducted for social anxiety threshold groups and negative interactions with peers. The proportion of groups with the same subscript ($a$, $b$) do not differ significantly from each other at the .05 level. Chi-square analyses were not conducted for Characters without subscripts, due to violations in statistical assumptions dependent on sample size. Note that scoring allowed for more than one character per memory.

The most notable finding for all social anxiety threshold groups was the high proportion of negative and positive social interactions involving Peers. Hypothesised relationships relating to Mother, Father, and Peers will be discussed separately in the following subsections. As shown in Table 16, a significantly higher proportion of negative social interactions were recalled by clinical and subclinical social anxiety groups compared to controls, however no obvious trends were observed in relation to negative interactions with other Family Members (i.e., siblings, cousins, grandparents, aunts or uncles), Teachers, or Other People (i.e., no specified relationship).
On the other hand, patterns from thematic analysis showed marginal trends for non-socially anxious individuals to have reported more positive interactions with Family Members than subclinical and clinical social anxiety groups, respectively. Furthermore, positive interactions with People in general were only recalled by control and subclinical social anxiety groups, and one non-socially anxious participant recalled positive interactions with their Teacher. Therefore, earliest social memories of non-socially anxious individuals were more likely to involve positive social interactions, with a wider range of people, compared to individuals with subclinical and clinical social anxiety respectively.

**Hypothesis 2: Interactions with mother (H2a) and father (H2b).** Chi-square analyses were not performed on data pertaining to themes involving negative interactions with either parent, because 50% of cells in each analysis had expected frequencies less than 5, thus violated assumptions dependent on sample size (Mother: $n = 6$; Father: $n = 4$). Nonetheless, patterns of results lied in the expected direction to partially support the hypothesis that (H2a): individuals with clinical and subclinical symptoms respectively, would recall more negative interactions with Mothers, compared to non-socially anxious individuals. These trends, represented a graded relationship between social anxiety symptom severity and earliest memories of negative interactions involving Mothers. Specifically, the SAD group (7.5%) were almost twice as likely as the subclinical group (3.9%) and three times more likely than the control group (2.6%), to have reported negative relations with their Mother, as their earliest social memory.

Contrary to expectations (H2b), predictions that individuals with SAD and subclinical symptoms respectively, would recall more early memories involving negative interactions with Fathers than non-socially anxious individuals, were not supported. In fact, the SAD group (5%) were approximately twice as likely to have recalled negative interactions with Father’s, than individuals with subclinical social anxiety (2%) and controls (2.6%). However, thematic analysis
of memory narratives revealed the nature of negative interactions with fathers as potentially more harmful for individuals with subclinical social anxiety, than non-socially anxious individuals.

Overall, the clinical group (12.5%) were twice as likely as subclinical (5.9%) and control groups (5.2%) to have recalled negative interactions with parents (i.e., Mother and Father). Note, the proportion of early memories containing negative interactions with either parent was quite small for all groups, especially in relation to Fathers. Thus, case examples from single participants illustrated below, are not necessarily suggestive of common themes however they do demonstrate the increasingly harmful nature of interactions with parents recalled by individuals with greater social anxiety symptom severity in this study. Table 17 below presents two case examples from the control group that depict negative interactions with either Mother or Father, and examples from clinical and subclinical social anxiety groups demonstrate negative interactions with both parents present.
Table 17
Case Examples of Negative Interactions with Parents for Social Anxiety Groups

<table>
<thead>
<tr>
<th>Character</th>
<th>Negative Interaction from Earliest Social Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother and Father (SAD group)</td>
<td>“When I was 3 years old I remember being left at the hospital. My room was right across the hall from the elevator and I remember my mum and dad putting their coats on and getting into the elevator. I cried and screamed but the door closed and they were gone... I learned they would leave me and that others can be trusted more”</td>
</tr>
<tr>
<td>Mother and Father (subclinical group)</td>
<td>“Before my parents divorced they had an argument in-front of my younger brother and I. My Dad was yelling at my Mum, imitating her and she was very upset. I was scared”</td>
</tr>
<tr>
<td>Mother (control group)</td>
<td>“When I bit a fellow student in crèche. I don’t remember too much detail... I remember being told off by my Mum”</td>
</tr>
<tr>
<td>Father (control group)</td>
<td>&quot;I was approx 5 yrs old running around on the grass in the backyard among the trees with my younger brother (2 yrs younger). My father took a lot of pride in his garden and would tell us again and again to stay clear of the newly planted trees. My brother and I were playing some kind of chasey game, I accidentally ran into the tree and snapped it in half. My father came out and realised what had happened, he yelled loudly 'who is responsible for this?' I immediately pointed to my brother. He immediately went to the grape vine and pulled a long vine out, he gave my brother the biggest whipping and I just stood there and watched in shock. I was full of guilt for many years afterwards, I felt horrible about this incident&quot;</td>
</tr>
</tbody>
</table>

Thematic analysis revealed the nature of negative interactions with both Mother and Father differed between the groups. The SAD group reported memories of abandonment or neglect, the subclinical group recalled witnessing marital conflict, and the control group
described being disciplined or punished. However, both social anxiety groups recalled being lost or separated from their Mother. Alternatively, non-socially anxious individuals were the only group to have recalled memories of positive interactions with both parents, in which they were encouraged, nurtured, comforted, or treated kindly.

**Hypothesis 2c: Interactions with peers.** To test the hypothesis (H2c) that: individuals with clinical SAD and subclinical social anxiety would recall a higher proportion of negative Peer interactions (categorical variable), than non-socially anxious individuals, a chi-squared test was conducted ($N=30$). It revealed a significant difference between the proportion of social anxiety threshold groups who recalled negative interactions with Peers, $\chi^2 (2) = 9.982, p=.007$. Note, chi-square assumptions dependent on sample size were met for analyses of peer interactions, suggesting sufficient power to detect significant differences between social anxiety groups should one exist. However, the strength of this relationship was small (Cramer’s $V= .28$), indicating a weak relationship between the proportion of negative peer interactions recalled from earliest social memories of clinical (37.5%) and subclinical social anxiety groups (29.4%), relative to the control group (7.7%). As expected, greater social anxiety was associated with more memories involving negative interactions with Peers (i.e., peers, friends, team-mates). Narrative examples that signify negative social interactions with peers, are presented for each social anxiety threshold group in Table 18 below.
Table 18

Case Examples of Negative Interactions with Peers from Earliest Social Memory

<table>
<thead>
<tr>
<th>Group</th>
<th>Negative Interactions with Peers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical SAD</td>
<td>“Playing basketball when I was younger, I had recently had my birthday and received a set of lip-glosses. Before I left for basketball one night, I was playing with the lip-gloss and when I arrived at basketball I still had pink lip-gloss on. I remember one girl teasing me in front of everyone asking why I was wearing lip-gloss. I was upset and embarrassed”</td>
</tr>
<tr>
<td>Subclinical Social Anxiety</td>
<td>“I was in a fight in primary school, on the oval with a friend. It was broken up quickly”</td>
</tr>
<tr>
<td>No Social Anxiety (control)</td>
<td>&quot;A friend of mine was reporting things I said to another person whom I liked however, I never said anything near to what was being reported. The memory began with me being pissed off and ended the same. It was all childish and stupid&quot;</td>
</tr>
</tbody>
</table>

Thematic analysis of memory narratives revealed that for both clinical and subclinical social anxiety groups, negative interactions with Peers was categorised by being teased or ridiculed, offended, and excluded by friends, peers, or team-mates. Additional themes associated with negative Peer interactions involved betrayal by a friend (i.e., SAD group) and feeling nervous around peers (i.e., subclinical social anxiety group). Furthermore, these negative interactions typically occurred in primary or secondary school, school camps, birthday parties, and sporting clubs. Alternatively, participants in the control group recalled memories of being; betrayed by a friend, offended by another child not wanting to play, aggressive toward another child, or annoyed at peers, and these interactions occurred in primary school and crèche.
Additional trends from the data showed that non-socially anxious were most likely group to recall positive interactions with Peers, followed by individuals in subclinical and clinical social anxiety groups, respectively. However, a chi-square test indicated that the proportion of positive Peer interactions recalled from early social memories was not significantly different between social anxiety threshold groups, $\chi^2 (2) = .893, p = .640$. Case examples from memory narratives containing positive social interactions with Peers are presented in Table 19 below.

Table 19

<table>
<thead>
<tr>
<th>Positive Interaction with Peers</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAD group</td>
<td>“At primary school, every recess and lunch time my friends and I would play sporty games and every week it was a different game. We all got along very well. It was a simpler time”</td>
</tr>
<tr>
<td>Subclinical Social Anxiety group</td>
<td>“When I was in primary school I would hang out after school with some of the other children in the neighbourhood. We would go bike riding, rollerblading and chatting for hours each time”</td>
</tr>
<tr>
<td>Control group</td>
<td>“I remember one time when I first started primary school. I arrived early and saw only one other person. So the boy and his older sister came up to me and we automatically became friends. It made me feel at ease meeting new people”</td>
</tr>
</tbody>
</table>

Typical themes associated with positive Peer interactions reported by each social anxiety threshold group were initiating friendships, or playing with existing friends at pre-school, primary, and secondary school. However, this was a slightly more common occurrence for non-socially anxious individuals (23.1%) compared to individuals with subclinical (17.6%) and clinical (15%) social anxiety symptoms, respectively. The following section of results presents
findings relating to the second main aim of this study, which was to investigate the nature of social anxiety symptom severity and potential images experienced when anxiously anticipating, or during actual social situations.

7.8. Research Question 1: Affect Categories from Earliest Social Memory

The second research question explored emotional experiences associated with earliest memories of past social situations, for individuals with self-reported symptoms representing SAD, subclinical social anxiety, and no social anxiety. Each memory narrative was coded for its most prominent type of affect, to identify the type and severity of emotional experiences that differentiate clinical from subclinical symptoms. Chi-square analyses were not performed on data pertaining to themes from affect type, because 50% of cells in each analysis had expected frequencies less than 5 and assumptions dependent on sample size were violated. Thus, analysis of affect types was not significantly powered to detect significant results. Both variables (Social Anxiety Threshold Group) and (Affect Category) were categorical, therefore a crosstabulation was produced to demonstrate the proportion of memories signified by each affect category. Table 20 presents the percentage of memories from clinical, subclinical and control groups, containing specific types of positive, negative, and neutral affect themes.
Table 20  
*Positive, Negative, and Neutral Affect from Earliest Memory of being in a Social Situation*

<table>
<thead>
<tr>
<th></th>
<th>Control (n=39)</th>
<th>Subclinical (n=51)</th>
<th>SAD (n=40)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive affect/ Happiness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild contentment or satisfaction</td>
<td>17.9%</td>
<td>7.8%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Moderate happiness or pleasure</td>
<td>12.8%</td>
<td>7.8%</td>
<td>5%</td>
</tr>
<tr>
<td>Excitement</td>
<td>5.1%</td>
<td>3.9%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild discomfort, apprehension, nervousness</td>
<td>15.4%</td>
<td>9.8%</td>
<td>5%</td>
</tr>
<tr>
<td>Moderate anxiety, distress, fear</td>
<td>2.6%</td>
<td>7.8%</td>
<td>10%</td>
</tr>
<tr>
<td>Severe anxiety or panic</td>
<td>-</td>
<td>2%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Embarrassment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shy/ Self-Conscious</td>
<td>2.6%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>7.7%</td>
<td>3.9%</td>
<td>10%</td>
</tr>
<tr>
<td>Humiliated</td>
<td>-</td>
<td>-</td>
<td>7.5%</td>
</tr>
<tr>
<td><strong>Emotional Pain</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimidated</td>
<td>2.6%</td>
<td>5.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Hurt</td>
<td>2.6%</td>
<td>5.9%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Worthless</td>
<td>-</td>
<td>-</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Anger</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild irritability, annoyance</td>
<td>7.7%</td>
<td>5.9%</td>
<td>5%</td>
</tr>
<tr>
<td>Moderate anger or frustration</td>
<td>5.1%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hatred</td>
<td>-</td>
<td>-</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild sadness depression, abandonment</td>
<td>2.6%</td>
<td>2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Moderate depression, loneliness, emptiness</td>
<td>-</td>
<td>3.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Severe depression- Deep sadness, despair</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Guilt-Shame</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild regret or shame</td>
<td>-</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Moderate guilt or shame</td>
<td>-</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Overwhelming guilt or shame</td>
<td>2.6%</td>
<td>-</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>No affect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral tone</td>
<td>12.8%</td>
<td>27.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*N = 130, total sample of participants*
As shown in Table 20, affective themes associated with Depression and Guilt-Shame comprised less than 10% of each social anxiety threshold group’s earliest social memory. To simplify results relating to affect categories with low frequencies (Last & Bruhn, 1985; Last & Bruhn, 1985), detailed case examples will be limited to affect categories representative of 10% or more memories reported by any social anxiety threshold group.

7.9. Main Affect Categories associated with Social Anxiety Threshold Groups

The following results describe key findings from thematic analysis of early memories according to negative and positive affect categories, with particular attention to common affective themes associated with each social anxiety threshold group. Note that findings from affect categories with low frequencies (i.e., one participant) in each group, represent individual cases as opposed to familiar themes illustrative of a particular social anxiety threshold group. Nonetheless, such case examples provide rich qualitative data regarding memories of early social experiences for individuals with varying degrees of social anxiety symptom severity.

7.9.1 Positive and neutral affect. Results revealed that as might be expected, non-socially anxious individuals recalled more early memories of social situations involving Mild Contentment or Satisfaction and Moderate Happiness or Pleasure, compared to individuals with subclinical and clinical social anxiety, who recalled an approximately equal proportion of social situations associated with mild to moderate positive affect. However, all social anxiety threshold groups recalled a similarly small proportion of social memories involving Excitement. Narrative examples of early memories related to positive affect categories, for each social anxiety group are presented in Table 21.
Table 21

Case Examples of Positive Affect Categories from Earliest Social Memory

<table>
<thead>
<tr>
<th>Positive Affect</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mild</strong></td>
<td></td>
</tr>
<tr>
<td>Satisfaction/Contentment</td>
<td>“It must have been when I was four, when my sister had her birthday party, she had a few friends over to celebrate. She let me sit and watch them play games and even participate” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>“My earliest memory of a social event would be an early Christmas, maybe when I was three years old. My family were over. I was the only young child so I enjoyed the attention and presents” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“I remember when I first started primary school, I arrived early to school and saw only one other person. So the boy and his older sister came up to me and we automatically became friends” (control group)</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td></td>
</tr>
<tr>
<td>Happiness or Pleasure</td>
<td>&quot;My 4th birthday party, when I had all my friends over for cake. It was fun” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>“In kindergarten, playing with a few friends on the playground. It involved communicating and collaborating with other children in terms of playing games or talking to one another. I generally have happy feelings about this memory” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“I remember when I was out shopping with friends when I was 7 years old. We were running around and playing hide and seek while our parents shopped, it was fun and kept us amused” (control group)</td>
</tr>
<tr>
<td><strong>Excitement</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“I remember my first day of pre-school. I felt excited to meet my teacher and put my bag on the hook. I walked in the playroom and started playing with a doll, when a group of girls walked up and wanted to play. We then went out to the sandpit” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>&quot;When I started secondary school I only had one friend from primary school. I was really excited to be making new friends in a new environment&quot; (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“Playing in primary school with friends. We played blocks in class and we were using our imaginations. It is a happy memory, I remember being excited” (control group).</td>
</tr>
</tbody>
</table>
Investigation of early memory narratives scored for positive affect revealed similar themes across all social anxiety threshold groups. In fact, all social anxiety threshold groups recalled interacting with friends or family members (Mild Satisfaction or Contentment), playing games, having fun, and initiating friendships (Moderate Happiness or Pleasure), and Excitement related to starting school, initiating friendships or playing with existing friends. Overall, findings indicated that a similar proportion of individuals from SAD (17.5%) and subclinical social anxiety groups (19.6%) described mild to extreme Positive Affect from their earliest memory of being in a social situation, however this was more common for the control group (35.8%). Further to this, the subclinical social anxiety group recalled the highest proportion of early memories containing no prominent affect (i.e., Neutral/ No affect), as exemplified by: "I remember when I went to fairy land adventure park for my birthday".

### 7.9.2. Anxiety, distress, and fear

Early memories of feeling anxious in social situations were common for individuals with and without social anxiety. The majority of anxious themes associated with early social memories of non-socially anxious individuals were rated Mild Discomfort, Apprehension or Nervousness, and one participant’s early memory (i.e., 2.6%) was rated Moderate Anxiety, Distress or Fear. Furthermore, the control group did not recall early memories involving severe panic of anxiety. A similar proportion of both clinical and subclinical social anxiety groups recalled early social experiences projective of Mild Discomfort, Apprehension or Nervousness, Moderate Anxiety, Distress or Fear, and Severe Panic or Anxiety. However, there was a slight trend for early memories of individuals with subclinical social anxiety to be more projective of Mild Discomfort or Apprehension (9.8% vs. 5%), compared to individuals with SAD who were slightly more likely to express Moderate Anxiety, Distress or
Fear (10% vs. 7.8%) (Refer to Table 20). Narrative examples of earliest social memories containing prominent themes related to Mild to Severe Anxiety are presented in Table 22.

Table 22

**Narrative Examples of Earliest Social Memory containing Anxious Themes**

<table>
<thead>
<tr>
<th>Anxiety Code</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mild Discomfort,</td>
<td>“It was one of my early birthdays and I was surrounded by family. As I was about to blow out the candles on my cake, I felt frightened and I became upset” (SAD group)</td>
</tr>
<tr>
<td>Apprehension, Nervousness</td>
<td>“I was playing the baby in the kindergarten play and everyone was there and watching me. It was fun but also scary to have everyone staring at me while I had to act and pretend to be someone else” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“My first day of prep, I didn’t want my mum to go. I remember being really scared of meeting new friends and didn’t want to feel left out. However, after the first day I made plenty of new friends and actually still am with two of them (control group)</td>
</tr>
<tr>
<td>2. Moderate Anxiety,</td>
<td>&quot;When I was six my mum and I were shopping and I lost her. I had to go to the main office so they could call my mum over the PA system and find me. While I was lost I felt anxious, insecure, sad and I didn't think I would ever find her&quot; (SAD group)</td>
</tr>
<tr>
<td>Distress or Fear</td>
<td>“Having to make a presentation in front of the class, and being so nervous I would avoid having to do it for weeks. Whilst presenting I would shake and sway I was so nervous. Having everyone staring at me made me feel very uncomfortable” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“I remember when I first started prep and how nervous and anxious I was. I wasn’t use to being around other children as I didn’t attend pre-school or kindergarten and I had only just moved to Australia a year prior. I’ve always felt different and some-what awkward around new people” (control group)</td>
</tr>
<tr>
<td>3. Severe Anxiety or</td>
<td>&quot;I was on the tram and feeling very dirty and distressed. I felt anxious that all of the people on the tram were looking at me with strange facial expressions. It was bizarre, I felt that I was talking to myself without being in my body&quot; (SAD group)</td>
</tr>
<tr>
<td>Panic</td>
<td>&quot;I was five and it was my first day of preschool. I remember being nervous and not wanting to be there. I clutched onto my mum and was determined not to let her go. I cried all day and worked myself up so much that I vomited several times. I was afraid to be alone, without my mum&quot; (subclinical social anxiety group)</td>
</tr>
</tbody>
</table>
Thematic analysis of participants’ memory narratives revealed that compared to social anxiety groups, the majority of earliest social memories from the control group coded Mild Discomfort or Apprehension, essentially resulted in a positive outcome, as demonstrated by the example provided in Table 22. Additional case examples of the control group, in which the memory narrative ending positively, but depicted Mild Discomfort or Apprehension as the most prominent affect, are exemplified below:

Participant 1) “I remember being the ring bearer for my Uncle’s wedding. I don’t recall how young I was but I was not at school yet. It was the first time I was in front of so many people and I couldn’t take everyone looking at me so I started throwing a tantrum. I was taken out of the wedding by my Dad but I don’t remember what happened once he carried me outside.”

Participant 2) “My best friend and I got lost in the city and took the wrong tram. It was so embarrassing, but I was so worried because we had no idea where we were. Luckily, a kind lady told us to just cross the road and take the opposite tram back into the city.”

Participant 3) “I thought I could go to the first day of school on my own. We lived about a block away and usually mum came with me. I must have been in the third or fourth grade. I remember looking at the class list and seeing my name on the wall, but not really knowing anyone in my class, nor the teacher. I ran home. My mum was waiting, she encouraged me and walked me back to school”.

Furthermore, thematic analysis of memories revealed particular features of Anxious themes that were specific to clinical and subclinical social anxiety groups. For example, only socially anxious individuals described early social situations involving: fear or distress as a result
of performance situations (i.e., formal presentations or speeches), fear of being observed by others, and physiological arousal (i.e., heart pounding, voice trembling, hands shaking), with more severe physiological symptoms experienced by individuals clinical SAD (e.g., out of body experience) than subclinical social anxiety (e.g., vomiting). In addition, a small proportion of anxious memories recalled by both social anxiety groups entailed separation anxiety from primary caregivers. One non-socially anxious participant also recalled an instance of separation when starting school. However, anxiety was associated with making friends as opposed to fear of being separated from one’s mother.

7.9.3. Self-consciousness, embarrassment and humiliation. Individuals from all groups recalled early social memories of being Self-Conscious and Embarrassed. However, the SAD group were the only ones to recall being Humiliated in social situations, and reported the highest proportion of memories involving Self-consciousness, Embarrassment, and Humiliation. Interestingly, a higher proportion of non-socially anxious individuals than individuals with subclinical social anxiety recalled early social situations in which they were Embarrassed. However, various subthemes associated with Embarrassment distinguished socially anxious individuals from the control group. Narrative examples of each social anxiety threshold group’s earliest social memory that was coded for the category Embarrassment, are shown in Table 23.
### Narrative Examples of Earliest Social Memory containing Themes of Embarrassment

<table>
<thead>
<tr>
<th>Embarrassment Code</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-conscious</td>
<td>&quot;When I was sitting with a group of people who I had only just changed over to their group. I’m not a very loud person around people I don’t know. They always seemed to be making fun of my height and how little I spoke” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>“In primary school, I found it extremely difficult to make friends due to having low confidence. I made awkward gestures to people and they usually just tried to avoid me” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“I was in kindergarten and we had a fake Olympics. I was in the relay race and we had to have a group huddle and talk. Because I was such a shy kid I was the only one in the group not to say something or contribute which left me feeling pretty bad” (control group)</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>“When I started becoming friends with a particular group, they were all talking about something and when I went to contribute, it was completely off topic and irrelevant. It was so embarrassing” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>“My first night of year 7 camp we had to make a circle around the camp fire and tell everyone about ourselves. When it came to my turn to speak, I quickly said my name, where I lived and that I had a sister. I spoke for a minute and felt myself going red. I didn’t elaborate on my interests or dislikes, whereas many others told about themselves in a humorous way... we could either stay and get to know other people from different classes, or turn it in for the night. I decided to turn it in” (subclinical social anxiety)</td>
</tr>
<tr>
<td>Humiliated</td>
<td>“I remember one time when I was a child I had ants crawling all over my body at school. The teacher took my clothes off in-front of everyone. This was socially traumatic” (control group)</td>
</tr>
<tr>
<td></td>
<td>“I was in the second grade and I was in a class play. My parents came to see me. I was wearing a costume that did not fit and my skirt fell down. I was standing in front of everyone in my top and underwear” (SAD group)</td>
</tr>
</tbody>
</table>
Analysis of memory narratives from individuals with SAD and subclinical social anxiety revealed that Embarrassment most often resulted from feeling socially inept, or interactions with others involving social rejection, such as being teased, laughed at or ridiculed. On the other hand, for non-socially anxious individuals, Embarrassment typically followed an event in which the individual had no control over their physical body (e.g., wetting self at school camp, approaching a stranger instead of father, ants crawling over body and being stripped by teacher).

7.9.4. Emotional pain. Thematic analysis of memory and image narratives identified a pattern of negative emotions that were categorised as Emotional Pain. The category defined as Emotional Pain in the current study was conceptualised and scored according to a degree of severity that captured feelings of inferiority or intimidation, hurt feelings, and worthlessness (MacDonald & Leary, 2005; May, Byrd, Brown, Beckman & Sizemore, 2007; Strandmark, 2004). Case examples of memories coded for Emotional Pain, are shown in Table 24.
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

Table 24

<table>
<thead>
<tr>
<th>Emotional Pain Code</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intimidated</strong></td>
<td>“When I was in Grade 1, it was the end of the year. Everyone was given their certificate but a much bigger girl took mine and ran away. I couldn’t do anything because I was afraid she would hit me” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>“First stepping into university, it was actually quite frightening. Students were much older than me in some classes, it felt very intimidating” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“I remember meeting a family friend for the first time. He was an intimidating man, very tall and had a loud voice. He was also my best friend’s uncle so I had to be on my best behaviour. I remember being nervous and trying to do my best not to make a fool of myself” (control group)</td>
</tr>
<tr>
<td><strong>Hurt</strong></td>
<td>“I remember one time in high school my friends and I were sitting in the library studying and chatting away, when one of my friends was being racist towards Asians in front of me and she didn't even release that I would be offended. Minutes later she realised and apologised, she said she doesn't see me as an Asian” (SAD group)</td>
</tr>
<tr>
<td></td>
<td>&quot;I remember being at kindergarten playing 'make believe'. I was made to role-play the prisoner and the other kids were police or guards. They got very carried away and kicked dirt in my face, I was very hurt by it” (subclinical social anxiety group)</td>
</tr>
<tr>
<td></td>
<td>“I remember playing monkey bars at my brothers school, my mother and I were picking him up. My mother was chatting to one of the other mothers, and she told me I would be starting school the following year with her daughter Bianca. Bianca was there and I remember waving at her and smiling. I also remember her smiling but not really being interested and running away. Even though I was little I remember being offended that she didn’t want to come and play” (control group)</td>
</tr>
<tr>
<td><strong>Worthless</strong></td>
<td>“When I played netball in a rep team in about Grade 4, all the girls were from private schools and very different to me and my friends who went to a public school. They would all exclude me and my friends, and I felt lower and unequal to them” (SAD)</td>
</tr>
</tbody>
</table>
Results revealed that individuals with SAD, subclinical social anxiety, and no social anxiety were approximately equally likely to recall early memories in which they felt Intimidated or inferior to peers or family friends. However, for individuals with greater social anxiety symptom severity recalled a higher proportion of memories projective of Hurt feelings. Subsequently, individuals with SAD were more likely than individuals with subclinical symptoms to have recalled being offended or betrayed by peers or friends, discriminated against, or treated unkindly by family or peers, and only one participant from the control group recalled having their feelings hurt by a peer. Furthermore, a small proportion of individuals from the SAD group described early memories of social situations in which they felt unimportant, forgotten, or unequal to others (i.e., Worthless).

7.10. Negative Affect Categories with Low Frequencies

To re-iterate, earliest memories of being in a social situation were rarely associated with Depression or Guilt/Shame irrespective of social anxiety symptom severity, and Anger was somewhat common only for non-socially anxious participants (Refer to Table 20). Therefore, detailed case examples from the aforementioned affect categories are not illustrated here. Nonetheless, in considering findings associated with several other affect categories, meaningful trends found from memories projective of anger, depression, and guilt-shame illustrated similarities and differences between social anxiety threshold groups.

7.10.1. Anger, frustration and hatred. A small proportion of all social anxiety threshold groups recalled early memories reflective of Mild Irritability or Annoyance. However, with the exception of anxiety, Anger was the only common type of negative affect associated with 12.8% of earliest social memories of non-socially anxious individuals. Interestingly, thematic analysis showed that the source of Anger or frustration from social situations differed for socially anxious and non-anxious individuals. For instance, for individuals with clinical (5%)
and subclinical (5.9%) social anxiety, memories projective of Mild Irritability or Annoyance was due to interpersonal issues, mainly an argument or disagreement with peers or friends in primary school.

Further to this, one individual from the SAD group (2.5%) projected prominent feelings of Hatred, which differed to typical feelings of moderate Anger or Frustration experienced by subclinical and control groups. In contrast, with the exception of one non-socially anxious participant whose Anger was directed at a friend, memories from the control group usually involved annoyance or frustration due to forced participation in particular activities (e.g., speeches, school excursions, school parade). In addition, Mild Irritability was associated with uncharacteristic features of typical socially anxious concerns (e.g., a party ending unexpectedly early).

7.10.2. Depression and guilt-shame. Thematic analysis of memory narratives scored for Depression and Guilt/Shame, revealed differentiating features of emotional experiences associated with socially anxious and non-socially anxious individuals. For example, a very small proportion of all groups reported feeling Depressed or sad following either accidental or intentional separation from one’s parents. However, the appraisal of the event differed according to each social anxiety threshold group. For example, the control group recalled being comforted after separation, the subclinical social anxiety group did not interpret the separation as either positive or negative, and the SAD group perceived separation from parents as abandonment or neglect.

Furthermore, despite only one participant from the control (2.6%) and SAD group (2.5%) whose earliest social memory was projective of the category Guilt-Shame, themes from singular cases still demonstrated categorical differences between socially anxious and non-anxious
individuals. For instance, the non-socially anxious individual’s memory represented Overwhelming Guilt, because she blamed her brother for her actions and their father harshly punished him. In comparison, memories recalled by both social anxiety groups projected Shame as opposed to guilt, with more intense Shame associated with clinical than subclinical groups. For example, a small proportion of subclinical socially anxious participants (4%) recalled shame relating to aspects of their personality or behaviour (Mild to Moderate Shame) whereas the participant from the SAD group projected Overwhelming Shame as a result of being sexually abused. Thus, emotional experiences associated with Shame corresponded to social anxiety symptom severity and the underlying nature of emotions experienced by socially anxious individuals was inherently distinct to that of healthy controls.

7.11. Summary of Affect for Social Anxiety Threshold Groups

Overall, thematic analysis of one’s earliest memory of being in a social situation, revealed similar core affective themes for clinical and subclinical social anxiety groups compared to the control group, in relation to moderate-severe anxiety and emotional pain involving hurt feelings. Key findings also demonstrated a greater degree (i.e., physiological anxious arousal and worthlessness) and wider range of negative emotions (i.e., embarrassment) projected from early memories of the clinical group compared to subclinical group, which provides support for conceptualising social anxiety as a spectrum disorder. Figure 2 displays the main type of affect categories associated with each social anxiety threshold groups’ earliest memory of being in a social situation.
As seen in Figure 2, the most common affect categories scored from the SAD groups’ earliest social memory related to: Embarrassment (self-conscious, embarrassed, humiliated 22.5%), Anxiety (mild to severe = 17.5%), and Emotional Pain (intimidated, hurt, worthless = 15%), accounting for 55% of negative affect themes. Interestingly, early memories containing Positive Affect (contentment, moderate happiness, excitement) were also recalled for 17.5% of individuals comprising the SAD group. For the subclinical group, earliest social memories most frequently projected No prominent affect or a Neutral tone (27.5%), Positive Affect (contentment, moderate happiness, excitement = 19.6%), and similar to the SAD group, 31.4% of subclinical socially anxious individuals experienced Anxiety (mild to severe = 19.6%), and Emotional Pain (intimidated, hurt = 11.8%). However, compared to the clinical group themes associated with Embarrassment (self-conscious, embarrassed =5.9%) were not common.

In contrast, non-socially anxious individuals most often recalled memories related to Positive Affect (contentment, moderate happiness, excitement = 35.8%), Anxiety (mild to
moderate anxiety= 18%), Anger (mild irritability, moderate anger or frustration= 12.8%) and Neutral affect (12.5%). Thus, compared to individuals with clinical SAD and lesser extent subclinical social anxiety, earliest social memories of embarrassment (10.3%) and emotional pain (5.2%) were uncommon emotional experiences of the control group.

7.12. Research Question 2: Content and Process Themes from Early Memories

Qualitative data from memory narratives was explored for potential influences from memories of early social situations, which may be associated with clinical and subclinical social anxiety, as indicated by self-reported symptom severity. To compare similar and differentiating features of early social memories recalled by social anxiety threshold groups, each memory was scored for the most prominent content or process theme (positive or negative). Memories with insufficient detail to match any code were scored General or Vague. Chi-square analyses were not performed on data relating to content and process themes, because 50% of cells in each analysis had expected frequencies less than 5 and assumptions dependent on sample size were violated. The crosstabulation presented in Table 25 shows the proportion of specific content and process themes that emerged from memory narratives of each social anxiety threshold group.
Table 25
Positive and Negative Content and Process Themes from Earliest Social Memory

<table>
<thead>
<tr>
<th>Content and Process Themes</th>
<th>SAD (n= 40)</th>
<th>Subclinical (n= 51)</th>
<th>Control (n= 39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Succorance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped, Cared for or treated Kindly</td>
<td>-</td>
<td>2%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Interactions with others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiness of being with a friend</td>
<td>7.5%</td>
<td>7.8%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Cooperative interactions</td>
<td>10%</td>
<td>11.8%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Successful Mastery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieved social goal</td>
<td>7.5%</td>
<td>11.8%</td>
<td>17.9%</td>
</tr>
<tr>
<td>Achieved other goal-oriented activity</td>
<td>-</td>
<td>3.9%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Mastery-Failure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tries to achieve social goal and fails</td>
<td>17.5%</td>
<td>15.6%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Tries to achieve other goal and fails</td>
<td>-</td>
<td>-</td>
<td>5.1%</td>
</tr>
<tr>
<td>Rejection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejection from peers</td>
<td>17.5%</td>
<td>17.6%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>15%</td>
<td>3.9%</td>
<td>-</td>
</tr>
<tr>
<td>Separation/ Abandonment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidental separation/ Being lost</td>
<td>5%</td>
<td>-</td>
<td>2.6%</td>
</tr>
<tr>
<td>Intentional separation</td>
<td>2.5%</td>
<td>3.9%</td>
<td>-</td>
</tr>
<tr>
<td>Impulse Control/ Rule Breaking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No control over physical self</td>
<td>-</td>
<td>2%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Participant is aggressive, angry or nasty</td>
<td>2.5%</td>
<td>3.9%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Other is aggressive, angry or nasty</td>
<td>5%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Participant doesn’t respect rules or limits</td>
<td>-</td>
<td>-</td>
<td>2.6%</td>
</tr>
<tr>
<td>Others don’t respect rules or limits</td>
<td>-</td>
<td>2%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Loss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental separation</td>
<td>-</td>
<td>2%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Betrayal</td>
<td>2.5%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Harm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sickness</td>
<td>-</td>
<td>-</td>
<td>2.6%</td>
</tr>
<tr>
<td>Bizarre or Delusional content</td>
<td>2.5%</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General or vague</td>
<td>5%</td>
<td>9.8%</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
As seen in Table 2, positive content and process themes (i.e., Succorance, Successful Mastery, Interactions with others) from earliest memories of being in a social situation were most common for non-socially anxious individuals (56.4%), followed by individuals with subclinical social anxiety (37.3%) and SAD (25%). The inverse of this relationship was also true, in that negative content and process themes were more often associated with the SAD group (70%), than subclinical (53.3%), and control groups (43.8%). Furthermore, particular themes comprising various content and process categories (i.e., Impulse Control-Rule Breaking, Separation, Loss-Trust, and Harm) had low frequencies across all groups. Therefore, findings of main themes that emerged from memory narratives for each social anxiety threshold group will be described with detailed case examples. For ease of readability, findings relating to content and process themes from memory narratives are presented according to positive and negative categories separately, with particular focus on key themes found from each social anxiety group.

7.13. Positive Content and Process Themes associated with Social Anxiety

As might be expected, a higher proportion of non-socially anxious individual’s (10.3%) were Helped, Cared for, or treated Kindly, by a significant other or authority figure (Succorance), compared to one participant from the subclinical group (2%), who recalled receiving a gift (i.e., succorance). Furthermore, the SAD group did not recall memories containing themes related to Succorance. The following case example from the control group illustrates themes coded for Succorance that were not associated with either social anxiety group:

"I thought I could go to the first day of school on my own. We lived about a block away and usually mum came with me. I must have been in the third or fourth grade. I remember looking at the class list and seeing my name on the wall, but not really
knowing anyone in my class, nor the teacher. I ran home. My mum was waiting, she encouraged me and walked me back to school”.

Moreover, the main theme associated with the control group’s earliest social memory was Happiness being with friends from the category Interactions with Others. Not surprisingly, the proportion of individuals who recalled Happy interactions with friends was higher for non-socially anxious individuals (20.5%) than individuals with subclinical social anxiety (7.8%) and SAD (5%), respectively. Interestingly however, individuals with both clinical (10%) and subclinical social anxiety (11.8%) were more likely than individuals with no social anxiety (5.1%) to have recalled Cooperative interactions with others. Case examples of early memories coded for the category Interactions, are shown in Table 26.
Table 26

Case Examples of Themes from Earliest Social Memory related to Interactions with Others

<table>
<thead>
<tr>
<th>Interactions with Others from Earliest Social Memory</th>
<th>Cooperative Interactions with others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAD group</strong></td>
<td>&quot;When I was four, my sister had her birthday party and she had a few friends over for a sleepover. She let me sit with them and even participate”</td>
</tr>
<tr>
<td><strong>Subclinical group</strong></td>
<td>“When the children and I from across the road where picking plums off a tree”</td>
</tr>
<tr>
<td><strong>Control group</strong></td>
<td>“In primary school I was playing with the boys and I was running around the corner in the rain and slipped over”</td>
</tr>
</tbody>
</table>

**Happiness with Friends**

| **SAD group**                                       | “In kindergarten, I was making jokes with a friend about how booby traps were made” |
| **Subclinical group**                               | “I remember climbing up the rope on the playground in kindergarten, laughing with the kids. I slid down the slide and we got called inside, so I ran along the tan bark inside” |
| **Control group**                                   | "I remember my first day at transition into prep at school. I was sitting next to a girl and we looked at each other and smiled. We were looking at the board and counting to 100. The bell went for the start of recess. We immediately asked each other’s names were. I said “do you want to play chasey? And we ran off together asking others to play. This is a fond memory for me, as I am actually still close with this girl”" |
For all groups, earliest memories of social situations categorised by Cooperative Interactions with others were categorised by participating in activities (e.g., plum picking, games, playing in sandpit, tasks at kindergarten) and interacting or collaborating with other children or family members. However, narrative content of memories did not specify or project prominent positive emotions associated with the interaction or social encounter. On the other hand, memories scored for Happiness being with friends, were associated with a sense of enjoyment, excitement, or fun whilst playing or socialising with peers and friends at kindergarten, primary school, and birthday parties.

An additional theme commonly identified from memory narratives of non-socially anxious individuals, was Successful Mastery of Social Goals. As might be expected, individuals from the control group (17.9%) were more likely to recall Successfully achieving Social Goals, than individuals with subclinical social anxiety (11.8%) and SAD (10%), respectively. Case examples of early memories coded for Successful Mastery of Social Goals are presented in Table 27.
Table 2

**Case Examples of Earliest Social Memory involving Successful Mastery**

<table>
<thead>
<tr>
<th>Achieved Social Goal</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAD group</td>
<td>“At age 5 or 6 in a school based context. All i remember is trying to make friends and interact with other children on one of the first days of school”</td>
</tr>
<tr>
<td>Subclinical group</td>
<td>“In primary school, sitting around talking to a few people and making new friends”</td>
</tr>
<tr>
<td>Control group</td>
<td>“My first day of prep, after the first day I made plenty of new friends and actually still am with two of them”</td>
</tr>
</tbody>
</table>

Analysis of qualitative data revealed that individuals from each social anxiety threshold group recalled successfully Achieving a Social Goal in pre-school and primary school, in terms of playing with friends or making friends. The following results relate to social anxiety threshold group’s’ earliest memory of being in a social situation indicative of negative content and process themes.

### 7.14. Negative Content and Process Themes associated with Social Anxiety

The main types of negative content and process themes scored from early memories were similar for both clinical and subclinical social anxiety groups (See Table 25). More specifically, 35% of individuals with SAD and 33.4% of individuals with subclinical social anxiety recalled early memories of social experiences in which they Failed to achieve Social Goals, or were Rejected by their Peers. In comparison, only 10.3% of non-socially anxious
individuals recalled early memories in which they Failed Social Goals and 2.6% of non-socially anxious individuals recalled being Rejected by their Peers. Table 28 illustrates examples of early memories scored for themes related to Failure, before presenting results related to Rejection.

Table 28

Case Examples of Earliest Social Memory involving Failure of Social Goals

<table>
<thead>
<tr>
<th></th>
<th>Failed to achieve a Social Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Earliest Memory of being in a Social Situation</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SAD group</td>
<td>“When I had to introduce myself to the class, I found myself very nervous and when I began to speak my voice was shaking. I quickly gave explanations and did not want to elaborate on anything because I was so nervous. I felt that the audience was not very engaged because of how anxious I was. Once I finished I quickly sat down and wasn’t prepared to ask any questions that may have been asked of me”</td>
</tr>
<tr>
<td>Subclinical group</td>
<td>“When I graduated from Grade 6, I was really anxious about seeing everyone at school and about what I was going to wear that evening. Making it even more nerve-racking was the fact that my parents were going to be there. I remember feeling very nervous when talking to my class friends in a big group, and especially when collecting my certificate. I felt relieved once the night was over but it was a shame I didn’t express myself better on the night”</td>
</tr>
<tr>
<td>Control group</td>
<td>“As a small child (3-4 years old), I was in a room full of relatives. I was the centre of attention, which reduced me to tears”</td>
</tr>
</tbody>
</table>

Investigation of thematic content related to Failed Social Goals recalled by individuals with both clinical and subclinical social anxiety symptoms, involved difficulties
in interpersonal situations, such as informal social interactions, or performance situations in the school environment. For example, socially awkward behaviour with peers, physiological symptoms of anxiety that affected social performance during class presentations, and social interactional anxiety in large groups or crowds. Further to this, memories from the SAD revealed poor assertiveness skills, avoidance of confrontation, and sensitivity to rejection, across a wider range of social situations (e.g., kindergarten, university, social events).

In comparison, the control group’s memories of Failed Social Goals involved adjusting to the school environment, reduced participation in school-based activities, or distress associated with being the centre of attention (see example in Table 28). Thus, for socially anxious individuals, earliest memories of being in a social situation were more often associated with anxiety, avoidance, poor social skills and unsuccessful social interactions or performance situations compared to the control group, who recalled inconsequential difficulties due to being nervous or shy. Case examples in Table 29 below demonstrate a further theme from early social memories categorised by Rejection from Peers, which was common among subclinical and clinical social anxiety groups.
**Table 29**

*Case Examples of Earliest Social Memory involving Rejection*

<table>
<thead>
<tr>
<th>Rejection from Peers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Earliest Memory of being in a Social Situation</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>SAD group</strong></td>
</tr>
<tr>
<td>“I remember being with fellow students and everyone was chatting. When I contributed</td>
</tr>
<tr>
<td>to the conversation I was met with cold remarks and sneers from the rest of the group.</td>
</tr>
<tr>
<td>maybe even a bit of laughter and ridicule”</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Subclinical group</strong></td>
</tr>
<tr>
<td>“When I had to speak up to my friends in primary school, to stop being mean to me and</td>
</tr>
<tr>
<td>excluding me” (social anxiety group)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Control group</strong></td>
</tr>
<tr>
<td>“I remember playing monkey bars at my brothers school, my mother and I were picking</td>
</tr>
<tr>
<td>him up. My mother was chatting to one of the other mothers, and she told me I would</td>
</tr>
<tr>
<td>be starting school the following year with her daughter Sarah who was there. I recall</td>
</tr>
<tr>
<td>waving at her and smiling. I also remember her smiling but not really being interested</td>
</tr>
<tr>
<td>and running away. Even though I was little I remember being offended that she didn’t</td>
</tr>
<tr>
<td>want to come and play. But Sarah remembers the same situation in reverse”</td>
</tr>
</tbody>
</table>

Thematic analysis of codes that represented Rejection from Peers showed that clinical and subclinical social anxiety groups recalled early social situations involving; arguments with friends, being excluded, or ridiculed by peers, friends, or team-mates, and being overtly criticised for aspects of one’s personality (i.e., subclinical and SAD groups), appearance, or race (i.e., SAD group). On the other hand, one non-socially anxious individual recalled a peer refusing to play. Thus, individuals from clinical and subclinical social anxiety groups recalled harsher forms of social rejection compared to non-socially anxious individuals.
In addition to early social memories of peer rejection and failed social goals, various content and process themes were only identified from memory narratives of individuals in clinical and subclinical social anxiety groups. For instance, individuals with self-reported SAD (15%) and subclinical symptoms (3.9%) recalled early memories in which they Feared Negative Evaluation, however this was more common for individuals with clinical symptoms. Qualitative examples of socially anxious individuals’ early memory narratives involving Fear of Negative Evaluation are presented in Table 30.

Table 30

Case Examples of Earliest Social Memory involving Fear of Negative Evaluation

<table>
<thead>
<tr>
<th>Fear of Negative Evaluation</th>
<th>Earliest Memory of being in a Social Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAD group</td>
<td>&quot;The moment came that I had to do my speech, my heart was pounding, I didn't think my voice would come out, I was trembling and feeling very self-conscious of everyone looking at me. I was so embarrassed&quot;</td>
</tr>
<tr>
<td>Subclinical group</td>
<td>“I remember sitting in a circle of children, either in kinder or prep, and each of us being asked to call out a phrase that had the same rhythm as the music that was being played. I remember the fear I had that everyone would laugh at my phrase”</td>
</tr>
</tbody>
</table>

Memories coded for themes related to Fear of Negative Evaluation revealed that individuals with clinical and subclinical social anxiety symptoms expressed specific concerns about being scrutinised, negatively evaluated, and laughed at by other people. However, compared to the SAD group, in which Fear of being Negatively Evaluated by others was one of the most prominent themes from earliest social memories, only two participants from the
subclinical group described memories of social situations in which they feared being scrutinised. Subsequently, memories categorised by Fear of Negative Evaluation contained a wider range of concerns for individuals with SAD, such as feeling self-conscious being the centre of attention, observed eating, or in the presence of other people.

In addition, analysis of memory narratives revealed themes specific to social anxiety groups. A very small proportion of individuals from clinical SAD (5%) and subclinical (5.9%) social anxiety groups reported that their earliest memory of being in a social situation involved themes related to Intentional Separation and Bizarre material. Results also revealed various content and process themes that only emerged from SAD and control groups, whereas social situations recalled by the subclinical group contained no distinct themes. For instance, interpersonal process themes involving Betrayal and Others being Aggressive, Angry or Nasty, were only recalled by individuals with SAD (7.5%). On the other hand, non-socially anxious individuals (10.2%) recalled specific themes that were conceptually distinct and from typical socially anxious concerns or interpersonal issues (e.g., Sickness, Failing to achieve a Non-Social Goal, and the participant Not Respecting Rules or Limits).

7.15. Summary of Content and Process Themes for Social Anxiety Groups

Key themes from earliest social memories provides additional support for classifying social anxiety as a spectrum disorder, as demonstrated by similar core issues associated with social anxiety threshold groups and accompanying negative thoughts expressed by the clinical group. For example, peer rejection experiences and failed social goals were equally common themes projected from early memories of clinical and subclinical social anxiety groups. Further to this, the SAD group also had prominent fears of negative evaluation relative to the subclinical group. Findings relating to the most prominent content and process
themes that emerged from memory narratives of each social anxiety threshold group are displayed in Figure 3 below.

As seen in Figure 3, key features associated with early social memories of each social anxiety threshold group specifically related to either positive or negative social themes (i.e., rejection, mastery and failure of social goals, fear of negative evaluation, cooperative and happy interactions with others). These results are presented in the following discussion of prominent themes representative of potential risk and protective factors associated with the trajectory of social anxiety symptom severity.
Chapter 8: Discussion

The discussion chapter begins with an overview of results relating to the main research questions posed for this study, followed by a brief summary of CPT, which guided interpretation of findings suggestive of potentially unconscious and conscious influences from earliest social memories as representing core issues related to current social anxiety concerns associated with symptom severity. Results relating to hypotheses that directed thematic analysis of earliest social memories in the current study are presented and compared with previous research on memories and social anxiety, and extends findings to associations with varied symptom severity. Key themes shared by both social anxiety groups relative to the control group represent potential precursors or historical influences associated with the development of social fears. On the other hand, distinct themes from memories of the SAD group indicate potential boundaries between social anxiety symptoms that warrant clinical diagnosis. Interpretation of findings are discussed according to Bruhn’s CPT (1990), in terms of core issues embedded in the structure of earliest social memories as representing unmet needs and how this relates to the development of social anxiety.

Similarly, key themes from memories of non-socially anxious individuals are presented to exemplify satisfied needs and protective factors associated with healthy development and psychological well-being. To inform potential pathways associated with trajectories of social anxiety symptom severities, the discussion then turns to addressing recent conceptualisations of social anxiety as a spectrum disorder. An integration of the main findings are considered in light of potential aetiological pathways associated with early onset, important conditioning events, risk, and protective factors that interfere with social and emotional development. Following this, preliminary evidence regarding the utility of early memory probes in research is then presented in relation to socially anxious samples, before
addressing theoretical and clinical implications of this study’s findings. Strengths and limitations of this study are then presented with suggestions for future research for investigating varied social anxiety symptom severity.

8.1. Overview of Findings for Social Anxiety Symptom Presentations

Findings from the current study revealed several potential factors that signified trajectories of symptoms comprising the social anxiety spectrum. The first research question posed by this study, explored links between current self-reported subclinical and clinical symptoms of social anxiety and the nature of interactions with other people from earliest memories of social encounters. Findings indicated, that socially anxious individuals with greater symptom severity recalled a higher incidence of negative interactions with other people early in life. Further trends indicated that, non-socially anxious individuals were more likely to recall positive interactions with others than individuals who developed subclinical and clinical social anxiety. Thus, increased social anxiety symptom severity was associated with a greater incidence of negative interactions with other people, which implicates the importance of early social interactions in the development of social interactional anxiety experienced by individuals with SAD, and to a lesser extent subclinical social anxiety.

The second research question explored earliest social memories for similarities and differences in prominent emotional experiences (affect category), adverse conditioning experiences, positive and negative life events (content and process themes), for subclinical and clinical socially anxious individuals compared to controls. Key themes from early social encounters commonly associated with self-reported SAD and lesser extent subclinical social anxiety related to; heightened emotional reactions associated with anxiety and emotional pain, greater incidence of negative interactions with parents, peers, and failed social goals,
relative to the control group. Thus, core issues identified from early social memories entailed similar risk factors, which mainly differed according to quantitative increases in frequency and severity for threshold SAD. However, findings indicated some differentiating indicators of historical experiences associated with SAD that warrants a clinical diagnosis. These additional themes of individuals who developed clinical SAD, involved public humiliation, embarrassment, maladaptive cognitive appraisals, and prominent fears of negative evaluation, which are interpreted as early risk factors associated with the development of the disorder.

In comparison, memories of non-socially anxious individuals were categorically distinct and for the most part, indicative of more positive and healthy developmental social experiences. Further to this, individuals with subclinical social anxiety recalled memories with similar positive themes as the control group, demonstrating potential protective factors from early social encounters that interact with risk factors and lead to increased social fears below diagnostic thresholds. The following discussion of results relating to the current study’s hypotheses intends to inform potential factors that constitute the social anxiety spectrum. Subsections are organised according to the overall tone of earliest social memories, followed by noteworthy themes that emerged for individuals at different points of the social anxiety spectrum, in relation to interactions with others, main affect categories, content, and process themes.

### 8.2. Overall Tone of Earliest Social Memory

As hypothesised (H1), the overall affective tone of earliest social memories recalled by the SAD group projected a greater degree of negative affect than memories of the subclinical and control groups respectively. More specifically, the majority of individuals from the SAD group (70%) recalled early memories of increasingly negative social
situations, and a similar but less pronounced pattern was found for subclinical (51%) and control groups (43.6%), who recalled more neutral and positive social situations, respectively. Thus, consistent with evidence that social anxiety represents a spectrum disorder (Kerns et al., 2013; Kollman et al., 2006; Ruscio, 2010), the degree and valence (i.e., negative, neutral, positive) of tone associated with earliest social encounters corresponded to social anxiety symptom severity.

These results support previous research findings, that individuals with SAD recall significantly more negative memories than non-socially anxious individuals (Anderson et al., 2008; Field et al., 2004; Hackmann et al., 2000; Wenzel & Cochran, 2006). However, unlike studies using analogue samples of high socially anxious individuals (Chiupka et al., 2012; Moscovitch et al., 2011), the current study found no significant differences between subclinical and control groups in relation to negative memories of earliest social situations. One explanation for this discrepancy relates to sampling procedures, in which studies conducted on high socially anxious participants in non-clinical samples, may have also comprised cases with clinical symptoms whose responses on social anxiety measures would naturally reflect elevated scores for group inclusion. This would increase the probability of significant differences between subclinical and control groups, as evidenced by significantly more earliest memories projective of negative affect for clinical than control group in the current study.

Furthermore, Moscovitch et al. (2011) identified important considerations of research on autobiographical memory and social anxiety, in that methodological differences used to cue memory (Refer to section 3.4. Research on Cognitive Processes) render comparisons across studies difficult. Fittingly, previous studies typically investigated memories in anticipatory or post-event processing conditions (Chiupka et al., 2012; Field et al., 2004;
Moscovitch et al., 2011), or utilised pre-determined social threat cues to activate related memories (Morgan, 2010; Hirsch & Clark, 2004; Wenzel et al., 2004). However, this study explored ‘earliest’ memories of personally relevant social encounters to elicit information embedded in schemas, and may explain differences in findings. Additional variations in sampling procedures may also account for conflicting findings with aforementioned studies, in that previous research compared either SAD or high social anxiety groups with a control group, whereas this study compared clinical with subclinical groups and a non-socially anxious control group, in order to investigate boundaries between symptom presentations along the social anxiety spectrum.

8.3. Interactions with Other People from Earliest Social Memory (RQ1)

In considering the nature of social interactional anxiety and fears of negative evaluation associated with SAD, memories of early interactions with other people are particularly important for understanding early influences on anxiety related to future interpersonal situations (Alden & Taylor, 2004; Harvey et al., 2005; Morgan, 2010). Results from earliest social memories revealed that despite no significant differences between groups, non-socially anxious individuals (41%) more commonly recalled positive interactions with others, than individuals who developed subclinical (25.5%) and clinical social anxiety (17.5%), respectively.

Furthermore, compared to subclinical and clinical socially anxious individuals, non-socially anxious participants recalled positive social interactions with a wider variety of people, including mothers, fathers, grandparents, teachers, peers, friends, and other people more generally. The subclinical group recalled positive interactions with a wider range of people (i.e., peers, friends, cousins, sibling, and general others) than the clinical group, whose
Memories only involved positive interactions with peers, friends, and siblings. Therefore, fewer positive interactions with others early in life may strengthen negative schemas relating to social interactional situations for individuals who develop social anxiety, given the high occurrence of memories involving negative interactions with others.

Not surprisingly, individuals who developed clinical SAD (60%) in adulthood frequently recalled early memories involving negative interactions with other people, whereas individuals with subclinical symptoms (37.3%) reported fewer negative interactions with others than the SAD group but slightly more than the control group (23.1%). Subsequently, increased frequency of early memories involving negative interactions with others was analogous to greater social anxiety symptom severity. This highlights the importance of early interactions as having had a significant impact on future interactional anxiety for individuals with self-reported SAD, and lesser extent subclinical social anxiety. Therefore, it seems reasonable to assume that the majority of individuals with SAD display negative interpretive biases regarding other people, as would some individuals with subclinical social anxiety (Alden & Taylor, 2004; Pinto-Gouveia et al., 2006; Stopa et al., 2013; Taylor & Alden, 2005).

In relation to types of people involved in negative interactions encountered early in life, no prominent trends were found irrespective of social anxiety symptom presentations, for teachers, siblings, relatives, or people more generally. This adds to mixed evidence regarding the influence of teachers in the development of social anxiety (Bracik et al., 2012; Hackmann et al., 2000), as well as contentions that dysfunctional schemas can result from negative relations with siblings (Young, 1999). Nonetheless, findings support well documented influences of parents and peers in the development of clinical and subclinical social fears (Cunha et al., 2008; Festa & Ginsburg, 2011; Kennedy et al., 2009; Pinto-Gouveia et al.,
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

2006), was supported by this study’s results. This is not surprising given children’s social and emotional development typically occurs in the context of family and school environments, to which parents and peers play the most important role in child and adolescent development (Beidel & Turner; Hudson & Rapee, 2000; Lambert, 2006).

8.3.1. Negative interactions with parents. In accordance with evidence suggesting associations between negative parenting behaviours and increased social anxiety in clinical and non-clinical populations (Harvey et al., 2005; Knappe et al., 2009a; Rork & Morris, 2009), the hypothesis that individuals with SAD and subclinical symptoms would recall more negative interactions with their mother, than non-socially anxious individuals (H2a) was supported. These results are comparable to Knappe et al.’s (2009b) study, in which the sample of ‘parents’ comprised predominantly mothers (mother N=1,026 vs. father N=27), with strong associations found between negative parenting behaviours and SAD, followed by less consistent relationships with subclinical and symptomatic social anxiety respectively. Therefore, as demonstrated by a wealth of previous research, mothers play a particularly important role in children’s development as well as subclinical and clinical social fears (Bowlby, 1982; Beidel & Turner, 2007; Elizabeth et al., 2006). More specifically, a higher incidence and degree of negative interactions with mothers early in life was associated with greater self-reported social anxiety symptom severity in adulthood.

Contrary to expectations relating to negative memories of fathers and increased social anxiety symptom severity, relative to non-socially anxious controls (H2b), individuals from the SAD group were twice as likely to recall negative interactions with fathers early in life as both subclinical and control groups. This distinctive pattern of results compared to findings of mothers, are consistent with contentions that father’s play a specific yet different role in the development of social anxiety (Bögels & Perotti, 2011; Bögels & Phares, 2008; Knappe et
al., 2012; Rork & Morris, 2009). In particular, thematic analysis of early memories signified negative interactions with fathers as especially relevant for individuals with threshold SAD and less so for individuals with subclinical social anxiety. This result needs to be viewed with caution given the low frequencies of negative paternal relations across all social anxiety thresholds groups in the current study.

However, in support of this finding, a small proportion of patients with SAD report negative interactions with their father, which involve criticism (Hackmann et al., 2000) and humility, in the form of deficient praise or positive feedback (Chartier et al., 1998). Moreover, tentative suggestions from a recent review of the literature suggest paternal relationships are more influential on children’s level of social anxiety than maternal relationships, especially for children with high social anxiety (Bögels & Perotti, 2011). For example, one empirical study found father’s influence on children’s social confidence and independence was significantly greater for children with high social anxiety than low social anxiety (Bögels & Phares, 2008). Accordingly, aetiological models emphasise multiple pathways to SAD (Beidel & Turner, 2007; Gazelle & Rubin, 2010; Ollendick & Hirshfeld-Becker, 2002), thus paternal relationships likely influence clinical expressions of the disorder for some but not all individuals.

Nonetheless, fathers naturally play an important role in normal child development (Bögels & Phares, 2008), and paternal influences have been linked to withdrawn or inhibited behaviour (Neal & Edelmann, 2003), social anxiety in non-clinical samples (Bögels & Phares, 2008; Bögels et al., 2011; Howell, 2009), and SAD patients (Chartier et al., 1998; Hackmann et al., 2000). These findings highlight the importance of fathers in the development of subclinical and clinical social fears, and inspection of qualitative data provided meaningful insight into the quality of these interactions, which may explain why
individuals with subclinical social anxiety were equally likely as controls to recall negative memories of fathers. More specifically, early memories of the clinical group signified greater maltreatment from fathers than the subclinical group, which entailed potentially more harmful encounters than the control group. Therefore, the nature rather than incidence of negative paternal relations early in life was related to increased social fears in adulthood.

Furthermore, discrepancies with previous investigations may reflect methodological differences in the use of self-report and quantitative measures within the literature, compared to projective techniques designed to elicit qualitative data in the current study. In this way, qualitative and projective research techniques allowed for pure exploration of meaningful information, revealing of schematic processes deemed to operate outside of conscious awareness. This approach produced results that were not limited to predetermined outcome measures that assess frequencies of particular parenting behaviours (Beidel & Turner, 2007; Hudson & Rapee, 2000; Ollendick & Benoit, 2012). To demonstrate this, Theiler (2005) investigated early childhood memories in a non-clinical student sample and found one’s earliest memory of father entailed themes of abandonment that had a lasting influence on current psychological well-being.

Therefore, combined findings from this and Theiler’s (2005) study, signify the importance of utilising early memories for accessing meaningful information relevant to current psychological functioning and core issues associated with psychological disturbance (i.e., SAD), which supports the utility of early memory probes in research (Bruhn, 1990; Mayman, 1968). Following this reasoning, it is doubtful self-report measures used to assess the frequency of particular parenting attributes (e.g., parental overprotection, rejection, emotional warmth etc), reveal personally significant issues associated with development of social fears for different individuals, especially considering varied aetiological pathways
implicated in the onset of the disorder (Beidel & Turner, 2007; Gazelle & Rubin, 2010; Hudson & Rapee, 2000). Therefore, incongruent findings may be explained in a way that subclinical socially anxious individuals experience potentially harmful interactions with fathers compared to non-socially anxious individuals, in which case the nature of negative paternal interactions early in life are suggestive of increased social fears later in life.

This was especially evident for individuals who developed clinical symptoms, who recalled more frequent and severe forms of maltreatment by both parents relative to individuals with subclinical symptoms and healthy controls. For example, the SAD group recalled instances of separation, abandonment and/or neglect, whereas the subclinical group described instance of separation, unreliable parenting, witnessing verbal aggression and taunts between parents during marital conflict. This supports empirical evidence that family environments categorised by conflict, verbal aggression between parents, or being raised by people with abusive behaviours, influence development of SAD (Bracik et al., 2012; Chartier et al., 1998; Chartier et al., 2001; Marteinsdottir et al., 2007), and extends to development of subclinical symptoms later in life. On the other hand, non-socially anxious participants recalled negative interactions with mothers and fathers that reflected conventional occurrences within the family unit, such as discipline or punishment directed at oneself or siblings.

Therefore, in considering conceptual and empirical links between parental discipline, hostility, abandonment and neglect (Taylor & Alden, 2005), findings from memories demonstrated parental risk factors attenuated in magnitude from SAD, to subclinical and control groups. For instance, witnessing verbal taunts, ridicule, or aggression between parents (i.e., subclinical group) may be suggestive of vicarious learning experiences, in which children learn through modelled behaviours of parents that relationships are unsafe and
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

should be feared (Chartier et al., 2001). Such vicarious learning experiences may result in less severe anxiety associated with future interactional situations than instances of ridicule or aggression directed at oneself, as was the case for individuals who developed SAD (i.e., findings of public embarrassment or humiliation and other people being angry, aggressive or nasty to the participant).

Furthermore, extreme parenting behaviours of abandonment or neglect by parents of individuals comprising the SAD group, adds to empirical evidence that SAD is associated with histories of emotional abuse, neglect (Gren Landell et al., 2011; Kuo et al., 2011; Neal Simon et al., 2009), rejecting, and/or emotionally cold parenting (Alden & Taylor, 2004; Cunha et al., 2008; Harvey et al., 2005; Knappe et al., 2012). These findings are in accordance with cognitive perspectives, in which memories of past social encounters especially early interactions with parents, influence maladaptive schemas of others that guide negative expectations of future social interactions and can lead to social fears (Clark & Wells, 1995; McGinn & Young, 1996). Furthermore, cognitive distortions are more prominent and rigid in clinical versus non-clinical populations (Brewin et al., 2010; Clark & Rhyno, 2005; Schmidt & Joiner, 2004), as was found for individuals with clinical SAD compared to those who developed subclinical symptoms. Therefore, results relating to negative interactions with parents could signify learning histories that influenced negative schemas regarding negative expectations of others, and/or social interactional anxiety in future relationships.

More specifically, early memories of abandonment and neglect relate to Young’s (1999) clinical practice, suggesting that unstable or unreliable parenting can promote early maladaptive schemas that one will not be emotionally supported or protected (i.e., abandonment); and that cold family environments can influence beliefs that one’s needs for nurturance or affection will not be sufficiently met (emotional deprivation). Since these
parenting behaviours were more relevant for clinical than subclinical groups, results from this study demonstrate the entrenched nature of unconditional core beliefs and cognitive thoughts (Calvete et al., 2013; Pinto-Gouveia et al., 2006; Young, 1999) associated with clinical SAD compared to non-clinical social anxiety. This can be illustrated by singular cases from the clinical and subclinical social anxiety group in relation to early memories of separation from parents, exemplified below:

Clinical SAD participant: “*When I was 3 years old, being left at the hospital... I cried and screamed but the door closed and they were gone... I learned that my parents would leave me and others can be trusted more*”

Subclinical participant: "*I was five and it was my first day of preschool. I remember being nervous and not wanting to be there. I clutched onto my mum and was determined not to let her go. I cried all day and worked myself up so much that I vomited several times. I was afraid to be alone, without my mum*".

As seen in the case examples above, the participant with clinical symptoms perceived separation from parents extremely negatively, resulting in a general distrust of both mother and father. On the other hand, the socially anxious participant from the subclinical group did not perceive their mother positively or negatively, instead the focus of the memory was on internal thoughts and symptoms of anxiety, experienced due to separation. Therefore, as revealed through schematic processing of the event in memory, the nature and degree of negative beliefs regarding others was an important feature of pathological social anxiety symptoms. Negative cognitive appraisals were associated with greater symptom severity.
beyond aforementioned examples of separation, providing evidence that maladaptive schematic processing of other people and social encounters is evident early in life (Horowitz, 1994; Young, 1999). However, it is noted that the context in which separation occurred was actually harsher for the clinical group and greater negative appraisal of separation was warranted. Thus, findings may also demonstrate particular types of social events recalled from memory that were influential in shaping maladaptive schemas of oneself and expectations of future interpersonal relationships with others (Alden & Taylor, 2004; Bruhn, 1990; Clark & Wells, 1995), which lead to more pathological symptoms reaching diagnostic thresholds for SAD.

In addition, when considering findings that memories of fathers were distinctly associated with increased frequency and severity of interactions for individuals with SAD, it is possible that abandonment or neglect by fathers has greater negative implications on children’s social and emotional development than mothers, leading to clinically significant symptoms in adulthood. From this view, prescribed gender roles of mothers and fathers are innately different and produce varied responses in children’s normal social development, especially in relation to the fathers’ role in protection and socialisation (Bögels & Perotti, 2011). Bögels and Phares’ (2008) review of the literature, specified fathers as particularly influential in promoting social competence in children, by encouraging autonomy, socialisation and a sense of security. Thus, fathers who abandon or neglect their children may also invest less time encouraging socialisation or independence.

Consequences of reduced autonomy or social competence can influence negative beliefs of social inadequacy and subsequent avoidance or withdrawal of social situations. This has further implications on reducing opportunities for developing age appropriate social skills and social competence in future social situations (Bögels & Phares, 2008) and
illustrates the importance of fathers in the development of social fears early in life. Taken together, findings relating to the nature of negative relations with parents provide support for conceptualising social anxiety as a spectrum disorder, with parental risk factors representing gradient of severity alongside social anxiety symptom profiles. In this way, the type rather than frequency of negative interactions with fathers is indicative of increased symptom severity. However, this contention requires further investigation because the higher incidence of negative interactions with fathers reported by the clinical group may represent categorically distinct pathways to developing SAD.

Interestingly, a notable finding from memories of both subclinical and clinical social anxiety groups, was that socially anxious individuals recalled negative interactions of mothers and fathers together, during varied encounters such as marital conflict (subclinical social anxiety), abandonment, or neglect (SAD), whereas the control group recalled negative interactions with mothers and fathers singly. Therefore, negative encounters with both parents in concert, may have a greater negative impact on individual’s perception of caring relationships with other people and create social fears of future interactional situations. Future research would benefit from investigating the co-dynamics between parental influences and social anxiety symptom severity (Bögels & Phares, 2008; Chartier et al., 2001), to provide a more comprehensive understanding of the influence co-parenting behaviours have on social interactional fears associated with subclinical or clinical symptoms of social anxiety.

8.3.2. Negative interactions with peers. As hypothesised (H2c), individuals with SAD and subclinical social anxiety recalled significantly more negative interactions with peers, compared to non-socially anxious individuals. Subsequently, peer maltreatment during critical developmental periods such as childhood or adolescence, was identified as a
powerful conditioning experience associated with current self-reported social anxiety (Erath et al., 2007; Flanagan et al., 2008; Hackmann et al., 2000; Harvey et al., 2005) at both subclinical and clinical thresholds. Such findings highlight the impact of negative interactions with peers early in life, in shaping interpersonal fears and anxiety experienced in future social situations, for individuals who develop varied social anxiety symptom severity. Moreover, in relation to classification of SAD representing a categorically distinct entity in current diagnostic manuals, findings of negative peer relations suggest similar core interpersonal problems associated with the development of social anxiety symptoms along the spectrum of severity.

8.4 Peer Rejection Experiences

Similar types of rejection from peers (i.e., social exclusion or isolation, teasing, ridicule, mockery, or criticism) were equally recurring themes from earliest social encounters recalled by subclinical (17.6%) and clinical social anxiety groups (17.5%). These results corroborate retrospective reports of socially anxious adults that frequently describe histories of peer rejection or exclusion in childhood or adolescence (Edwards et al., 2010; Hackmann et al., 2000; Harvey et al., 2005; Hudson & Rapee, 2004; McCabe et al., 2003). In addition, peer rejection was projected from socially anxious individuals ‘earliest’ memory of negative social encounters, supporting suggestions that memories of adverse relations with peers coincide with the onset of SAD (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003).

Further support for associations between peer rejection and development of social anxiety (Flanagan et al., 2008; Hackmann et al., 2000; Harvey et al., 2005), was demonstrated by findings that only one non-socially anxious individual (2.6%) recalled mild
forms of rejection, in which a peer refused an invitation to play. More specifically, this memory narrative stated having later developed a longstanding friendship with the rejecting peer, who remembers the exact same situation in reverse (i.e., the participant refused to play). Irrespective of the accuracy of the memory, in terms of which child experienced rejection, this example signifies the complex interplay between risk (i.e., rejection) and protective (i.e., friendship) factors that can deter, or in this instance encourage healthy development and psychological well-being. For example, development of a positive friendship may have reduced negative consequences associated with actual or perceived rejection during childhood, by promoting a sense of belonging and social acceptance (Berenson et al., 2009; Bruhn, 1990; Lambert, 2006; Mellin, 2012; Ledley & Heimberg, 2006). Moreover, this participant did not develop social anxiety in adulthood, which provides indirect evidence that positive friendships promote healthy social and emotional development.

These findings coincide with empirical evidence from clinical and non-clinical populations, suggesting socially anxious children and adolescents have fewer friends and poorer friendship quality (Biggs et al., 2012; Flanagan et al., 2008; La Greca & Lopez, 1998) and signify the importance of peer relationships in buffering against social anxiety. For instance, close friendships have been found to protect socially anxious adolescents against psychosocial risks associated with loneliness, low self-efficacy and peer victimisation (Erath et al., 2010). However, negative interactions with peers (i.e., bullying, rejection, and victimization), rarely occur as an isolated incident (Biggs et al., 2012; Erath et al., 2007; Storch et al., 2005), as may have been the case for the aforementioned example from the control group. Therefore, given the commonality of peer rejection recalled by socially anxious individuals in the current study, repeated exposure to peer victimisation during crucial developmental periods early in life seems relevant to development of social fears and
concerns related to social anxiety (Alden & Taylor, 2004; Beidel & Turner, 2007; Flanagan et al., 2008; Rapee & Spence, 2004).

In particular, empirically relevant implications of peer rejection involve sensitivity to criticism or rejection, relational difficulties, internalising problems, a sense of not belonging, negative beliefs of inadequate social performance, negative beliefs of others, social withdrawal, isolation, and loneliness (Alden & Taylor, 2004; Flanagan et al., 2008; Hymel, Rubin, Rowden & LeMare, 1990; London, Downey, Bonica & Paltin, 2007; Mellin, 2012). Interestingly, these consequences associated with maltreatment from peers resemble symptoms and features of SAD (APA, 2013; Clark & Wells, 1995). These findings of negative interactions with peers early in life demonstrates how social anxiety manifests as subclinical or clinical symptoms, in which anxiety, fear of rejection, or humiliation in future social interactions lead to withdrawal and avoidance. This can further promote social fears by reducing opportunities for developing age-appropriate friendships, and hinder social and emotional development from a young age (Berenson et al., 2009; Flanagan et al., 2008; Roth et al., 2002).

Furthermore, in addition to specific types of maltreatment described as peer rejection, early memories of the SAD group involved negative interpersonal encounters of racial discrimination, betrayal from friends, and being the recipient of other people’s anger, aggression or nastiness, which was unrelated to the subclinical group. Therefore, compared to individuals who developed symptoms below diagnostic thresholds, individuals with self-reported SAD experienced a wider range of negative interactions with other people early in life that may have influenced or strengthened social interaction anxiety.
Individuals from all groups recalled rejection from ‘peers’ as defined by children or adolescents in the school setting. However, individuals with more severe social anxiety experienced maltreatment by a wider range of interpersonal relationships categorised under the broad descriptor ‘peers’, including friends and team-mates. Negative interactions with this broader range of ‘peers’ may have shaped or reinforced negative beliefs associated with SAD, in terms of being fundamentally flawed or socially inadequate, as well as negative expectations regarding interactions with other people and future social relationships (Erath et al., 2007; Gren-Landell et al., 2011; Hudson & Rapee, 2000). Therefore, individuals with SAD experienced a wider range of negative interpersonal interactions with peers in childhood or adolescence that may have generalised to a more extensive range of feared situations in adulthood. Based on this reasoning, increased numbers of feared situations is associated with greater symptom severity, distress, and impairment (Bögels et al., 2010; Faravelli et al., 2000; Van Roy et al., 2009; Ruscio et al., 2008; Stein et al., 2010) required for diagnosis of SAD (APA, 2013).

These results are consistent with qualitative research on autobiographical memories of patients with SAD that contain themes of perceived or actual criticism from others (Erwin et al., 2006; Hackmann et al., 2000; Harvey et al., 2005; Stopa et al., 2013). The memory narratives exemplified below illustrate particular rejection experiences, in which subclinical and clinical socially anxious participants were criticised for aspects of their physical appearance and/or personality.

“When I was sitting with a group of people who I had only just changed over to their group. I’m not a very loud person around people I don’t know. They always seemed to be making fun of my height and how little I spoke” (SAD group)
“I remember one time being told I was too bossy by my primary school friends. I can’t remember much just being in a group and planning some sort of activity and then my friend turned to me and said ‘we don’t want to do that with you anymore because you always take over, you’re too bossy’ and everyone agreed and walked away from me. I don’t think I have ever been as confident since that moment” (subclinical social anxiety group)

Interestingly, Gilbert and Miles (2000) stated that “verbal attacks on a person’s sense of identity, their attractiveness, competency or parentage seek to devalue the person in their own eyes and the eyes of others” (p. 757). These authors found, instead of blaming others for received criticism, socially anxious individuals blame themselves, resulting in a sense of shame that occurs when undesirable self-qualities are exposed to others. Moreover, self-blame for criticism believed to be true can become internalised as self-criticism (Gilbert & Miles, 2000), a destructive type of negative self-evaluation that entails feelings of worthlessness (Cox et al., 2002; Cox et al., 2004) and shame (Helsel, 2005; Matos et al., 2013), which are theoretically and empirically associated with SAD (Clark & Wells, 1995; Cox et al., 2002; Cox et al., 2004; Helsel, 2005).

Despite empirical and theoretical contentions that shame is a core feature of SAD (Clark & Wells, 1995; Field et al., 2004; Gilbert & Miles, 2000; Helsel, 2005), no clear association was found between social anxiety and shameful emotions from early memories in this study, adding to mixed evidence regarding its exact role in SAD (Hedman, Ström, Stünkel & Mortberg, 2013; Matos, et al., 2013; Pinto-Gouveia et al., 2006). One explanation
for this finding, derives from the nature of shame as a secondary emotion that becomes internalised in response to particular events, or sequence of events, in which one is exposed, humiliated, devalued, or made to feel worthless (Helsel, 2005), which is often the case when one is rejected by their peers (Gilbert & Miles, 2000). Therefore, shame can displace primary emotions of embarrassment, humiliation or worthlessness and would develop subsequent to one’s ‘earliest’ memory of a particular social encounter. Nonetheless, the higher incidence of memories from the SAD group in the current study categorised by embarrassment, humiliation, and worthlessness may reflect childhood experiences that later become internalised as shame for individuals with clinically significant symptoms. Feelings related to worthlessness due to peer rejection and its relevance to SAD are addressed in the following subsection (8.5 Emotional Pain and Devaluing Interpersonal Relationships)

8.5 Emotional Pain and Devaluing Interpersonal Relationships

Interpersonal events such as rejection, threat, or social exclusion typically result in emotional pain or hurt feelings, which are “an inevitable part of human relationships” (May et al., 2007. p.50). In accordance, irrespective of social anxiety symptoms, individuals recalled early memories of feeling inferior to peers or family friends and experienced hurtful emotions in response to interpersonal relationships, although these occurrences were more common for individuals with clinical and subclinical social anxiety, respectively. The relevance of negative interpersonal experiences in producing hurt feelings, strongly indicates that emotional pain is especially relevant for individuals who develop social anxiety (MacDonald & Leary, 2005; May et al., 2007; Mellin, 2012).

More specifically, the essence of emotional pain projected from socially anxious individuals earliest social memory was the result of devaluing interpersonal encounters that
involved being offended or betrayed by friends, discrimination against one’s appearance or race, and/or unkind treatment from family members or peers. Therefore, inherent in the nature of relational devaluation are negative outcomes involving emotional distress and feeling less valued than friends, partners, or people more generally (Feeney, 2004; MacDonald & Leary, 2005; Strandmark, 2004). In this way, associations between social anxiety and emotional pain are conceptually relevant to ‘social pain’, a term used to described emotional reactions in response to feeling excluded or devalued in interpersonal relationships (MacDonald & Leary, 2005).

Based on this view, early memories of actual or perceived devaluation, rejection, or exclusion that elicit hurt feelings or social pain, would conceivably create fears of experiencing hurtful emotions in future interactions with others and subsequent development of subclinical or clinical social anxiety in adulthood. Furthermore, interpersonal adversity resulting in emotional pain relates to characteristic features of SAD in many ways. For instance, hurtful emotional experiences caused by early interactions with other people, would influence tendencies toward hyper-vigilance of social threat, sensitivity to criticism or social rejection, perceptions of others as untrustworthy or rejecting (Feeney, 2004; Helsel, 2005; May et al., 2007; Mellin, 2012), and negative beliefs of low self-worth (Clark & Wells, 1995; Strandmark, 2004).

Given these similarities between consequences associated with hurtful emotional experiences and characteristics of SAD, it is not surprising extreme forms of emotional pain categorised by worthlessness was exclusive to the clinical group. These early social memories entailed feeling unimportant, forgotten, or unequal to others. This substantiates theoretical models of SAD (Clark & Wells, 1995; Rapee & Heimberg, 1997), empirical associations between worthlessness and SAD (Cox et al., 2002; Cox et al., 2004; Helsel,
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

203

2005), as well as qualitative investigations of autobiographical memories in patients with SAD (Witheridge et al., 2010). Thus, results relating to worthlessness demonstrate similarities between this study’s clinical group of individuals with self-reported SAD, and treatment seeking patients with a diagnosis of SAD.

Moreover, results of peer rejection, criticism, devaluing interpersonal experiences and overall negative interactions recalled by the clinical group, can be seen as providing indirect support for contentions that self-blame for criticism received by others becomes internalised as self-criticism (Gilbert & Miles, 2000), which essentially entails feelings of worthlessness (Clark & Wells, 1995; Cox et al., 2002; Cox et al., 2004; Helsel, 2005). Therefore, it is speculated individuals who develop subclinical symptoms below diagnostic thresholds internalise criticism less so than individuals with clinical SAD do. The following example from the subclinical group supports this contention.

“When I had to speak up to my friends in primary school, to stop being mean to me and excluding me” (subclinical group)

This case in point exemplified an assertive and perhaps protective response to peer exclusion, suggestive of potential resistance to internalising peer rejection as being worthless. Since victimized peers often have low self-worth (Hudson & Rapee, 2000; Roth et al., 2002), individuals who develop subclinical symptoms may be more resilient or self-assured, as shown by this subclinical socially anxious participant who approached rejecting peers and demonstrated belief in her own self-worth. For individuals with SAD, overt criticism can become internalised as shame or low self-worth, resulting in a distorted negative self-image (Helsel, 2005; Gilbert & Miles, 2000), and excessive anxiety in social or performance
situations (Dozois & Frewen, 2006; Hofmann, 2007). Furthermore, fears of being hurt by others may result in negative beliefs that one is incapable of meeting social demands (Strandmark, 2004), feelings of weakness, shame, or worthlessness, and subsequent social withdrawal or avoidance which leads to a lack of social support and isolation (Clark & Wells, 1995; Cox et al., 2003; Helsel, 2005; Strandmark, 2004).

Overall, results relating to emotional pain appear especially relevant when considering pathways of social anxiety, individuals with more severe social anxiety symptoms more often recall earliest social memories reflecting a greater degree of emotional pain. Thus, extreme forms of emotional suffering experienced early in life, as evidenced by projections of low self-worth, represents a distinguishing feature of threshold SAD, linked to increased distress and impairment that warrants diagnosis (Chartrand et al., 2011; Hofmann et al., 2004). These findings suggest emotional pain is especially relevant for future considerations of aetiological pathways to subclinical and clinical social anxiety, beyond current conceptualisations of typical emotions such as anxiety, embarrassment, and humiliation.

Since socially anxious individuals commonly fear or avoid situations requiring interactions with other people (Faravelli et al., 2000; Furmark, 2002; Iancu et al., 2006; Knappe et al., 2011), and social interactional anxiety is the core feature of SAD, alongside performance fears recently distinguished by a ‘performance only’ specifier (APA, 2013). Increased understanding of the role hurtful emotional reactions play in social anxiety can provide valuable insight into the development of interaction anxiety. This information can be incorporated into aetiological models of SAD and add to a more detailed accounts of interactional fears associated with clinical and subclinical presentations of the disorder.
8.6 Unsuccessful Mastery of Socials Goals

Key themes from earliest social memories of individuals with clinical SAD (17.5%) and to a lesser extent subclinical social anxiety (13.7%) often depicted failure to achieve social goals. Non-socially anxious controls (10.3%) also had memories of failed social encounters, however such instances were not identified as main themes and demonstrated normal emotional reactions (e.g., tantrums) of young children, or developmentally appropriate social challenges that many shy children and adolescents have difficulties with (e.g., adjusting to the school environment or confident participation in school-based activities). Therefore, early social failures recalled by the control group were representative of the majority of people who experience mild to moderate anxiety or self-consciousness in social or performance situations, who do not become significantly distressed or impaired (Kearney, 2005; Ledley & Heimberg, 2006). Alternatively, socially anxious individuals’ earliest memories of social failure signified a smaller proportion of the population who experience extreme social fears that interfere with desired social or performance outcomes (Clark & Wells, 1995; Kearney, 2005; Ledley & Heimberg, 2006).

Interestingly, social inadequacies were equally common for subclinical and clinical groups and entailed categorically similar themes, with the exception of poor assertiveness skills only evident for individuals with SAD. Conceptually and empirically relevant failed social goals were exemplified by; interpersonal difficulties attributed to social awkwardness, poor social skills, social withdrawal or avoidance (Beidel et al., 2010; Biggs et al., 2012; Erath et al., 2007; Kearney, 2005; Ledley & Heimberg, 2006), and performance difficulties associated with heightened anxious arousal or distress (APA, 2013; Faraveli et al., 2000; Furmark, 2002; Stein & Deutsch, 2003). Both groups also recalled undesirable social encounters of actual or perceived failure in; formal presentations, informal interactions with
others, initiating and maintaining conversations with unfamiliar peers, and general social interactional situations (e.g., party, gathering, wedding) (Faraveli et al., 2000; Furmark, 2002; Kessler et al., 1998; Stein & Deutsch, 2003).

Therefore, from a young age individuals with subclinical and clinical social anxiety were anxious, nervous, self-conscious, or overwhelmed in social interactional situations, and this was associated with social skills deficits, social withdrawal, and/or avoidance, which had a negative impact upon social or performance situations. Moreover, social, interactional and performance inadequacies transpired in the school environment for individuals irrespective of social anxiety symptoms. For non-socially anxious individuals, unsuccessful social encounters also occurred in the company of family members in early childhood (e.g., 3-4 years old). However, clinical and subclinical socially anxious participants recalled failed attempts at social and performance goals across a wide range of social settings, such as birthday parties, social events, and university, with kindergarten (i.e., clinical) and school camp (i.e., subclinical) specific to each social anxiety group.

It is plausible, early memories that portrayed unsuccessful social goal attainment across a broad range of social settings, may have influenced negative beliefs of social inadequacy that generalised to numerous social or performance settings and became problematically associated with anxious arousal in social interactional or performance situations throughout life (Clark & Wells, 1995; Kearney, 2005; Ledley & Heimberg, 2002). Therefore, suggestions that social failures with peers influence negative self-beliefs of social inadequacy, and subsequent expectations of poor performance that lead to avoidance or withdrawal of social interactional situations (Biggs et al., 2012; Erath et al., 2007; Williams & Silverman, 2012), applies to individuals who develop subclinical and clinical symptoms and demonstrates similar core features of social anxiety threshold groups.
Social withdrawal or avoidance early in life has further negative implications that extend to reduced peer acceptance, fewer close friendships, social support networks (Biggs et al., 2012; Erath et al., 2007; Kearney, 2005; Ledley & Heimberg, 2006; Tuschen-Caffier, Kuhl & Bender, 2011), early school dropout, and reduced academic and work performance (Brunello et al., 2000; Ollendick & Hirshfeld-Becker, 2002; Kashdan & Herbert, 2001). These repercussions associated with early social failures interfere with social and non-social goals necessary for adequate functioning as an adult in contemporary society. Further to this, perceived social incompetence and subsequent withdrawal of social situations compounds problems associated with social anxiety, by reducing opportunities for learning age appropriate social skills, developing a sense of belonging with peers, and/or disconfirming negative beliefs regarding social performance and self-worth (Beidel et al., 2007; Elizabeth et al., 2006; Ollendick & Benoit, 2012; Ledley & Heimberg, 2006).

Overall, results support cognitive models that suggest, past memories involving actual or perceived social failures, influence negative beliefs and assumptions that distort schematic processing of future social situations (Clark & Wells, 1995; Rapee & Heimberg, 1997). Given the similar occurrence of failed social goals from earliest social memories of clinical and subclinical groups, memories of past interpersonal problems demonstrated by inadequate or undesirable social performance represent aetiological pathways associated with increased social fears. However, early memories of social inadequacies or interpersonal difficulties may be a sign of symptoms or consequences associated with the early onset of social fears (Beidel et al., 2007; Rapee & Spence, 2004), as opposed to events that influenced social fears. Nonetheless, failed social goals that occur early in life can result in heightened anxious arousal associated with future social or performance situations, and influence concerns of potential scrutiny by others due to fears of appearing weak, inept, or nervous based on
observable signs of anxiety or inadequate social performance (Clark & Wells, 1995; Kearney, 2005).

### 8.7 Anxious Arousal in Social or Performance Situations

Anxious arousal was associated with earliest memories of personally meaningful social situations for individuals irrespective of social anxiety symptom severity. Initially, this appears contradictory with previous research findings, in which memories of individuals with SAD (Anderson et al., 2008; Stopa et al., 2013; Wenzel & Cochran, 2006) and subclinical social anxiety (Chiupka et al., 2012), contained significantly more fearful and anxious themes than non-socially anxious control groups. However, fear and anxiety are normal human emotions experienced across a range of situations and is not problematic for most people (Kearney, 2005), as indicated by non-socially anxious individuals who recalled feeling mildly anxious during social situations encountered early in life. Following this reasoning, apprehension and nervousness are common and developmentally appropriate emotions with adaptive and maladaptive functions, as demonstrated by non-clinical and clinical populations (Beesdo et al., 2009; Costello et al., 2005; Helsel, 2005; Hofmann et al., 2004; Kearney, 2005; Ollendick & Benoit, 2012; Wittchen, 2000).

Moreover, the majority of non-socially anxious individuals whose memories signified prominent discomfort or apprehension, recalled defining moments of being nurtured, cared for, encouraged, befriended, or receiving guidance. The theoretical view taken here, argues such themes represent positive memories indicative of learnt coping skills, a sense of belonging or achievement, gratified needs, wishes, and/or motivation for overcoming future difficulties (Bruhn, 1990). Therefore, early memories of the control group demonstrate how protective factors reminiscent of affiliation, safety, nurturance, or social competence, can
buffer negative consequences associated with mild anxiety or social fears early in life and prevent anxiety in future social situations (Bruhn, 1990; Hofmann et al., 2004; Ledley & Heimberg, 2006).

An additional explanation as to why clinical, subclinical and non-socially anxious individuals were equally likely project anxiety from earliest social memories is stated in diagnostic manuals, in which diagnosis of pathological anxiety should be differentiated from transient responses to normal life stressors (APA, 2013). Accordingly, one non-socially anxious individual recalled commencing primary school after recent migration to Australia, which probed moderate anxiety attributed to always having been shy but feeling “different” and “awkward around new people”, classic concerns associated with social anxiety (Moscovitch, 2009; Neal & Edelmann, 2003). While interpretation of a single case is cautioned, this example demonstrates how significant life stressors (i.e., migration) can amplify age appropriate social challenges (i.e., commencing school) for shy children, and increase anxious arousal or negative thoughts to resembled clinical social fears. Thus, moderately intense anxious arousal in early social situations is not necessarily indicative of troublesome social fears later in life, as evident from self-reported responses of the control group. This case in point, illustrates the importance of investigating situational factors associated with socially anxious concerns and heightened anxious arousal when considering vulnerability factors associated with diagnosable symptoms.

In comparison, moderately intense anxiety projected from memories of both subclinical and clinical social anxiety groups specifically related to social, interaction, or performance situations and embellished core features of social anxiety. Such as, social, performance, and/ or observational fears (Chiupka et al., 2012; Faraveli et al., 2000; Knappe et al., 2011; Ruscio et al., 2008), separation anxiety from primary caregivers (APA, 2013;
Silove, Marnane, Wagner, Manicavasagar & Rees, 2010), heightened physiological arousal, fear of showing observable signs of anxiety and social withdrawal or avoidance (Bögels et al., 2010; Hackmann et al., 2000; Moscovitch, 2009; Neal & Edelmann, 2003; Stopa et al., 2013; Weeks et al., 2009). Therefore, adults with self-reported social anxiety at and below diagnostic thresholds experienced similar types of social fears and interactional anxiety, compared to mild, situational anxiety described by the control group.

The nature of extreme social fears and heightened anxious arousal in response to social interaction situations was a further distinguishing feature of clinical and subclinical groups relative to the control group. This supports contentions that severe degrees of anxiety and subjective distress differentiates normal from pathological anxiety (APA, 2013; Beesdo et al., 2009; Kearney, 2005). For example, with the exception of one non-socially anxious participant from the control group, all anxious themes reflected mild discomfort, apprehension, or nervousness (15.4%), whereas the majority of the SAD group recalled being moderate to severely anxious (12.5%). Interestingly, exactly half of the subclinical group’s memories projective of anxiety were categorised by mild discomfort or apprehension (9.8%) and the remaining encompassed moderate to severe anxiety (9.8%). Thus, subclinical social anxiety was associated with greater social fears than controls but less than SAD. This is consistent with social anxiety representing a spectrum disorder (Filho et al., 2010; Knappe et al., 2009b), with both subclinical and clinical group’s memories of mild anxiety being categorically distinct (i.e., social interaction fears) to that of the control group, which typically embellished protective themes.

Despite memories of socially anxious individuals’ signifying comparable social fears and anxious themes, signs of heightened physiological arousal corresponded to social anxiety symptom severity. For instance, the SAD group described a wider range of physiological
symptoms (i.e., heart pounding, trembling voice, blushing) than the subclinical group (i.e., shaking hands), with greater intensity (i.e., out of body experience vs. vomiting). This study’s detailed analysis of qualitative data found the nature, source, and intensity of anxious arousal differentiated individuals with subclinical and clinical social anxiety symptoms from non-socially anxious controls. Thus, quantitative statistics suggesting anxiety in social or performance situations was equally important for socially anxious and non-anxious individuals, masked meaningful variations in anxious themes associated with the development of social fears.

8.8 Self-Consciousness, Embarrassment or Humiliation

As with normal emotional experiences of anxiety, social anxiety is proposed to represent a normally distributed variable, with self-consciousness or shyness indicative of non-pathological states, and SAD signifying clinical extremes of the spectrum (Beidel & Turner, 2007; Hofmann et al., 2004; Rettew, 2000). Consistent with this view, individuals with and without social anxiety in the current study had memories where they were self-conscious during early interpersonal encounter. These same qualities have been found in studies using clinical and non-clinical populations (Hofmann et al., 2004; Neal & Edelmann, 2003; Roth-Ledley & Heimberg, 2006). Thus, irrespective of social anxiety symptom severity, self-consciousness was associated with extreme shyness experienced in social situations, difficulties initiating conversation with friends or groups of people, feelings of not belong, and withdrawal from group activities.

These experiences associated with self-consciousness were equally common for subclinical and non-socially anxious individuals although as might be expected, individuals with self-reported SAD were more likely to recall self-conscious themes from earliest
memories of social encounters. This supports a wealth of empirical findings showing associations between SAD and self-conscious or shy emotions (Kearney, 2005; Neal & Edelmann, 2003; Stein & Gorman, 2001; Stemberger et al., 1995). Similarly, empirical studies on autobiographical memories also found memories of SAD patients contained self-conscious themes that focused on the self and perceptions of others when under social threat (Anderson et al., 2008; Stopa et al., 2013). Taken together, these findings demonstrate the nature of public awareness and social evaluative concerns associated with SAD, in which self-consciousness experienced in social situations is associated with fear of potential scrutiny by others (Hudson & Rapee, 2000), were mirrored in their early memories.

Nonetheless, similar to individuals with clinical SAD, shy individuals can become extremely anxious in social interactions, lack social skills, and often withdraw from social settings (Kearney, 2005). Developmentally appropriate feelings of self-consciousness, innately shy temperaments, and fears of embarrassment are quite common and markedly different to extreme fears of embarrassment that cause considerable distress or interference in daily living, as is the case for individuals with SAD (Knappe et al., 2011; Neal & Edelmann, 2003; Ollendick & Hirshfeld-Becker, 2002; Van Roy et al., 2009). Thus, self-consciousness or embarrassment experienced in social interaction situations do not necessarily cause social anxiety in adulthood (Ledley & Heimberg, 2006; Stein & Stein, 2008; Wittchen, 2000), as shown by memories of embarrassment recalled by individuals in spite of social anxiety symptom profiles.

However, diagnostic profiles of SAD emphasise fears of embarrassment as one of the main criterion for diagnosis (APA, 2013) and this association is supported by empirical studies comprising SAD patients (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003). Not surprisingly, findings from memory narratives revealed a higher incidence of
themes relating to embarrassment for individuals with clinical symptoms, with distinct themes suggestive of more extreme humiliation. More specifically, individuals with self-reported SAD recalled humiliating social situations associated with public criticism (i.e., peer rejection/ victimization), or undesirable social outcomes that occurred in the presence of other people (i.e., failed social goal). These types of adverse social experiences have been implicated in the onset of the SAD in previous empirical studies and represent powerful conditioning events linked to the development of clinical social fears (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003).

Interestingly, non-socially anxious individuals recalled more memories of embarrassment than the subclinical group, yet did not develop social fears in adulthood. This seemingly unexpected result can be explained from content found from thematic analysis of embarrassing themes, revealing the nature of embarrassment described by non-socially anxious controls differed to that described by socially anxious individuals. For instance, meanings conveyed by clinical and subclinical social anxiety groups depicted public embarrassment that occurred because of social rejection or social inadequacy whilst interacting with others. In contrast, memories of the control group revealed that embarrassment occurred in the presence of other people but with an absence of social interactions.

Therefore, a distinguishing feature of embarrassment experienced by socially anxious individuals early in life was the social interactional component. These findings make conceptual sense, in that embarrassment experienced during early interactions with other people would conceivably lead to fears of embarrassment or humiliation when anticipating or engaging in future social interactions. In turn, earliest social memories containing themes of embarrassment or humiliation, symbolise core features of SAD and substantiates diagnostic,
theoretical, and empirical conceptualisations of the disorder (APA, 2013; Beidel & Turner, 2007; Clark & Wells, 1995; Hidaglo et al., 2001). Furthermore, key findings from early memories suggest early experiences of social embarrassment and humiliation represent distinct risk factors associated with clinical SAD. However, two participants with subclinical social anxiety did recall embarrassment of a similar nature to that of the SAD group thus interpretation of these findings may vary according to categorical or quantitative distinctions.

For instance, instances of embarrassment or humiliation can signify a broader range of negative emotions and harsher forms of negative conditioning events (i.e., quantitative increases in severity), or completely separate emotions from anxiety for example, suggestive of categorical distinctions. However, participants’ subjective responses on diagnostic self-report measures determined allocation into clinical or subclinical groups. Therefore, personal perceptions of distress (e.g., ratings 1-4) and functional impairment could produce some variation in responses and error in group classification. Therefore, it is also possible that due to self-report methods used to verify social anxiety threshold groups in this study that these two participants were incorrectly identified as having subclinical rather than clinical SAD.

8.9. Fear of Negative Evaluation

In view of the fact that fear of negative evaluation lies at the core of social anxiety and criteria for diagnosis of the disorder (APA, 2013), earliest social memories containing prominent fears of potential scrutiny were one of the foremost themes associated SAD (15%) but less commonly associated with subclinical social anxiety (3.9%). Therefore, from an early age, socially anxious individuals expected to be perceived negatively by others during social encounters (Chartier et al., 1998; Clark & Wells, 1995; Ollendick & Hirshfeld-Becker, 2012; Weeks et al., 2009). This adds to recent empirical evidence, in which autobiographical
early memories and the social anxiety spectrum

memories of SAD patients contained prominent social evaluative concerns (Witheridge et al., 2010), as well as findings that emotional tendencies toward overt evaluation and attracting attention, differentiated individuals with subclinical from clinical social anxiety (Weeks et al., 2010).

Weeks et al.’s (2010) findings are of particular relevance to the current study’s exploration of potential boundaries between social anxiety symptom severities. Weeks and colleagues examined classification of social anxiety in three large samples of community, undergraduate, and SAD patients. Emotional tendencies toward fear of overt evaluation was found to represent a categorically distinct component of SAD, providing evidence of discrete boundaries between diagnostic thresholds (i.e., categorical construct), as opposed to quantitative increases in gradients of severity (i.e., dimensional construct). Similarly, findings from the current study indicated that early tendencies toward fears of potential scrutiny were associated with current self-reported SAD associated with significant distress and/or impairment. However, recent empirical investigations that have examined variations in cognitive thoughts, utilising samples representing varied degrees of the social anxiety spectrum (i.e., clinical, subclinical, and no social anxiety symptoms) have reported mixed evidence (Kley et al., 2012; Tuschen-Caffier et al., 2011; Weeks et al., 2009; Weeks et al., 2010).

For instance, some studies suggest fears of potential scrutiny correspond to increased social anxiety symptom severity, with subclinical social anxiety associated with higher degrees of social evaluative fears than healthy controls but less than SAD groups, in child (Tuschen-Caffier et al., 2011) and adult samples (Weeks et al., 2009). In contrast, other studies report no evidence suggesting continuity between social anxiety thresholds and negative cognitive thoughts associated with fears of negative evaluation. Rather, these studies
indicate significantly higher frequencies of fears relating to negative evaluation for children (Kley et al., 2012) and adults (Weeks et al., 2010a) with a diagnosis of SAD, relative to to those with subclinical symptoms and non-socially anxious controls. This correspond to this study’s findings from earliest social memories, with fears of negative evaluation representing characteristic features compromising symptom profiles of SAD but not subclinical social anxiety, or healthy controls. However, despite only two subclinical socially anxious individual’s memories containing social evaluative content, fears relating to negative evaluation was not entirely specific to clinically diagnosable symptoms and may therefore be interpreted as representing quantitative (i.e., spectrum) or dimensional (i.e., categorical) boundaries between social anxiety thresholds. Tuschen-Caffier et al. (2011), suggests that based on the continuum hypothesis of social anxiety, it can be assumed that individuals with subclinical social anxiety would fear negative evaluation.

Nonetheless, previous research suggesting either categorical or incremental differences in fears of potential scrutiny across the social anxiety spectrum, are based on scores from measures that assess frequencies of negative thoughts (e.g., fear of negative evaluation scale). Therefore, results simply indicate a higher incidence of negative cognitions for clinical compared to subclinical groups, as opposed to reflecting true categorical differences in the content of cognitive biases. This study provided meaningful information regarding the nature of social evaluative fears, in which individuals with symptoms meeting criteria for SAD recalled a wider range of social evaluative concerns relative to individuals with subclinical symptoms. The small proportion of individuals with subclinical symptoms described similar concerns as individuals with SAD, involving potential scrutiny or laughter by others for saying something foolish, or being different or odd. Additional social evaluative concerns of individuals who developed SAD related to acting in ways that would attract
attention, being publicly embarrassed, humiliated, watched and/or observed eating by other people.

Importantly, several key findings from social anxiety groups’ earliest social memories were conceptually and empirically relevant to fears of negative evaluation (Alden & Taylor, 2004; Edwards et al., 2010; Helsel, 2005; Hudson & Rapee, 2000; MacDonald & Leary, 2007; May et al., 2007). Therefore, social experiences associated with subclinical and clinical social anxiety groups, such as social performance anxiety, self-consciousness, social embarrassment, emotional pain, failed social goals and/or peer rejection that occur in the absence of social evaluative fears, may result in elevated anxiety in social situations for some individuals without causing clinically significant distress or impairment. This study indicates that an important feature of developing clinical SAD is interactions between aforementioned risk factors that occur in conjunction with fears of negative evaluation.

For example, anxiety experienced in social or performance situations in the absence of social evaluative fears can be appropriate, adaptive and can typically be overcome with repeated exposure, or functional coping strategies (Kearney, 2005). However, when combined with fears of negative evaluation, anxious arousal experienced in social or performance situations can provoke increased distress associated with fears of potential scrutiny of others noticing observable signs of anxiety and being perceived as weak, nervous, or socially inept (APA, 2013; Kearney, 2005). Likewise, feeling self-conscious in social situations is normal and developmentally appropriate (Hidaglo et al., 2001; Van Roy et al., 2009), however should self-consciousness result in persistent fears of potential scrutiny across several social interactional situations, this may result in more severe social anxiety that warrants clinical diagnosis.
Social evaluative concerns are innately associated with feelings of self-consciousness (Weeks & Howell, 2012), but for individuals with SAD this can lead to frequent and distressing fears associated with being negatively evaluated and cause considerable impairment in social functioning (Chartier et al., 1998; Knappe et al., 2011; Van Roy et al., 2009). It follows, that fears of negative evaluation can perpetuate or increase self-consciousness to influence clinically significant social fears distinct from normal emotional experiences, to produce elevated physiological arousal and intense anxiety in social interaction or performance situations (Kearney, 2005; Stein & Deutsch, 2003). The following memory narrative from the SAD group exemplifies this relationship between self-consciousness and fear of negative evaluation: “...I remember feeling very self-conscious of everyone looking at me and watching me eat”. In a similar way, hurt feelings and worthlessness (i.e., emotional pain) from early memories were more frequent and severe for individuals with SAD than subclinical symptoms.

In considering development of clinical rather than subclinical social anxiety, cognitive models propose individuals with SAD feel others are evaluating their worth during social interactions (Clark & Wells, 1995) and empirical studies provide evidence of associations between fears of negative evaluation and low self-worth in samples of individuals with SAD (Cox et al., 2002; Helsel, 2005). Therefore, intensely painful emotions internalised from perceptions of negative evaluation can result in a greater sense of social disapproval, increased problems in future relationships, and low self-worth (Feeny, 2004; MacDonald & Leary, 2007; May et al., 2007). Accordingly, individuals with SAD fear being scrutinised by others due to prominent beliefs of worthlessness, which results in more severe anxiety in social situations when one is exposed to potential scrutiny (APA, 2013; Clark & Wells, 1995).
Further to this, socially embarrassing or humiliating interpersonal events, peer rejection experiences, and instances of social or performance failures can result in social evaluative concerns regarding potential scrutiny (Edwards et al., 2010; Hudson & Rapee, 2000; Neal & Edelmann, 2003). Thus, early memories of the SAD group were projective of several emotional, interpersonal, and environmental factors that can shape cognitions that lead to fears of negative evaluation. With the exception of two subclinical socially anxious participants, these risk factors occurred in the absence of prominent social evaluative fears. Therefore, innate vulnerabilities toward fears of potential scrutiny may increase negative consequences of shared risk factors (i.e., anxiety, self-consciousness, emotional pain, negative relationships with parents, peer rejection, failed social goals), to determine trajectories representing clinical expressions of SAD.

In summary, consistent with diagnostic information in the DSM-5 stating temperament or traits that predispose individuals to fear negative evaluation are risk factors for developing SAD (APA, 2013), prominent fears of negative evaluation from a young age were more commonly associated with development of clinical rather than subclinical symptoms in the current study. Moreover, earlier onset of fears relating to potential scrutiny implies that negative self-appraisals, low self-worth, or internalisation of negative criticism is more deeply entrenched for individuals with social evaluative fears associated with greater distress and impairment associated with diagnosis of SAD. In comparison, it is possible that individuals with social anxiety below diagnostic thresholds developed fears of negative evaluation later in life as a result of cumulative conditioning events. These fears learnt subsequent to early developmental periods would have fewer negative repercussions on early social and emotional development and formation of dysfunctional schemas, than social

8.10. Interpretation of Earliest Social Memory according to Bruhn’s CPT

Cognitive Perceptual Theory (Bruhn, 1990), was drawn upon as a framework for guiding this study’s investigation of symptom profiles representing the social anxiety spectrum. According to CPT, historical influences embedded in the content of early memories provide evidence of current concerns and/or psychological disturbance (Bruhn, 1990). Furthermore, ‘earliest’ memories entail immense diagnostic value in terms of understanding the nature and types of problems that compromise healthy development (Barrett, 1980; Bruhn, 1990; Bruhn, 1995; Bruhn & Schiffman, 1982b; Saunders & Norcross, 1988). The present findings support this view, as individuals with self-reported symptoms recalled earliest social memories suggestive of themes empirically related to social anxiety (i.e., anxiety, peer rejection, social and performance difficulties) (Hudson & Rapee, 2000; Kearney, 2005). Moreover, in accordance with what Bruhn (1990) described as ‘major unresolved issues’, which are embedded in memories to demonstrate current ‘issues in process’, it would be expected that earliest social memories of individuals with clinical symptoms would be more likely to manifest issues relevant to socially anxious concerns than individuals with subclinical symptoms, which may not be as relevant.

In this way, memories revealing of ‘unresolved issues’ relevant to current social anxiety symptom severity would be more serious for individuals with clinical SAD than individuals with less severe or impairing symptoms below diagnostic thresholds, because social anxiety may not be the most pressing issue related to these individuals’ present
situation. Findings from this study support Bruhn’s (1990) theory, by demonstrating congruency between social issues from autobiographical memories for the majority of individuals with current SAD and as expected, this pattern was less distinct for individuals with subclinical symptoms relative to controls. Thus, unresolved issues corresponded to progressively more severe dysfunction in social situations for individuals with greater symptom severity. In particular, core issues related to negative social interactions was more prominent for individuals with clinical SAD, compared to individuals with symptom presentations that do not meet diagnostic criteria, and healthy controls.

Following from this reasoning, prominent negative themes from earliest social memories represent unmet needs or risk factors that impede normal development or personal growth (Bruhn, 1985; Bruhn, 1990; Bruhn, 1992a), and promote social anxiety. In contrast, psychological well-being demonstrated by early memories containing positive themes, signified protective factors that encourage healthy social and emotional development, and buffer social fears to prevent social anxiety (Bruhn, 1990; Kearney, 2005; Lambert, 2006; Kashdan et al., 2013). In this way, thematic content from earliest social memories revealed meaningful information regarding potential interactions between risk and protective factors associated with trajectories of social anxiety symptom profiles along the spectrum.

However, findings from earliest social memories do not suggest individuals with SAD actually experienced more adverse social events than individuals with subclinical symptoms and non-socially anxious controls. Rather, schematic processing of social situations depicted by automatic retrieval of earliest memories signifies influential issues associated with current socially anxious concerns that deterred healthy psychological functioning (Bruhn, 1985; Bruhn, 1990). Therefore, even if socially anxious participants did not actually experience more negative events, the selective retrieval of what is considered one’s earliest social
memory provides meaningful information regarding present day issues (Bruhn, 1990), which for socially anxious individuals relates to social interactional situations. From this view, potentially unconscious projections revealed through earliest social memories were used as a means of providing information to distinguish problems associated with the development of varying degrees of social anxiety symptoms, ranging from normal to pathological.

According to CPT, early memories are selectively determined by not only fears, but needs, interests, major beliefs, personality, and present relevance (Bruhn, 1985; Bruhn, 1990; Bruhn & Last, 1982). Consistent with this reasoning, the control group’s memories were more often associated with positive content and emotional experiences, therefore likely signify protective factors that promote social and emotional well-being (Bruhn, 1990; Hofmann et al., 2004; Roth-Ledley & Heimberg, 2006) and protect against the development of social fears. Since psychologically healthy participants from the control group did not develop social anxiety, it seems logical to infer that common positive themes from earliest social memories of non-socially anxious individuals reveal factors that influence development of positive schemas of the self, others, social relationships, and social fears. Moreover, given that early memories of social situations involving positive affect were common among non-socially anxious individuals, it is speculated that memories of happy or positive social situations decrease the likelihood of developing socially anxious concerns.

8.11. Need Attainment in Early Life for Social Anxiety and Control Groups

Several theoretical perspectives suggest secure, lasting, and mutually satisfying interpersonal relationships with supportive adults underlies personality development and fosters social and emotional development (Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn,
1990; Mayman, 1968; Kearney, 2005). This is especially relevant for individuals who develop social anxiety, given the nature of interpersonal fears associated with the disorder. Notably, themes that emerged from earliest social memories of the control group related to positive emotional states and healthy social relationships, suggestive of gratified needs relating to nurturance, safety, affiliation, achievement, and autonomy (Bruhn, 1990; Lambert, 2006; Geist & Hamrick, 1983).

A similar but less robust pattern was also found for a proportion of subclinical socially anxious individuals in relation to particular positive themes, whereas memories of the SAD group contained the least positive meanings. Moreover, findings suggest ungratified needs associated with nurturance, safety, affiliation, achievement, and autonomy represent core issues associated with current issues relating to social anxiety for individuals with SAD and less so, subclinical symptoms. This demonstrates the importance of ‘earliest’ memories in revealing diagnostic information associated with current psychological distress (Barrett, 1980; Bruhn, 1990; Bruhn, 1995; Bruhn & Schiffman, 1982b; Saunders & Norcross, 1988). These core issues are important factors for considering common risks associated with onset of social fears and impairments in social and emotional functioning (Ginsburg, La Greca & Silverman 1998).

8.11.1. Nurturance and safety. Importantly, non-socially anxious individuals were the only group to have recalled positive interactions with mothers or fathers that involved being nurtured, comforted or treated kindly. This supports well-documented evidence that positive relationships with parents protective against mental illness (Kennedy, Bybee, Sullivan & Greeson, 2009; Lambert, 2006). Moreover, from an attachment perspective the caregiver relationship as essential for healthy development and psychological health (Bowlby, 1982; Beidel & Turner, 2007; Ledley & Heimberg, 2006), and this was
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

substantiated by Last and Bruhn’s (1983) investigation of children’s early memories, that
found the presence of a caretaking figure improved the likelihood of psychological well-
being. Therefore, an absence of positive memories relating to a parent of subclinical and
clinical social anxiety groups, combined with increased negative interactions with parents
early in life, suggests core issues associated with social anxiety stems from unmet needs by
attachment figures early in life.

This supports empirical evidence that the nature of parent child relationships plays an
important role in the development of social anxiety (Lambert, 2006; Ollendick & Benolt,
2012; Rork & Morris, 2009). Interestingly, a small proportion of individuals irrespective of
social anxiety symptoms recalled positive early memories of interacting with relatives,
however this was more common for non-socially anxious individuals than subclinical and
clinical socially anxious individuals, respectively. Notably, socially anxious individuals
recalled positive interactions with siblings and/or cousins whereas the control group recalled
positive interactions with grandmothers. This finding relates to Last and Bruhn’s (1983)
study, in which the presence of a supportive grandmother from early memories differentiated
well-adjusted, mildly maladjusted and severely maladjusted 8 to 10 year old boys. Therefore,
as suggested by Last and Bruhn, grandmothers who play an important role in children’s early
upbringing represent a supportive care-giving figure similar to mothers, which also have the
potential to promote healthy psychological development through positive relationships.

Furthermore, only non-socially anxious individual’s in the current study recalled early
memories of being helped, cared for, or treated kindly by a significant other or authority
figure (i.e., Succorance). In Bruhn’s original scoring system ‘being gifted’ and ‘succorance’
were separate categories but due to low frequencies in the current study themes relating to
these categories were combined into Succorance, thus one participant from the subclinical
group recalled feeling “chuffed” after receiving a gift from an adult family friend. This positive experience, although only representative of a single case, demonstrates the wider range of positive social interactions associated with symptom profiles of individuals with subclinical social anxiety that developed less severe symptoms in adulthood.

Therefore, early memories of positive relationships with one’s mother, father, and grandparents, can promote a sense of safety and well-being that encourages healthy social and emotional development (Lambert, 2006; Last & Bruhn, 1983) and protect against social fears. Moreover, an absence of positive interactions with such characters from memories of both social anxiety groups adds to evidence suggesting social anxiety is associated with a lack of close relationships with adults (Chartier et al., 2001). From the view of CPT, core content from socially anxious individuals’ earliest memories signified unresolved issues related to adverse interactions with parents and a lack of positive relationships with parents and family members (Bruhn, 1990; Bruhn, 1995; Bruhn & Last, 1982). Therefore, unsatisfied needs relating to nurturance and safety, depict core issues that may have compromised social and emotional development of individuals with current socially anxious concerns.

8.11.2. Affiliation, achievement, and autonomy. Extensive empirical support shows positive peer relationships and age appropriate socialisation are necessary for healthy development and psychological well-being (Berenson et al., 2009; Ginsburg et al., 1998; Hymel et al., 1990; Mellin, 2012). Key themes from the control group’s earliest social memories related to positive social interactions, which most often involved happiness being with friends or peers. These positive relationships depicted from memories of early developmental periods elicited a certain degree of satisfaction or positive emotions (i.e., mild contentment, moderate happiness, excitement), which was more common for non-
socially anxious individuals, compared to subclinical and clinical socially anxious individuals.

In fact, early memories of subclinical and clinical social anxiety groups revealed tendencies toward diminished positive affect, which adds to current conceptualisations of intense negative emotions characterising SAD. Therefore, this finding supports a recent line of evidence suggesting an deficiencies in positive emotional experiences should be recognised as a characteristic feature of clinical (Kashdan et al., 2013; Nargon-Gainey & Watson, 2011) and subclinical social anxiety (Kashdan & Steger, 2006; Farmer & Kashdan, 2012). These results validate previous findings that memories of well-adjusted individuals contain more positive and pleasant themes than clinical populations (Davidow & Bruhn, 1990; Last & Bruhn, 1983; Moscovitch, 2009). Moreover, positive affect memories from the control group support CPT, in suggesting that such memories represent satisfied needs, which may buffer potential consequences, associated with unsatisfied needs during early developmental periods (Bruhn, 1990). In this way, gratified needs of affiliation and a sense of belonging in social relationships was essential for healthy social and emotional development and psychological well-being (Berenson et al., 2009; Bruhn, 1990; Hofmann et al., 2004; Hymel et al., 1990; Lambert, 2006; Mellin, 2012; Ledley & Heimberg, 2006).

Therefore, positive social encounters with peers support theoretical and empirical suggestions that relationships during childhood and adolescence are particularly important for satisfying needs of affiliation and healthy socialisation (Bruhn, 1990; Geist & Hamrick, 1983; Mellin, 2012). Furthermore, earliest social memories of the control group were indicative of core themes relating to successful mastery of social goals, which typically involved having initiated, maintained, or enjoyed interactions with peers, across a range of social situations such as in pre-school, primary school, or birthday parties. Thus, non-socially anxious adults
recalled attempts at successfully mastering social goals, seeking out new friendships and sharing experiences with current friends, which in addition to depicting satisfied needs of affiliation, also demonstrates gratified needs of achievement and autonomy (Bruhn, 1990).

In addition, memories from the control group depicted an absence of peer maltreatment. This and findings suggestive of need attainment described above, relates to empirical evidence that social acceptance, being liked by classmates, and increased friendship quality, is associated with lower levels of social anxiety in children (Festa & Ginsburg, 2011) and adolescents (Erath et al., 2007; La Greca & Lopez, 1998; Tillfors et al., 2012). For instance, earliest social memories of clinical and subclinical social anxiety groups respectively, were least likely to signify affiliation, which is an innate human need to belong and relate to others by attempting to seek new or already formed friendships (Bruhn, 1990). Instead, subclinical and clinical socially anxious individuals commonly recalled instances of peer rejection, which highlights the importance of ungratified affiliation needs in the development of current socially anxious concerns.

Particularly negative experiences of rejection or victimization during the school years can interfere with attainment of basic affiliation needs, an innate human need to belong and connect with others (Berenson et al., 2009; Bruhn, 1990; Geist & Hamrick, 1983; Mellin, 2012). This can result in problems with future interpersonal interactions and relationships, which is a fundamental feature of SAD. According to CPT, earliest social memories projective of peer rejection or exclusion, represents core issues suggestive of unmet affiliation needs that continue to underlie current concerns with social interactions and relationships with others, as manifested by self-reported social anxiety for individuals with subclinical and clinical symptoms. Moreover, early memories suggestive of ungratified needs from peer relationships were uniquely associated with current self-reported social anxiety.
symptoms. To emphasise this point, Geist and Hamrick (1983), described social anxiety, as mutually exclusive with affiliation, in that harmful interpersonal interactions from one’s past negatively influence future fears of rejection.

In addition, subclinical and clinical socially anxious individuals commonly recalled failing to achieve social goals that related to unsuccessful social interactions with peers and undesirable outcomes associated with performance situations, typically in the school environment. Therefore, unsuccessful mastery of social goals during early developmental periods interfered with gratified needs of achievement and autonomy, and represented meaningful core issues linked to current socially anxious concerns (Bruhn, 1990). More specifically, the majority of failed social goals occurred in the school setting. Earliest memories of school depict attitudes toward achievement, mastery and independence (Bruhn, 1990). These negative memories of social failure in the school environment represent attitudes regarding social performance, peer relationships, and general attitudes about the self, suggestive of low self-confidence, negative self-worth, social incompetence, and perceptions of being unlikeable.

Despite a similar incidence of subclinical and clinical groups having recalled failed social goals, a common theme identified from the subclinical social anxiety group also involved successful mastery of social goals (i.e., initiating friendships, interacting or conversing with friends). Therefore, some individuals who developed symptoms below diagnostic thresholds displayed socially competent and independent behaviours depicting satisfied needs of achievement and autonomy, which may have buffered development of more extreme social anxiety later in life (Lambert, 2006). Alternatively, current social concerns for these individuals may be related to unsatisfied affiliation needs given key themes from memories indicative of peer rejection.
8.11.3. Summary of core issues associated with current social anxiety. From the perspective of CPT, earliest memories of non-socially anxious individuals’ were more likely to signify positive interactions with parents, supportive adults, and peers, thus illustrating healthy social and emotional development and secure attachments. More specifically, memories of non-socially anxious participants in the current study contained key themes relating to happiness being with friends, successful mastery of social goals, and cooperative interactions with peers. This demonstrated a higher incidence of need attainment relating to affiliation, achievement, and autonomy.

Similarly, fewer instances of positive, successful, or pleasant interactions with others early in life, combined with meaningful information from early memories related to negative interactions with parents and peers are relevant to personality organisation and current psychological issues associated with current social anxiety symptoms severity (Bruhn, 1990; Bruhn, 1995; Bruhn & Last, 1982). Memories revealing few instances of positive peer relationships and achieved social goals with increased occurrences of peer rejection and failed social goals, suggest unresolved issues related to unsatisfied needs of affiliation, autonomy and achievement related to social competence are associated with current SAD. This is also the case for individuals with subclinical symptoms, however this group also recalled key themes associated with successful mastery of social goals therefore some individuals in this group displayed satisfied needs of achievement and autonomy.

8.12. The Social Anxiety Spectrum

This study’s analysis of ‘earliest’ social memories of clinical, subclinical, and non-socially anxious control groups identified several symptomatic and vulnerability factors that
support classification of social anxiety as a spectrum disorder (Knappe et al., 2013; Kollman et al., 2006; Ruscio, 2010). In particular, early onset of social fears and severity of adverse conditioning events were important determining factors for trajectories of social anxiety symptom severity. For instance, the majority of the clinical group recalled memories signified by cognitive or affective symptoms of SAD and empirically relevant conditioning events known as vulnerability factors (Britran & Barlow, 2004; Neal & Edelmann, 2003; Ollendick & Hirshfeld-Becker, 2002; Rapee & Spence, 2004), with weaker associations of similar core themes evident for less than half the subclinical group. Therefore, compared to individuals who developed symptoms below diagnostic thresholds, development of SAD was associated with more frequent and severe social fears and negative learning histories during childhood or adolescence (Knappe et al., 2009b; Simon et al., 2009).

This shows that the greater part of the clinical group, had early onset marked by several risk factors and symptoms of social anxiety that progressed to clinically diagnosable SAD in adulthood, as indicated by self-reported symptoms. These findings support empirical evidence of the disorders chronic course (Beesdo-Baum et al., 2012; McLean et al., 2011; Xu et al., 2011). In contrast, individuals with subclinical social anxiety recalled fewer and less robust social fears and vulnerability factors, representing less negative extremities. Therefore, this subset of individuals in the subclinical group recalled similar social fears and negative social encounters as the SAD group, but did not develop clinical symptoms. This implies milder social fears evident early in life also follow a persistent course into adulthood, for some individuals whose symptoms did not meet full criteria for SAD (Fehm et al., 2008; Merikangas et al., 2002).

However, the remaining subset of individuals with subclinical symptoms who recalled neutral or positive social events, seem to have developed social anxiety later in life given the
absence of negative learning histories or social fears from early memories. This highlights the important role of early onset and severity of negative conditioning events in the development of clinical symptoms (Beesdo-Baum et al., 2012; Kessler et al., 2005a). Early onset of social fears is a well-established determinant of clinically significant social anxiety (APA, 2013; Lim et al., 2013), whereby increased social demands and changes in social environments during this developmental period may coincide with increased social fears for vulnerable individuals (Beesdo, Knappe & Pine, 2009; Hudson & Rapee, 2000; Gazelle & Rubin, 2010; Gren-Landell et al., 2009). Interference caused by early onset of social anxiety in childhood or adolescence can lead to several difficulties because social situations and interactions throughout life are necessary to achieve social and non-social goals (Kashdan & Herbert, 2001; Kearney, 2005).

Consequences of early onset, include emotional or behavioural problems in childhood, increased anxiety, social skills deficits, problems in peer relationships, loneliness, isolation (Beidel et al., 2007; Van Roy et al., 2009), underachievement at school, early school dropout, and/or reduced work performance later in life (Brunello et al., 2000; Gren-Landell et al., 2009; Ollendick & Hirshfeld-Becker, 2002; Stein & Gorman, 2001). Therefore, early onset of SAD can impede several areas of development and successful functioning in interpersonal relationships, academic, or occupational attainment (Elizabeth et al., 2006; Neal & Edelmann, 2003; Wittchen, 2000). These negative repercussions associated with social fears and avoidance naturally cause severe impairments and distress in daily living when they begin from a young age. Therefore, early onset is a clear marker for distinguishing symptoms of SAD from subclinical social anxiety (Lim et al., 2013).

Earliest memories of the SAD group were also most often representative of symptoms of social anxiety (i.e., extreme physiological arousal) and adverse conditioning events (e.g.,
public humiliation) representing unresolved issues linked to current psychological disturbance. In contrast, early memories recalled by non-socially anxious controls involved developmentally appropriate social fears or more commonly, positive encounters theoretically and empirically related to personal growth, need gratification, and promotion of healthy development (Bruhn, 1990; Lambert, 2006). For the subclinical group, in addition to similar yet less extreme learning histories associated with the SAD group, memories also portrayed similar positive social encounters as controls, which projected gratified needs of affiliation and achievement. Furthermore, approximately one-third of early social memories recalled by subclinical socially anxious individuals did not elicit any prominent affective tone (i.e., neutral).

Thus, the subclinical group recalled learning histories indicative of: adverse social events that may have negatively affected social and emotional development (Brook & Schmidt, 2008; Gazelle & Rubin, 2010; Harvey et al., 2005), potential protective factors that can enhance psychological well-being (Bruhn, 1990; Kearney, 2005; Lambert, 2006), as well as social encounters that did not trigger extreme negative emotions (i.e., increased neutral affect). In this way, neutral or positive social encounters can buffer potential consequences of highly negative learning histories, by counteracting or disconfirming beliefs associated with adverse social experiences (Beidel & Turner, 2007; Kearney, 2005). Therefore, a combination of risk and protective factors during crucial developmental periods was a defining feature of the subclinical group. This finding conceptually relates to trajectories for developing social anxiety symptoms below diagnostic thresholds, which is greater than normal social fears representing lower extremes of the spectrum.

These patterns of findings from the subclinical group represent a more balanced array of early memories indicative, with less negative affect, more neutral affect, and increased
positive social encounters than the clinical group. This is comparable to Moscovitch et al.’s (2011) study that found individuals with low social anxiety retrieved a balance of positive and negative memories of social situations, relative to predominantly negative memories recalled by more severely affected socially anxious individuals. However, direct comparisons with these findings cannot be made because memories associated with a neutral tone were not assessed in Moscovitch et al.’s study, and results were based on differences between non-clinical individuals with high and low social anxiety, as opposed to socially anxious individuals with clinically significant symptoms. Therefore, this study adds to knowledge of the social anxiety spectrum and extends early memory literature, by providing evidence that the valence and degree of affective tone associated with earliest social memories corresponds to self-reported social anxiety symptom severities, with memories of clinical, subclinical and non-socially anxious participants attenuating in degree of negativity, and decreasing in degree of positivity.

Overall, findings revealed associations between clinical symptoms in adulthood and early memories depicting greater incidence and severity of social fears, conditioning events, range of negative emotions, cognitive dysfunction, maltreatment from parents, social and performance inadequacies, relative to subclinical symptoms. Interestingly, problems with peers were equally prominent issues among subclinical and clinical groups, which may represent common pathways for developing social anxiety later in life. This provides further evidence of the continuity of symptomatology along the social anxiety spectrum and supports suggestions by Ruscio (2010), that “a range of potential causal factors are themselves distributed along gradients of severity, combine to produce the symptom profile characteristic of SAD” (p 666).
However, consistent with previous empirical studies investigating the role of conditioning events in the onset of SAD (Harvey et al., 2005; Stemberger et al., 1995), earliest social memories of most but not all individuals with self-reported SAD in the current study signified potential conditioning experiences. Thirty percent of the SAD group recalled positive or neutral social encounters, yet still developed clinical symptoms in adulthood, which may signify atypical cases of adult onset reported within the literature (Faraveli et al., 2000; Merikangas et al., 2002; Rapee & Spence, 2004; Wittchen & Fehm, 2003). For these individuals, ‘earliest’ memories would not reveal significant learning experiences or traumatic events that often occur throughout the lifespan (Bruhn, 1990; Harvey et al., 2005), and impact later onset of social fears (Stemberger et al., 1995; Van Roy et al., 2009).

In the same way, a substantial proportion of non-socially anxious individuals in the current study recalled early memories of negative social situations and did not develop social anxiety (Neal & Edelman, 2003; Stemberger et al., 1995). It is unknown why adverse conditioning experiences are a risk factor for social anxiety in some but not all individuals and vice versa. However, complex interactions between genetic, temperamental, and cognitive vulnerabilities likely predispose some individuals to experience or perceive negative life events more so than others (Elizabeth et al., 2006; Gazelle & Rubin, 2010; Marteinsdottir et al., 2007; Rapee & Spence, 2004; Wittchen & Fehm, 2003). Based on this reasoning, although genetic factors were not examined in the current study, relationships between heritability and psychopathology should be acknowledged for its potential influence on social anxiety symptom severity.

For instance, family studies show stronger associations between heritability of parents with SAD, and children with SAD than subclinical social anxiety (Knappe et al., 2009a; Knappe et al., 2011; Stein et al., 1998). Further to this, SAD is associated with several
heritable vulnerabilities including, anxiety, shyness, fear of negative evaluation, and low positive affect (i.e., extraversion) (APA, 2013; Beidel & Turner, 2007; Hudson & Rapee, 2000; Bienvenu, Hettema, Neale, Prescott & Kendler, 2007). Therefore, early onset of SAD is suggestive of heritable or temperamental predispositions to the disorder, which when combined with adverse social experiences or conditioning events such as those found in the current study, increase risk of developing clinically significant symptoms of SAD (Gazelle & Rubin, 2010; Iancu et al., 2006; Neal & Edelmann, 2003; Rapee & Spence, 2004). In turn, genetic vulnerabilities compounded by cognitive factors (i.e., fear of negative evaluation) and environmental factors (i.e., negative events or stressors) may interact to promote enduring social fears representative of clinical extremes of the social anxiety spectrum.

Moreover, combinations of social stressors, additive influences of negative life events, and multiple variations between risk and protective factors, may determine degrees of social anxiety (Ollendick & Benoit, 2012; Hudson & Rapee, 2000; Simon et al., 2009). Overall, the subclinical group displayed intermittent qualities of early social experiences associated with clinical and healthy control groups, as reported by previous studies (Filho et al., 2010; Knappe et al., 2009; Weeks et al., 2010b; Weeks et al., 2012). Therefore, consistent with recent empirical evidence suggesting social anxiety represents a spectrum disorder, memories of early social experiences recalled by individuals with clinical and subclinical social anxiety, were associated with similar core issues that mainly differed according to degrees of severity (Faravelli et al., 2000; Filho et al., 2010; Ruscio et al., 2008; Simon et al., 2009). The subsequent section aims to increase awareness regarding social anxiety symptom presentations, by integrating key themes from earliest social memories implicated in potential trajectories along the spectrum. Attachment and cognitive theories are drawn upon as a means
to better understand how early relationships and life events can shape negative beliefs associated with subclinical or clinical social anxiety.

8.12.1. Trajectories of subclinical social anxiety. Findings presented here represent potential pathways associated with increased social fears in adulthood, but do not account for clinical expressions of the disorder because not all individuals who recalled such experiences developed clinical SAD. Subsequently, social or performance anxieties present in early childhood or adolescence, represented a general vulnerability toward developing social anxiety in adulthood (Alden & Taylor, 2004; Kearney, 2005). More specifically, moderate to severe anxious arousal directly related to social, interactional, or performance situations (e.g., separation anxiety, physiological arousal, social fears) from a young age was associated with current self-reported social anxiety. Anxiety sensitivity evident during early social encounters can result from problems in caregiver relationships, maltreatment by peers (Bowlby, 1982; Roth et al., 2002), or failed attempts at achieving social or performance goals (Alden & Taylor, 2004; Kearney, 2005). Thus, heightened anxious arousal triggered by social fears early in life represents a principal basis to which additive risk factors may influence social anxiety symptom severity in future interaction or performance situations.

Following from this reasoning, increasingly common and negative relations with mothers also signify foundations for developing varied degrees of social anxiety later in life. According to attachment theories, relationships with primary caregivers provide an initial base for influencing schemas of the self, others, and future relationships that shape personality and psychological disturbance (Blatt & Maroudas, 1992; Bowlby, 1982; Ingram, 2003; Mayman, 1968). Therefore, disruptions in parent child relationships, due to unreliable, untrusting, or unavailable parenting, creates vulnerabilities toward developing insecure attachment styles, that influence maladaptive perceptions of social relationships and
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

interactions with other people, which can generalise to interactional situations with others throughout life (Blatt & Maroudas, 1992; Bowlby, 1982; London et al., 2007; Mayman, 1968; Mellin, 2012). Early memories of both subclinical and clinical social anxiety groups revealed elements of insecure attachment styles, indicated by separation anxiety in the absence of one’s mother, or mothers who displayed inconsistent or unreliable parenting behaviours.

Heightened anxious arousal was directly related to social fears of socially anxious individuals in this study, and negative relations with mothers early in life can create vulnerabilities toward insecure attachment styles that increase anxiety sensitivity (Blatt & Maroudas, 1992; Bowlby, 1982; Mellin, 2012), and development of social anxiety for some individuals (Beidel & Turner, 2007; Kearney, 2005; Ollendick & Benoit, 2012; Ledley & Heimberg, 2006). Increased social anxiety was also related to potentially more harmful interactions with fathers early in life, as found in previous studies (Bögels & Phares, 2008; Hackmann et al., 2000). Thus, in addition to mothers’ roles, negative interactions with fathers may be a powerful influence on schemas relating to future interactions (Bruhn, 1990.

Moreover, an absence of positive interactions with both mothers and fathers may influence feelings of low self-worth or beliefs of oneself as unlovable, which combined with negative interactions with parents creates negative expectations of future relationships or social interactions with others and renders individuals vulnerable to social and emotional problems associated with social interaction anxiety later in life (Gren-Landell et al., 2011; Lambert, 2006).

Additionally, negative encounters with both mother and father in concert were uniquely associated with self-reported social anxiety symptoms in adulthood. Due to the complex interplay between combined parenting and dynamics of this influence on child
development, it seems reasonable that the strength of united negative parenting behaviours (e.g., marital conflict) can produce harmful outcomes in terms of anxiety experienced in relation to future social relationships, which may promote social interactional fears in children, which continue into adulthood (Chartier et al., 2001). In this way, negative encounters with joint parents may produce distinctly maladaptive beliefs that markedly distort negative expectations of social relationships and influence tendencies toward social interaction anxiety (Bögels & Phares, 2008), which manifest as subclinical or clinical social anxiety later in life. Early memories of negative interactions with both parents present may also represent a lack of close relationships with primary caregivers or supportive adults early in life (Chartier et al., 2001). Taken together, negative interactions with both parents, maternal behaviours related to insecure attachment styles, potentially harmful negative interactions with fathers, an absence of positive interactions with both parents, and anxiety sensitivity associated with social or performance situations early in life, represents underlying vulnerabilities toward developing social fears (Beidel & Turner, 2007; Chartier et al., 2001; Bowlby, 1982; Kearney, 2005; Roth et al., 2002).

From this baseline of early vulnerabilities, interactions between risk and protective factors encountered throughout life likely determine development of social anxiety symptom severity for some individuals (Lambert, 2006). This is especially relevant when considering negative interactions with parents were less frequent and severe for the subclinical than clinical social anxiety group, and is supported by evidence suggesting the type and magnitude of maltreatment experienced in childhood has an influential additive effect on social anxiety symptom severity (Ruscio, 2010; Simon et al., 2009). For instance, children with secure attachments typically establish healthy peer relationships, join groups without difficulty, and engage in pro-social acts with other children (Beidel & Turner, 2007; Kearney, 2005). In
contrast, insecure attachment styles associated with social anxiety (Roth et al., 2002) negatively affect friendships quality (Neal & Edelmann, 2003; Kearney, 2005) and amplifies anxiety and avoidance of social interactions with peers (Ollendick & Benoit, 2012). In addition to negative relations with parents, ongoing stressful interactions with peers during early developmental periods can influence or reinforce negative self-beliefs of being unlikeable or defective, and shape dysfunctional schemas regarding future social interactions with others, resulting in increased social anxiety symptom severity (Beidel & Turner, 2007; Erath et al., 2007; Gren-Landell et al., 2011; McGinn & Young, 1996).

Evidently, this study found peer rejection to be a common conditioning event associated with current self-reported social anxiety at subclinical and clinical thresholds. This is not surprising, since maltreatment from peers plays a fundamental role in psychosocial development, rejection sensitivity, and anxious arousal in social or performance situations, which are characteristic features of social anxiety at and below diagnostic thresholds (Erath et al., 2007; Gren-Landell et al., 2011; Mellin, 2012; Ledley & Heimberg, 2006; Storch, Masia-Warner, Crisp & Klein, 2005). Peer rejection, teasing, victimization, exclusion, or neglect can influence or reinforce negative self-beliefs and perceptions of other people, resulting in expectations of future social situations as threatening or anxiety-provoking. This can lead to withdrawal or avoidance of peer-based activities (Ollendick & Benoit, 2012; Van Roy et al., 2009; Storch, et al., 2005) which can reinforce negative peer problems and create ongoing troubles in peer relationships during the school years (Hudson & Rapee, 200; Ledley & Heimberg, 2006).

For example, shy or withdrawn children can elicit negative responses from peers and become victims of teasing, victimization, or exclusion (Kearney, 2005; Lambert, 2006). In addition, empirical findings suggest withdrawal or avoidance of peer interactions and
activities are associated with reduced peer acceptance and fewer close friendships (Biggs et al., 2012; Erath et al., 2007; Hudson & Rapee, 2000), which naturally result in isolation and less social support (Kearney, 2005; Ledley & Heimberg, 2006), and further exacerbates social fears. Furthermore, devaluing interpersonal relationships including but not limited to peer rejection experiences such as, ridicule, criticism, or exclusion, were found to elicit hurtful emotional reactions for socially anxious individuals in the current study. These types of experiences can also create negative perceptions of oneself and of other people as rejecting or untrustworthy (MacDonald & Leary, 2007; May et al., 2007; London et al., 2007).

Importantly, empirical evidence has reported that attachment styles can influence responses to hurt feelings (i.e., emotional pain) (Cassidy, Shaver, Mikulincer & Lavy, 2009). In this way, children who experience consistent nurturing responses from primary caregivers, develop secure attachments, learn adaptive coping strategies and perceive negative emotions as manageable. Therefore, compared to individuals with insecure attachment styles, securely attached individuals may be more willing to address negative emotions, which promotes emotional security and positive working models of the self (Cassidy et al., 2009). In contrast, inconsistent responses from early attachment figures that influence insecure attachment styles can result in a lack confidence in effectively managing negative emotions (Brook & Schmidt, 2005; Cassidy et al., 2009; Ollendick & Benoit, 2012). Consequently, insecurely attached individuals may be more likely to internalise negative consequences associated with relational devaluation and experience emotional pain in the form of hurt feelings (i.e., subclinical and clinical groups).

Hurtful emotional reactions caused by devaluing interpersonal encounters with family, friends, or peers early in life, can shape expectations that future interpersonal relationships will inevitably lead to emotional pain (Feeney, 2005; MacDonald & Leary,
EARLY MEMORIES AND THE SOCIAL ANXIETY SPECTRUM

2005). Therefore, due to inadequate coping mechanisms learnt earlier in life, socially anxious individuals may avoid interactional situations as a means of preventing hurtful emotions that can arise from interpersonal relationships with others. Consequently, negative beliefs regarding other people are maintained and interpersonal relationships continue to be perceived as threatening (Alden & Taylor, 2004; Ledley & Heimberg, 2006). Furthermore, based on findings, that heightened anxious arousal during interactions with other people was evident from a young age and often continued into adulthood, it is possible that hurtful emotional reactions played an important role in creating sensitivity to rejection and interactional fears associated with subclinical and clinical social anxiety later in life. Early experiences of failed social goals indicative of performance inadequacies and difficulties interacting with others, mainly peers were common for subclinical and clinical social anxiety groups. These instances of unsuccessful social goal attainment typically involved social awkwardness or uneasiness, poor social skills, undesirable social performance caused by anxious arousal, and/or social withdrawal or avoidance. These findings substantiate empirical evidence that socially anxious individuals display social skills deficits (Biggs et al., 2012; Motoca et al., 2012), which may create or reinforce negative beliefs of poor social performance and expectations of future social failure (Clark & Wells, 1995; Kearney, 2005; Roth et al., 2002). Conceivably, actual or perceived social inadequacy reduces social confidence and increases anxious arousal in anticipation of, or during social or performance situations, which can lead to social withdrawal and avoidance (Kearney, 2005; Ollendick & Benoit, 2012; Van Roy et al., 2009; Storch, et al., 2005).

Withdrawal and avoidance of failure and rejection are common yet maladaptive coping mechanisms used by socially anxious children, adolescents, and adults in feared social, interactional or performance situations. This can interfere with social and emotional
development throughout the lifespan, and serve to maintain social fears (Beidel & Turner, 2007; Elizabeth et al., 2006; Erath et al., 2007; Kearney, 2005), by preventing opportunities for developing positive friendships and age appropriate social skills necessary for healthy development and social functioning as adults (Clark & Wells, 1995; Kearney, 2005; Ledley & Heimberg, 2006). Reduced opportunities for developing positive friendships can affect one’s ability to form close relationships throughout life, perpetuate anxiety associated with interpersonal encounters and lead to loneliness or isolation. Similarly, reduced opportunities for learning age appropriate social skills can lead to poor social performance, which further perpetuates negative beliefs of social inadequacy and diminishes confidence in future social situations (Clark & Wells, 1995; Ledley & Heimberg, 2006; Roth et al., 2002).

Overall, early memories signified by negative interactions with parents, peers, and unsuccessful mastery of social goals during critical developmental periods, are important conditioning events linked to subclinical and clinical social anxiety symptom presentations. These adverse interpersonal events can either shape or reinforce dysfunctional schemas of the self, others, social interaction, or performance situations, and elicit heightened anxiety associated with social fears at and below diagnostic thresholds (Erath et al., 2007; Gren-Landell et al., 2011; Hudson & Rapee, 2000). However, patterns of thinking developed through negative interactions early in life can also be reorganised and social fears can be overcome if children do not experience peer victimisation or exclusion (Alden & Taylor, 2004; Neal & Edelmann, 2003; Ledley & Heimberg, 2006; Storch et al., 2005).

Consistent with this view, the subclinical group’s earliest social memories signified similar yet less pronounced combinations of findings as the clinical group relating to negative peer interactions, as well as key themes from the control group related to positive peer relationships. Common themes for subclinical and clinical groups depicted minor
engagement in positive friendships (i.e., low happiness being with friends, high peer rejection) and poor social performance (i.e., high failed social goals), which involved fewer social skills deficits for subclinical than clinical groups. These types of social encounters also triggered the same types of negative emotions (i.e., anxiety, emotional pain), although such affective experiences were less extreme for individuals with subclinical rather than clinical symptoms presentations. Therefore, individuals with subclinical and clinical social anxiety recalled similar social and emotional problems with peers and social inadequacy that would increase social fears.

However, similar to non-socially anxious controls, some subclinical socially anxious individuals also recalled early memories with key themes of positive social experiences that signified development of age appropriate friendships (i.e., high co-operative interactions with peers) and learnt social skills demonstrated by initiating friendships or positive interactions with peers (i.e., successful mastery of social goals). These findings relate to evidence suggesting higher peer acceptance increases self-worth and enhance feelings of social competence, which can buffer against negative peer evaluations and excessive social fears (Festa & Ginsburg, 2011; Lambert, 2006). Therefore, based on the higher incidence and range of positive factors from earliest social memories, individuals with symptoms below diagnostic thresholds appear slightly more competent in social interactional or performance settings than individuals who meet criteria for SAD.

Early memories of social experiences recalled by individuals who developed less severe social anxiety are suggestive of interpersonal interactions that both strengthen (i.e., negative themes) and reorganise (i.e., positive themes) negative beliefs associated with social fears. In this way, negative memories of social encounters that influence negative beliefs of social interaction situations and increase social anxiety, and neutral or positive social
encounters can modify negative beliefs (Lambert, 2006). This interaction between negative, neutral, and positive social encounters early in life could prevent development of rigid schemas relating to the self and others. This can develop from repeated exposure to negative life events early in life and become deeply entrenched, pervasive templates that guide interpretation of future social situations (Beck, 1996; Calvete & Hankin, 2013; Young, 1999), as found for individuals with SAD in the current study.

Subsequently, individuals with subclinical symptoms displayed fewer self-critical appraisals, negative perceptions of others, and a reduced tendency toward experiencing intensely negative emotions, all characteristic features of individuals in the clinical group that are supported by previous research (Alden & Taylor, 2004; Brunello et al., 2000; Hidaglo et al., 2001). Interestingly, despite subclinical socially anxious individuals having recalled more positive instances of social encounters, they were no more likely than individuals with SAD to project positive emotions. This highlights the importance of diminished positive affect as symptomatic of shared risk factors related to trajectories of subclinical and clinical social anxiety (Farmer & Kashdan, 2012; Kashdan et al., 2013; Kashdan & Steger, 2006; Nargon-Gainey & Watson, 2011).

Overall, core themes suggestive of successful social goal attainment and cooperative interactions with peers demonstrates less pervasive themes associated with early social encounters of individuals who developed subclinical symptoms. Therefore, profiles of social anxiety below diagnostic thresholds signify decreased incidence and intensity of negative affect associated with similar yet milder forms of adverse conditioning events associated with the clinical group and increased protective factors early in life as the control group. These learning histories of individuals with subclinical social anxiety resulted in less severely
disrupted social and emotional development and fewer negative implications of harsh and more frequent conditioning events suggestive of earlier onset for individuals with SAD.

**8.12.2. Trajectories of clinical SAD.** In addition to potential pathways associated with subclinical symptoms, learning histories of individuals with SAD were categorised by adverse interpersonal events formerly implicated in aetiological models and greater disruptions in social and emotional development (Alden & Taylor, 2004; Beidel & Turner, 2007; Kearney, 2005; Ledley & Heimberg, 2006; Silove et al., 2010). Accordingly, shared themes related to instances of intentional separation, unreliable parenting, and joint negative interactions with parents were categorised by increasingly harmful relations with primary caregivers, for individuals with self-reported SAD. In addition, some individuals with clinical social anxiety recalled relationships with primary caregivers signified by abandonment or neglect, which can foster insecure attachments in children (Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn, 1990; London et al., 2007; Mayman, 1968), such as anxious/avoidant attachment styles that are often associated with SAD (Kearney, 2005; Roth et al., 2002).

Family environments or parenting behaviours categorised by neglect or rejection can influence negative perceptions of one self and others that guide interpretation biases regarding future social relationships and interactional anxiety in adulthood (Alden & Taylor, 2004; Beidel & Turner, 2007; London et al., 2007; Mellin, 2012). Not surprisingly, childhood maltreatment involving histories of emotional neglect have been associated with greater social anxiety, reduced life satisfaction and increased impairment over the course of treatment for individuals with a primary diagnosis of SAD (Bruce et al., 2013). Therefore, this study provides further evidence of links between increasingly negative parenting attributes and clinical expressions of SAD in adulthood (Knappe et al., 2009a; Merikangas et al., 2002).
Negative parenting behaviours by mothers and fathers create vulnerabilities toward developing SAD (Alden & Taylor, 2004; Kearney, 2005; Roth et al., 2002), by diminishing a child’s sense of self-worth or social competence and influencing negative beliefs of future social relationships with others (Bögels & Perotti, 2011; Bowlbly, 1980; London et al., 2007; Mellin, 2012). For instance, compared to individuals with subclinical symptoms, early interactions with parents recalled by those with clinical SAD demonstrated increasingly negative cognitive appraisals. However, negative perceptions did derive from more harmful interactions with parents for individuals with greater social anxiety symptom severity. These memories may represent influential moments from learning histories of individuals with social anxiety symptoms that shaped maladaptive schemas of others (Clark & Wells, 1995; Calvete & Hankin, 2013; Pinto-Gouveia et al., 2006).

For individuals who progressed to develop clinically significant SAD, negative memories of fathers were particularly important. Previous researchers have identified distinct consequences that may arise from early learning histories of abandonment or neglect by fathers compared to mothers, given the important role of paternal influences in encouraging socialisation and independence in children, as fathers are the dominant authority figures in conservative families (Bögels & Perotti, 2011; Bögels & Phares, 2008; Bögels et al., 2011; Lambert, 2006). More specific implications related to actual or perceived social or performance inadequacies, a reduced sense of security, autonomy, or social confidence, can promote entrenched self-beliefs regarding poor social performance and avoidance or withdrawal of social situations from a young age (Bögels & Perotti, 2011; Bögels & Phares, 2008; Bögels et al., 2011).

Considering early onset of SAD coincides with developmental periods categorised by increased demands for autonomous social functioning (Hudson & Rapee, 2000), early
memories of social and performance difficulties (i.e., failed social goals), may have reinforced negative beliefs of social incompetence and strengthened social or performance fears (Clark & Wells, 1995). In this way, negative relations with fathers and failed attempts to achieve social goals early in life both promote social withdrawal and avoidance, which creates further difficulties in social situations throughout life. Moreover, both mothers and fathers represented risk factors for impeding social and emotional development for some individuals with current SAD, which represents a basis for developing increased social fears. Maltreatment within family systems has a large influence on children’s perception of others as critical, untrusting, or rejecting, which translates to future relations outside the family unit, such as relationships with peers (Alden & Taylor, 2004; Mellin, 2012; Gran-Landell et al., 2011).

Therefore, patterns of thinking acquired through early interactions with caregivers can be strengthened through negative interactions with peers during the school years (Alden & Taylor, 2004), which was often found for individuals with clinical symptoms. Further to this, early onset of SAD in late childhood or adolescence occurs during developmental periods marked by heightened self-consciousness, increased social challenges, and greater emphasis on interpersonal relationships. Other people and social evaluative opinions become increasingly important and peer acceptance is especially relevant for identity formation (Beesdo, Knappe & Pine, 2009; Gren-Landell et al., 2009; Hudson & Rapee, 2000; Kashdan & Herbert, 2001). For this reason, “early rejection experiences may be especially painful and confusing for adolescents who are in the process of developing a sense of personal identity” (Mellin, 2012, p.2) and would conceivably lead to negative beliefs associated with SAD, such as being fundamentally flawed, defective, unattractive, inferior, or worthless (Clark & Wells, 1995; Gilbert & Miles, 2000; Hofmann, 2007; Roth et al., 2002).
Based on this reasoning, findings that individuals with SAD commonly recalled negative interpersonal encounters with parents and peers during crucial developmental periods, suggest negative beliefs formed early in life are reinforced or strengthened during the school years and contribute to clinically significant symptoms in adulthood. For instance, uncertainty regarding self-worth can arise when trust is broken between children and primary caregivers, or when needs have not been met by parents (Helsel, 2005). In the same way, repeated exposure to peer victimisation during crucial developmental periods is often associated with a sense of worthlessness (Helsel, 2005; London et al., 2007; MacDonald & Leary, 2007; Roth et al., 2002), a distinct feature of memories recalled by the clinical SAD group. Therefore, it is plausible that individuals with SAD who feel worthless in response to devaluing or painful interpersonal encounters with family members or friends early in life, believe maltreatment by others is warranted based on unconditional negative beliefs of perceived flaws or inadequacies and low self-worth (Gilber & Miles, 2000).

In support of this view, autobiographical memories of patients with SAD often denote self-critical appraisals (Harvey et al., 2005; Stopa et al., 2013), as exemplified in the current study “I felt the audience was not very engaged with me because of how nervous I was”. Similarly, like early memories from the clinical group, autobiographical memories of SAD patients have also shown frequent instances of perceived criticism from others (Harvey et al., 2005; Stopa et al., 2013). Internalisation of rejection or criticism received by parents, peers, or significant interpersonal relationships can result in self-criticism (Gilbert & Miles, 2000), a form of scrutiny imposed by excessively high standards of achievement and perfection, which is also related to feelings of worthlessness and fears of rejection, criticism, and disapproval (Cox et al., 2002; Cox et al., 2004). Therefore, individuals who develop clinically
diagnosable social anxiety may be more inclined to internalise maltreatment by others than individuals who develop symptoms below diagnostic thresholds.

In this way, frequent occurrences of negative interactions with others that result in self-criticism may represent an additional source of information that reinforces negative self-beliefs. This can elicit severe forms of emotional pain from a young age, resulting in feelings of worthlessness which is associated with pathological symptoms of various psychological conditions including SAD (Clark & Wells, 1995; Cox et al., 2002; Gilbert & Miles, 2000; Helsel, 2005). Therefore, devaluing, rejecting, or critical interpersonal encounters with others, as well as social or performance inadequacies, can intensify feelings of low self-worth, and intensify normal emotions such as anxiety, self-consciousness, or embarrassment in future social encounters (Gilber & Miles, 2000; Helsel, 2005; Kearney, 2005; Lim et al., 2013).

These non-pathological emotional experiences (i.e., anxiety, self-consciousness or embarrassment) reflect common pathways for interpersonal difficulties later in life (Beidel & Turner, 2007; Rapee & Spence, 2004). Therefore, embarrassing or humiliating events that occur during critical developmental periods can be increasingly distressing for children and adolescents with anxious or shy temperaments (Lim et al., 2013), as is the case for individuals who develop SAD (APA, 2013). Social embarrassment or public humiliation signifies harmful conditioning events associated with the development of SAD (Hackmann et al., 2000; Harvey et al., 2005; McCabe et al., 2003) and are characteristic features of the disorder (APA, 2013). Interestingly, content from early memories revealed that as opposed to general embarrassment experienced in the presence of others, socially anxious individuals experienced embarrassment whilst interacting with other people.
Adverse social interactions that caused embarrassment at an earlier period of life would naturally create fears of being embarrassed or humiliated in future social situations that require interacting with other people. In particular, individuals with self-reported SAD recalled humiliating social situations associated with public criticism (i.e., peer rejection/victimization), or undesirable social outcomes in the presence of other people (i.e., failed social goal). Socially embarrassing or humiliating interactions with others can create sensitivities to rejection or criticism and strengthen negative beliefs regarding poor social performance, which may lead to anxiety associated with future social situations (Alden & Taylor, 2004; Flanagan et al., 2008; Hofmann, 2007; Ingram, 2003; Rosenberg et al., 2010; Storch et al., 2005). Therefore, anxious or self-conscious children who are rejected, socially embarrassed or publicly humiliated would have difficulty engaging in social or interpersonal contexts (Beidel & Turner, 2007) and develop social evaluative concerns regarding potential scrutiny by others which manifests as SAD (Kearney, 2005; Lim et al., 2013).

Early memories of the SAD group revealed embarrassment, humiliation, and fear of negative evaluation were discerning emotional and cognitive features of clinical versus subclinical social anxiety, which substantiates diagnostic features of the disorder (APA, 2013). More specifically, DSM-5 criteria specifies; prominent fear or anxiety when exposed to potential scrutiny in social interactions, performance, or observational situations (Criterion A); and fear of showing observable signs of anxiety or acting in ways that will elicit negative evaluation from others, and result in embarrassment, humiliation, or rejection (Criterion B) (APA, 2013). Notably, individuals who developed clinical social fears had prominent early memories of being embarrassed or publicly humiliated that were linked to concerns about being negatively evaluated by other people. Similarly, fears of negative evaluation most often
related to situations in which embarrassing or humiliating encounters would elicit scrutiny by other people.

Therefore, social embarrassment or humiliation that occurs in childhood or adolescence may lead to fears of future embarrassment or humiliation, sensitivity to rejection, criticism, and social or performance anxiety. This can result in social evaluative concerns regarding potential scrutiny by others and intensify anxiety experienced in future social interaction situations (Erath et al., 2007; Gren-Landell et al., 2011; Hudson & Rapee, 2000; Neal & Edelmann, 2003). Subsequently, fears of negative evaluation and embarrassment represent core issues of clinical social anxiety that are present from a young age and persist into clinically diagnosable symptoms in adulthood. These diagnostic factors can develop from multiple pathways that are in themselves related to social evaluative fears. For instance, individuals with SAD were characteristically shyer in early social situations than participants from subclinical and control groups, which is innately associated with social evaluative concerns regarding other people’s perceptions and creates distressing fears of negative evaluation for individuals with SAD (Hudson & Rapee, 2000; Weeks & Howell, 2012).

Furthermore, social evaluative concerns can result from low self-worth, social or performance anxieties, fears of showing observable signs of anxiety and being perceived by others as anxious, nervous or weak, as well as past social encounters that involved devaluing interactions with others, peer rejection, bullying, victimization, and social or performance failures (Kearney, 2005; Weeks et al., 2009). In considering the high occurrence of these themes from early memories of the clinical group, it is not surprising that individuals with SAD develop negative thoughts relating to fears of negative evaluation in social interaction situations. This can cause considerable distress for socially anxious individuals and promote increased use of maladaptive coping strategies associated with social withdrawal.
or avoidance (Alden & Taylor, 2004; Mellin, 2012), which can lead to significant impairment required for diagnosis of SAD (APA, 2013).

Learning histories that promote social withdrawal or avoidance from a young age create fewer prospects for disconfirming negative beliefs, less opportunities for learning age appropriate social skills, and developing positive relationships throughout life, which can deter healthy social and emotional development (Biggs et al., 2012; Bögels & Perotti, 2011; Erath et al., 2007; Kearney, 2005; Storch et al., 2005). Support for this contention was found from information embedded in memory narratives of the clinical SAD group, which revealed few memories involving successful mastery of social goals, happiness being with friends, or cooperative interactions with others. Instead, social encounters often involved peer rejection and failed social goals. This pattern of results may signify a lack of close friendships and social skills deficits early in life for individuals who developed clinical SAD. Moreover, negative implications of social withdrawal or avoidance can lead to significant restrictions in lifestyle choices given the social nature of contemporary society (Iancu et al., 2006; Stein & Gorman, 2001), and result in reduced quality of life and functional impairment associated with SAD (APA, 2013; Kessler, 2003).

Taken together, the findings indicate that for individuals with a predisposition, frequent patterns of negative interpersonal relationships, socially traumatic conditioning events, undesirable social or performance outcomes that occur during critical developmental periods, can promote a sense of low self-worth, reduced autonomy, negative beliefs of oneself as unlovable, defective, or socially incompetent, and expectations of being disliked by peers (Bögels & Perotti, 2011; Helsel, 2005; Kearney, 2005; Marteinsdottir et al., 2007). These negative social encounters can also influence negative perceptions of others as untrustworthy, rejecting, or critical, which when combined with social evaluative fears of
being perceived as inept, anxious, weak or foolish, can elicit intense emotional responses that influence learned coping strategies of withdrawal from a young age (Clark & Wells, 1995; Alden & Taylor, 2004; Ledley & Heimberg, 2006). This can have detrimental effects on psychosocial functioning throughout life and result in symptom profiles of SAD (Alden & Taylor, 2004; Ollendick & Hirshfeld-Becker, 2002; Husdon & Rapee, 2000).

8.13. Findings According to Cognitive Theories and Schematic Processes

This study provides support for cognitive theories, which emphasise early memories of personally meaningful events, as important influences in the development of negative self-beliefs, perceptions of others, and the environment. These beliefs shape adaptive or maladaptive schemas that guide interpretation of future experiences and can entail cognitive and affective dysfunction associated with psychological disorders. One important assumption of cognitive theories postulates that unconscious schematic processes are an automatic response triggered by relevant cues in the environment (i.e., social interactions or situations) (Beck et al., 1985; Bruhn, 1990; Horowitz, 1994; McGinn & Young, 1996; Williams et al., 1997). The term ‘unconscious’ is used here to signify information that is often outside of conscious awareness. This does not mean that some of the information revealed in early memories is not conscious but rather, these memories can reveal information from schemas that are not consciously expressed.

A wealth of empirical evidence supports contentions of cognitive theories, finding memory biases guide a number of cognitive distortions however, evidence regarding memory bias in social anxiety is inconclusive (Clark, 2005; Heinrichs & Hofmann, 2001; Hirsch & Clark, 2004; Ledley & Heimberg, 2006; Morgan, 2010; Williams et al., 1997). Moreover, these findings are predominantly based on self-report questionnaire measures that assess
conscious thoughts and appraisals (Chambless & Hope, 1996; Clark, 2001; Wenzlaff & Wegner, 2000). Thus, to address limitations of previous research on cognitive processes, the current study probed earliest memories of personally relevant social encounters, as a means of eliciting meaningful information embedded in schemas, which may not necessarily reside in conscious awareness (Bruhn, 1985; Bruhn, 1990; Bruhn & Last, 1982). Based on this reasoning, findings from this study suggest that conscious or unconscious material signified in earliest social memories, revealed diagnostic information relevant to self-reported symptoms of SAD and lesser extent subclinical social anxiety.

These findings provide an additional source of information to self-report measures, which have the potential to extend empirical evidence and offer support for theoretical contentions suggesting, conscious and unconscious material from early memories is associated with current psychological disturbance (Acklin et al., 1991; Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn, 1990; Fowler et al., 1995; Fowler et al., 2000; Mayman, 1968). More specifically, results demonstrated that personally meaningful content embedded in early memories of the clinical group, conceptually and empirically related to symptoms, emotions, cognitive appraisals, and adverse social events pertinent to SAD (Calvete et al., 2013; Clark & Wells, 1995; Pinto-Gouveia et al., 2006) and this pattern of results was less pronounced for individuals with subclinical social anxiety. Therefore, early memories conveyed meaningful information related to schematic processes that captured fundamental issues of cognitive and emotional dysfunction (Bruhn & Last, 1982; Bruhn, 1990), which is characteristic of SAD (Calvete et al., 2013; Pinto-Gouveia et al., 2006). This demonstrates impressive support for projective techniques in activating unconscious schematic processes associated with social situations, for individuals with clinical symptoms.
Furthermore, core themes from early memories revealed cognitive indicators that distinguished clinical thresholds of the social anxiety spectrum. As follows, adverse social or interpersonal events experienced early in life (i.e., ‘earliest’ social memory), represented influential events from memory that had a lasting impact on dysfunctional beliefs uniquely associated with clinical symptoms (Beck, 1996; Clark & Wells, 1995; McGinn & Young, 1996). In comparison, early memories of the subclinical group depicted fewer negative conditioning events and social fears early in life, greater incidence of social situations with no affective tone, and a wider range of positive social encounters. This assortment of themes alludes to learning histories that influence similar, yet milder forms of cognitive biases relating to social situations, which trigger fewer, less intense emotional reactions (Beck, 1996; Ingram, 2003; Rachmann, 2002; Schmidt & Joiner, 2004), for individuals with subclinical social anxiety. For instance, earliest memories of positive and neutral social encounters may signify healthy foundations for processing future social experiences. Thus, negative social events that occur subsequent to crucial formative years may increase social fears but be less influential in shaping dysfunctional core beliefs formed earlier in life.

Following from this reasoning, several theoretical perspectives highlight the important role of parents in shaping negative schemas or working models of oneself, others, and interpersonal relationships (Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn, 1990; Ingram, 2003; Mayman, 1968; Schmidt & Joiner, 2004). Moreover, undesirable relations with parents signify particularly influential events, as they shape ‘earliest’ schemas that generalise to attitudes, perceptions, and expectations of other people and interpersonal relationships (Bruhn, 1990; Horowitz, 1994). Therefore, findings that individuals with SAD perceived more instances of potentially harmful negative interactions with parents, may reveal increased tendencies toward developing maladaptive beliefs and relations with others from an
early age (Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn, 1990; Ollendick & Benoit, 2012). These disruptions in early relationships represent vulnerabilities toward biased schematic processing of future social interactions, which may have been strengthened or reinforced by repeated, stressful, or ongoing negative experiences encountered early in life (McGinn & Young, 1996; Schmidt & Joiner, 2004), as indicated by earliest social memories containing predominantly negative themes for individuals with SAD.

Thus, greater incidence and extremity of negative social encounters from early memories of the SAD group, reveals conscious or unconscious influences that potentially shaped or reinforced maladaptive schemas (Beck, 1996; Bruhn, 1990; Young, 1999). Cognitive aspects of schemas depicted interpretation of events in memory that signified greater dysfunction (Beck, 1996; Clark & Steer, 1996), as demonstrated by negative self-beliefs, low self-worth, perceptions of others as critical, or rejecting, and fears of negative evaluation. Powerful emotional reactions (i.e., physiological arousal, embarrassment, humiliation, worthlessness) often accompanied these negative appraisals of the self and others, highlighting the complex interactions between dysfunctional thoughts and heightened affective states (Beck, 1996; Bruhn, 1990; McGinn & Young, 1996; Schmidt & Joiner, 2004; Williams et al., 1997) that directly related to SAD (Alden & Taylor, 2004; APA, 2013; Clark & Wells, 1995). Based on this reasoning, maladaptive schemas of social situations represent a useful marker for identifying clinical features of SAD.

Early memories of individuals with subclinical symptoms were associated with comparable but less pronounced cognitive biases than those with clinical SAD, providing evidence that cognitive dysfunction exist on a continuum of severity, and differ in degree rather than type (Brewin et al., 2010; Clark & Rhyno, 2005; Schmidt & Joiner, 2004). Interestingly, an equal proportion of clinical and subclinical groups’ early memories denoted
peer rejection, social, and performance inadequacies. Therefore, early memories signified by past social failures and negative relationships with peers, represent probable influences on cognitive and affective dysfunction associated with social anxiety. More specifically, these types of negative social experiences early in life conceivably influence negative beliefs of social inadequacy, and increase anxiety in social, interaction, or performance situations (Alden & Taylor, 2004; Clark & Wells, 1995; Kearney, 2005; Lambert, 2006), highlighting core features of social anxiety symptom presentations along the spectrum.

This substantiates Clark and Wells’ (1995) cognitive model, suggesting individuals with SAD have a tendency to recall memories of actual or perceived social failure, and this also applied to a subset of socially anxious individuals with subclinical symptoms in the current study. According to this model, recent instances of perceived social failure are integrated with memories of past social failure, and result in unrealistically negative beliefs of poor social performance, which become strongly encoded in memory. Subsequently, memories are implicated in a number of cognitive biases that occur in anticipation of, during, and after social encounters, serving to reinforce negative self-perceptions and increase anxiety or avoidance of future social situations (Clark & Wells, 1995; Clark, 2005).

Surprisingly, reviews of the literature report that clinical SAD groups fail to show any evidence of a memory bias, whereas inconsistent evidence is reported in non-clinical populations of social anxiety (i.e., subclinical), with positive results based on studies that activated social threat (Heinrichs & Hofmann, 2001; Ledley and Heimberg, 2006; Morgan, 2010). Therefore, probing earliest memories of social events was presumably more effective for eliciting social threat than commonly used methods such as cue words (Refer to Section 4.11 – Early Memory Probes and the Current Study). Overall, findings of increasingly negative cognitive appraisals and pervasive schemas elicited from early memories of clinical
relative to subclinical groups, provides further evidence that social anxiety represents a spectrum disorder, which varies according to degrees of severity.

The implications of these findings relate to Ruscio’s (2010) suggestion, that enhanced awareness of dimensional features associated with the social anxiety spectrum is useful for widespread aetiological models, to incorporate additive or graded risk factors as opposed to isolated causal factors that demarcate clinical expressions of SAD. These advances in knowledge and understanding of cognitive factors indicative of symptom severity can assist diagnosis, which has positive ramifications for treatment of individuals with clinical SAD, and also those with symptoms below diagnostic thresholds. These less severely affected individuals would perhaps benefit from short-term interventions compared to longer term therapy required for changing entrenched maladaptive schemas (Young, 1999) associated with SAD (Calvete et al., 2013; Pinto-Gouveia et al., 2006). This study’s analysis of early memories and content from schematic processing of social situations has important implications for future theoretical and treatment models of social anxiety, which are of great importance in taking further steps toward the prevention and treatment of social anxiety at and below diagnostic thresholds.

8.14. Diagnostic and Treatment Implications of the Social Anxiety Spectrum

The high prevalence, chronicity, comorbidity, and psychosocial impairments associated with SAD (Kessler et al., 2012; Lampe et al., 2003; ), indicates a need for accurately diagnosing and treating individuals within the community who suffer from this condition (Kashdan et al., 2013; Kollman et al., 2006; Ruscio, 2010). Current categorical classifications of SAD in the DSM have received a great deal of criticism in recent times, due
to unclear boundaries for differentiating this ‘categorically distinct’ condition from symptoms below diagnostic thresholds. One main criticism relates to subjective criteria that specifies significant distress and functional impairment for diagnosis (Clark et al., 1997; Faravelli et al., 2000; Filho et al., 2010). The problem herein, lies with evidence of few categorical differences between core issues of SAD and symptoms below diagnostic thresholds, which are also associated with increased avoidance, distress, impairment, and/or comorbidities relative to non-socially anxious controls (Dell’Osso et al., 2003; Fehm et al., 2008; Filho et al., 2010).

Thus, quantitative research has failed to identify boundaries between clinical and subclinical thresholds and suggest social anxiety is a dimensional construct, characterised by increasing degrees of severity and impairment (Filho et al., 2009; Knappe et al., 2013; Merikangas et al., 2002; Ruscio et al., 2000). Findings from the current study, add to this increasing body of evidence suggesting SAD and subclinical symptom presentations share several symptomatic and vulnerability factors and supports revised classification of social anxiety as a spectrum disorder in future nosologies (Ruscio, 2010; Knappe et al., 2009b; Karlsson et al., 2010; Kollman et al., 2013). Specifically, analysis of early memories revealed categorically similar core issues associated subclinical and clinical social anxiety profiles, with dimensional patterns of additive symptoms and vulnerability factors indicative of clinical SAD.

Thus, core features of social anxiety irrespective of symptom severity involved; negative interactions with mothers, fathers, and peers, social skills deficits, moderate to severe anxious arousal during social and performance situations, emotional pain in response to interpersonal encounters, and diminished positive affect. Additional features of clinical presentations signified increasingly frequent and severe interactions with parents, other
people, and adverse events involving a wider range of intense emotions such as embarrassment, humiliation, and worthlessness. One main element of these early experiences that distinguished clinical from subclinical groups, was accompanying social evaluative fears, which creates greater negative consequences associated with the original event portrayed in memory. These findings demonstrated that early memories of interpersonal adversity, was significantly more common for individuals with clinical than subclinical symptoms. This reflects the important influence of negative interactions early in life and development of more extreme interpersonal fears and difficulties later in life, which conceptually relates to symptom severity, distress and impairment of individuals with clinical SAD (Alden & Taylor, 2004; Pinto-Gouveia et al., 2006).

This finding resembles similarities between subclinical social anxiety and the ‘performance only’ specifier introduced in the DSM-5 (APA, 2013), which is classically associated with fewer impairments, distress, and later age of onset compared to ‘generalised’ SAD (Kessler et al., 1998; Sareen et al., 2006). However, as stated above, fundamental qualities of subclinical symptoms encompass interaction anxiety and emotional pain specifically related to interpersonal relations, challenging this proposition. These findings substantiate empirical evidence showing social interaction and performance fears most often co-occur (Knappe et al., 2011; Ruscio et al., 2008) and question the utility of the ‘performance only’ specifier in providing valuable information related to the social anxiety spectrum. Moreover, given the wealth of empirical evidence regarding this sub-typing system and failure to provide worthwhile clinical information beyond describing types of social fears that elicit anxiety and greater impairment, distress, or avoidance (Knappe et al., 2011; Ruscio et al., 2008; Vriends et al., 2007), its place in upcoming revision of the DSM infers reconsideration.
Interestingly, more prominent distinguishing factors of clinical diagnostic thresholds, involved embarrassing or humiliating emotions associated with negative conditioning events, as well as dysfunctional cognitive appraisals particularly relating to social evaluative concerns (Kley et al., 2011; Weeks et al., 2010). These were discerning indicators of perceived social experiences, representing distinct features of SAD that correspond to DSM-5 diagnostic criteria (APA, 2013). This implicates the conceptual relevance of specific learning histories in the development of fears relating to embarrassment, humiliation, and/or negative evaluation later in life. Importantly, these events can lead to negative schematic content relating to low self-worth, negative cognitive appraisals of others, and social evaluative fears in future social encounters, highlighting the link between aversive past events that occur early in life and development of clinical SAD (Hackmann et al., 2000; McCabe et al., 2003; Stemberger et al., 1995).

Based on this reasoning, similar types of emotions, interactions, social, or performance difficulties associated with increased social anxiety, can result in clinical symptoms when these situations are accompanied by maladaptive cognitive appraisals. Therefore, entrenched and pervasive cognitive schemas that guide interpretation of particular social encounters are a defining feature of clinical rather than subclinical symptom profiles, with cognitive biases promoting fears of potential scrutiny by others, representing a defining feature of more severe forms of social anxiety that meet diagnostic criteria for SAD (Kley et al., 2012; Weeks et al., 2010). These, core symptoms and vulnerability factors (i.e., embarrassment, humiliation, fear of negative evaluation) identified meaningful indicators of clinical symptoms and have important implications for explaining diagnostic features of the social anxiety spectrum. This demonstrates the value of qualitative research studies, for producing empirical evidence that can enhance knowledge and understanding of the nature,
as opposed to frequency of factors associated with characteristic profiles of the social anxiety spectrum.

Increased awareness regarding diagnostic thresholds of SAD has significant implications for aetiological models, in providing accurate accounts of symptomatic and vulnerability factors associated with varied degrees of social anxiety symptoms (Ruscio, 2010). Therefore, information regarding diagnostic boundaries of SAD and complex interactions with cognitive factors that increase risk of developing clinical versus subclinical symptoms, is essential for alerting mental health professionals of socially anxious individuals within the community, who would benefit from therapeutic intervention (Kashdan et al., 2013; Kollman et al., 2006; Merikangas et al., 2002; Ruscio, 2010). For instance, fluctuations between subclinical and clinical symptoms over certain periods exemplify the continuous nature of social anxiety and highlight prodromal symptoms that may develop into full expressions of the disorder (Bögels & Stein, 2009; Kessler, 2003; Merikangas et al., 2002). This is an especially relevant diagnostic issue, because individuals with subclinical social anxiety remain largely untreated in current classification systems.

Therefore, accurate diagnosis of symptoms comprising the spectrum could improve prognosis and treatment of social anxiety by tailoring intervention strategies that target subclinical social anxiety (Kashdan et al., 2013; Kollman et al., 2006; Ruscio, 2010). For example, less severe symptom presentations may be particularly responsive to short-term therapeutic interventions and substantially reduce prevalence of this remarkably common condition within contemporary society, as well as decrease costs for clients and services (Kessler 2005b; Lampe et al., 2003; Tillfors & Furmark, 2007). This information is important for mental health clinicians, in order to identify where client’s symptoms lie on the spectrum and provide tailored treatments in therapeutic settings.
8.15. Application of Findings in Clinical Practice with Socially Anxious Clients

This subsection highlights the advantages of utilising early memories in clinical practice with socially anxious clients, by focusing on three main aspects of treatment. The first relates to the value of early memories in accessing unconscious information related to current socially anxious concerns, which may not otherwise transpire from a client’s description of conscious thoughts, beliefs, or emotions in dialogue with therapists (Bruhn, 1990). This is especially relevant for socially anxious individuals given poor treatment response of this client group with traditional CBT interventions. The second benefit of using early memories specifically for treatment of social anxiety, is that this technique can overcome problems posed by the nature of social exchanges in therapy, which can create difficulties for socially anxious clients. These difficulties relate to establishing therapeutic relationships and gathering information, which may be difficult for socially anxious individuals to self-disclose due to fears of embarrassment or potential scrutiny, whereas reporting early memories may not seem as confronting.

Therefore, this approach is recommended during assessment of presenting issues in order to promote exploration of vulnerability and/or maintaining factors that can assist formulation and direct tailored interventions for varied symptom severities. Lastly, the importance of early onset is highlighted as a crucial developmental period for implementing treatment interventions and preventing clinically significant symptoms later in life. Findings from this study’s analysis of early memories are presented, to demonstrate common themes from early social experiences that may represent symptoms or warning signs of social anxiety. This discussion of results focuses on increasing awareness of potential risk factors that parents and teachers can identify and monitor in family and school settings. Overall, the
need for communal psychoeducation is essential for providing early intervention strategies that can assist in the prevention and treatment of social anxiety in vulnerable youth.

8.15.1. Accessing unconscious information in therapy. A widely utilised intervention for treatment of SAD involves CBT, a directive and structured approach to investigating current life events, present concerns, and cognitive distortions that cause psychological distress or interference in daily living (Clark, 2005; Rapee & Heimberg, 1997). However, reviews of the literature report mixed evidence regarding the efficacy of individual or group CBT, with little or no improvement reported for 40-50% of participants with SAD (Hofmann & Bögels, 2006; Mululo et al., 2012). Therefore, it is important to explore potential barriers of this approach in promoting effective recovery and refining treatment approaches for this disorder and subclinical symptom presentations. From a CBT approach, exploration of dysfunctional beliefs (i.e., schemas) that underlie cognitive distortions and emotional disturbance of psychological disorders is guided by clients' articulation of automatic thoughts, emotions, and behaviours (Beck et al., 1985; Beck, 1995; Clark, 2005).

However, these interventions assume clients can access this information from consciousness and accurately describe thought processes or emotional experiences to therapists (Beck et al., 1985; Clark, 2005). The problem with this view relates to theoretical, empirical, and clinical contentions that emotional dysfunction is triggered by schematic processing, which typically operates outside of conscious awareness (Beck, 1996; Bruhn, 1990; Fowler et al., 1995; Williams et al., 1997; Young, 1999). For instance, CPT (Bruhn, 1990) would suggest the high proportion of early memories from the subclinical group containing no prominent affective tone, demonstrates a lack of emotional awareness or affective blocking. Therefore, interventions that require conscious awareness of internal experiences may be ineffective for socially anxious clients, because empirical evidence
shows these individuals have difficulty understanding, describing, and expressing their emotions (Glick & Orsillo, 2011; Turk et al., 2005).

Similarly, treatment focusing on current thoughts and emotions target surface issues, which lie at deeper levels of maladaptive schematic processing for individuals with SAD (Calvete, et al., 2013; Pinto-Gouveia et al., 2006). Due to the rigid and pervasive nature of maladaptive schemas formed early in life, these self-perpetuating beliefs are resistant to change (Beck, 1996; Young, 1999). Thus, failure to identify unconscious influences of early life experiences on current psychological distress, may well explain poor treatment outcomes and high relapse rates reported for SAD once treatment ceases ((Ruscio et al., 2008; Xu et al., 2011; Yonkers et al., 2003). Therapeutic interventions such as schema therapy (Young, 1990) may be more effective for this client group, since this approach taps unconscious processes associate with entrenched self-views and perceptions of others, which has been substantiated by empirical investigations of early maladaptive schemas of social anxiety in clinical and non-clinical samples (Calvete et al., 2013; Howell, 2009; Pinto-Gouveia et al., 2006).

Treatment from attachment or psychodynamic perspectives to treatment may also be beneficial for SAD, as these approaches focus on understanding the clients’ interpersonal world through early experiences and linking factors that may have shaped schemas or ‘working models’ of the self and interpersonal relationships with current issues (Blatt & Maroudas, 1992; Bowlby, 1982; Bruhn, 1990). Blatt and Maroudas (1992) stated that pioneers such as Bowlby, believed reconnecting feelings and memories in therapy allowed for the detection of an individual’s true source of anxiety and pain. In this way, understanding experiences that led to anxiety in social situations through the vehicle of memories, enables reappraisal and potential restructuring of maladaptive responses to interpersonal relationships (Blatt & Maroudas, 1992). This can enhance insight and understanding of presenting issues
and may produce longer lasting therapeutic benefits for SAD than traditional CBT (Bruhn, 1985; Horowitz, Rosenberg, Ureno, Kalenzah & O’Haaloran, 1989). Moreover, individuals with subclinical social anxiety demonstrated comparable but less pronounced cognitive biases than individuals with clinical SAD in this study. Thus, less severely affected individuals may be more responsive to short-term treatment compared to those with deeply entrenched schemas, highlighting the importance of identifying individuals with symptoms below diagnostic thresholds, who would benefit from cost-effective treatment.

8.15.2. Benefits of early memories in therapy for social anxiety. Notably, findings from early memories revealed that individuals with self-reported SAD perceived significantly more interpersonal difficulties from an early age compared to individuals with subclinical symptoms. This highlights problems posed by the nature of therapy itself, in terms of social exchanges between client and therapist that make it difficult for individuals with SAD to establish therapeutic relationships (Clark, 2005). Therefore, development of positive and safe working relationships early in treatment is extremely important because the quality of this relationship can influence increased treatment gains. More specifically, interpersonal approaches to therapy view the therapeutic relationship as a basis for challenging negative beliefs and expectations of social interactions, which can create new ways of relating to other people (Blatt & Maroudas, 1992; Teyber, 1992). This seems particularly useful for working with interpersonal problems that underlie SAD (Alden & Taylor, 2004; Pinto-Gouveia et al., 2006).

Moreover, awareness of social interactional anxiety experienced by clients, especially during early phases of treatment, encourages supportive approaches to sessions that allow clients to become familiar with the process. Non-confrontational styles of therapy may serve to reduce anticipatory anxiety associated with future sessions, which can lead to avoidance of
treatment altogether. For instance, dropout is a strong predictor of poor treatment response and is especially common within this client population (Kuyken, et al., 2001; Rosenberg et al., 2010). Thus, inviting clients to share their early memories on paper rather than disclosing personal information with therapists upon first meeting may reduce anxiety experienced in session. Furthermore, collaborative exploration of memories between client and therapist can help establish positive therapeutic relationships (Blatt & Maroudas, 1992; Bruhn, 1990), which is important for reducing treatment barriers posed by difficulties building rapport with socially anxious clients.

Furthermore, exploration of early memories is a useful means of gathering rich and meaningful information during assessment phases of therapy, to uncover conscious and unconscious issues that cannot always be assessed by direct questioning (Bruhn, 1990; Theiler, 2005; Horowitz et al., 1989). This is especially relevant for clients who are not consciously aware of the impact earlier life experiences may have had on current anxiety and can address limitations of self-reporting potentially embarrassing information during therapy or interviews (Bruhn, 1990; Kessler et al., 2005). In this way, socially anxious individuals who have difficulty recognising or articulating uncomfortable or embarrassing thoughts, feelings and events, may be reluctant to disclose this to information to therapists in fear of embarrassment, appearing weak or stupid, or potential scrutiny. Therefore, it seems plausible that socially anxious clients would prefer disclosing personal information through writing rather than verbal dialogue with therapists, as Bruhn (1990) often found in his clinical experience with clients presenting with varied issues.

Information derived from early memories can provide insight into potentially negative self-concepts, perceptions of others, and memories of embarrassing or humiliating social experiences, which can assist therapists understanding of self-reported symptoms and inform
formulations. Therefore, early memories can be used in treatment to elaborate psychological assessments, by gathering meaningful background information relating to early childhood and family history (Bruhn, 1990). Furthermore, the current study found socially anxious individuals’ earliest social memories often involved school environments, which can reveal relevant information related to educational histories and social relationships. For instance, content revealed from school memories can inform attitudes toward achievement, mastery, independence, friendships, acceptance issues, and affiliation needs (Bruhn, 1990). Clients may not readily access this information via self-report or verbal dialogue during therapy, as it requires some form of insight or conscious awareness (Bruhn, 1990).

This technique has the potential to improve therapeutic outcomes for SAD and subclinical expressions of the disorder that present with interpersonal difficulties. In addition, exploration of early memories can be used in conjunction with memory-rescripting techniques, which directly focus on modifying encapsulated beliefs represented in memories of unpleasant social experiences, through cognitive restructuring (Wild, Hackmann & Clark, 2008). Memory rescripting techniques, have been found to produce considerable therapeutic benefits for socially anxious individuals whose response to standard, present focused techniques is relatively modest (Clark et al., 2006; Wild et al., 2008). Based on this reasoning, issues signified in early memories can guide tailored treatment interventions that target personally relevant problems associated with social anxiety (Bruhn, 1990).

**8.15.3. Early onset and intervention for children and adolescents.** Several themes embedded in the structure of the SAD group’s early memories, substantiate well-established associations between earlier age of onset with greater symptom severity, lower rates of recovery in adulthood, and reduced effectiveness of treatment (Beard, Moitra, Weisberg & Kessler, 2010; Lim et al., 2013; Merikangas et al., 2002; Mululo et al., 2012;
It is also possible, that the subset of individuals with subclinical symptoms in this study who recalled similar but less consistent themes as the clinical group, correspond to socially anxious individuals within the literature, who experience a substantial degree of distress or impairment, but whose symptoms do not meet diagnostic criteria (Dell’Osso et al., 2003; Fehm et al., 2008; Filho et al., 2010; Merikangas et al., 2002). This would suggest social fears early in life often progress to subclinical or clinical symptoms in adulthood and highlights the need for detecting early onset of social anxiety during crucial developmental periods.

In this way, early onset of SAD signifies the importance of prevention and treatment strategies that target socially anxious youth (Erath et al., 2007; Gren-Landell et al., 2009; Ollendick & Hirschfeld-Becker, 2002). Providing effective treatment during childhood or adolescence can produce significant therapeutic gains for young people at risk of enduring chronic symptoms throughout life. This can avert ongoing interference caused by social fears on social and emotional development, which leads to ongoing distress and psychosocial impairments in academic, occupational, and/or social functioning (Beard et al., 2010; Faravelli et al., 2000; Merikangas et al., 2002; Pelissolo et al., 2000). Data obtained from early memories in this study’s sample of adults, yielded a rich sense of past social experiences that conceptually related to the social anxiety spectrum. Therefore, early memory exploration may also be useful in younger populations, as a screening tool for identifying historical factors, unmet needs, or core issues that discern developmentally inappropriate social challenges suggestive of early onset from age-appropriate social fears or temporary stressors (Bruhn, 1981; Bruhn, 1990).

Bruhn (1990) suggests early memories are an effective assessment technique that can be used in children as young as 10 years of age who demonstrate fourth grade reading and
writing skills. This coincides with early onset of SAD in late childhood, which is an ideal period for implementing routine screening procedures for young people with social fears (Gren-Landell et al., 2009; Motoca et al., 2012,). This approach can address limitations of typical screening tools, in which questions for assessing social anxiety symptoms requires developmentally appropriate language the varies according to individuals stages of child and adolescent development (Gren-Landell et al., 2009). Despite no current research on the effectiveness of early memories in detecting social anxiety in youth, several studies provide evidence that information obtained from early memories in child and adolescent samples entail diagnostic and clinical importance in most cases (Bruhn, 1981; Bruhn, 1983; Last & Bruhn, 1983). For instance, Last and Bruhn’s (1983) investigation of 8 to 10 year old boys, found early memories differentiated degrees of psychopathology ranging from severely maladjusted, mildly maladjusted, and well adjusted. This is similar to recommendations proposed for differentiating degrees of age-appropriate from problematic social anxiety in young populations.

The following discussion highlights implications of this study’s findings, by demonstrating how perceived issues from past social situations, can guide early intervention strategies for socially anxious youth. To begin with, results corroborate difficulties in research attempting to delineate normal shyness from problematic social anxiety, due to the continuous nature of social anxiety in which clinical and subclinical symptoms are often conceived as extreme expressions of shy temperaments (Beidel & Turner, 2007; Hidaglo et al., 2001). For instance, shy personalities can closely resemble characteristics of social anxiety, as exemplified by the following case from the control group in this study, “...I was such a shy kid.. I was the only one in the group not to say something or contribute which left me feeling pretty bad”. Similarly, retrospective reports of subclinical and clinical socially
anxious adults indicate feeling as though social fears were an innate part of their personality and always having been shy and (Chartier et al., 1998; Hudson & Rapee, 2000; Sareen & Stein, 2000).

Consequently, normal personality traits and common emotions can resemble clinically significant symptoms of social anxiety and it is important not to over-pathologise innately anxious or shy temperaments, or normal developmental changes in maturity that occur alongside several physical, cognitive, and social changes in late childhood and adolescence (Hudson & Rapee, 2000). For example, emotional experiences including shyness, self-consciousness, anxiety, or sensitivity to interpersonal rejection can represent normal personality traits, common changes in adolescent development, and characteristic features of early onset SAD (Hudson & Rapee, 2000; Ollendick & Hirschfeld-Becker, 2002). This is especially relevant when considering normal changes in perspective taking and increased public awareness that usually develop around eight years of age and naturally leads to public self-consciousness, which is associated with social evaluative concerns. These developmentally appropriate changes in perspective taking and tendencies toward social embarrassment coincide with early onset of SAD for some children (Hudson & Rapee, 2000; Ollendick & Hirschfeld-Becker, 2002).

Not surprisingly, symptoms of early onset often go unrecognised by parents and teachers and in order to implement effective treatment, symptoms must first be identified. This demonstrate a need for communal education to parents, primary caregivers, and teachers, given their important role in referring young people to health professionals and mental health services (Glen-Landell et al., 2009). Therefore, effective steps in prevention and treatment begin with psychoeducation for adults actively involved in children’s lives (i.e., parents and teachers), by promoting awareness and knowledge of particular family, peer,
or social factors that can interact with children’s anxious or shy temperaments to increase social fears for vulnerable children. Increased awareness and understanding of healthy social and emotional development, potential risk factors, or warning signs associated with SAD, may encourage parents and teachers to detect and monitor problematic emotions, behaviours, or physiological symptoms suggestive of early onset SAD.

For instance, parents and families within communities are diverse and differ according to psychological mindedness, cultural beliefs, parenting styles, perception of children behaviours, and natural abilities toward accommodating for unique temperaments and personalities of children or adolescents. Therefore, increased efforts at promoting communication and open dialogue between parent and child is important for understanding emotions, perceptions of others, or interpersonal problems that can lead to negative self-beliefs and social evaluative fears. This can assist parents in detecting and monitoring sudden, intense, or extreme variations in personalities or emotional experiences, which is important for recognising behaviours or distressing events that signify clinically significant fears of negative evaluation and early onset SAD. In particular, findings from this study suggest consequences associated with negative parental behaviours, peer rejection, social fears, embarrassing or humiliating social encounters, repeated attempts of social or performance failures, social withdrawal, avoidance, or isolation, are important indicators of risk factors that should be made aware of through psychoeducation.

In this way, educating parents of detrimental parenting behaviours such as mothers and fathers modelling negative relationships or joining forces during negative interactions with children, can encourage willing parents to avoid instances in which both parties partake in potentially harmful interactions in the presence of, or with their child. For example, conscious efforts to model positive interpersonal relationships and taking steps to circumvent
marital conflict in the presence of impressionable children, represent positive strategies for promoting healthy family environment. Furthermore, increased awareness of children with particularly anxious temperaments who display sensitivities to separation or perceived abandonment, can assist implementation of strategies that can increase children’s sense of safety. This may involve communicating to children ones whereabouts, reason for their absence, or providing concrete information regarding their return.

Importantly, distressing events that occur in school or other environments are an inevitable part of development and do not cause SAD (Marteinsdottir et al., 2007). However, ongoing negative social events are implicated in the development of social anxiety thus parents can provide encouragement, validation of feelings, and positive social experiences, which may serve to buffer potentially harmful experiences (Kearney, 2005; Lambert, 2006). Similarly, by noticing increased behavioural avoidance, social withdrawal, isolation, or loneliness, parents can increase opportunities for developing age-appropriate social skills and friendships (Ollendick & Hirschfeld-Becker, 2002), which can protect against negative consequences associated with negative peer interactions (Erath et al., 2010; Motoca et al., 2012). This is vital for children who encounter ongoing rejection or victimization from peers, as demonstrated by early memories in this study that revealed unsatisfied needs of affiliation and achievement specifically related to initiating and maintaining friendships, were often associated with adult social anxiety, whereas satisfied needs of affiliation and social achievement were linked to psychological well-being in adulthood.

Thus, parents who have a good understanding of emotional experiences and risk factors associated with SAD and are aware of potential peer problems or bullying experiences, can increase prospects for developing positive friendships outside the school setting and deter trajectories of social anxiety (Ollendick & Hirschfeld-Becker, 2002).
Subsequently, parents play an important role in promoting healthy social and emotional development and increasing treatment efficacy in youth (Gren-Landell et al., 2009; Ollendick & Hirschfeld-Becker, 2002). Rodebaugh, Holaway and Heimberg’s (2004) review of the literature found, treatment involving parents and children/adolescence with SAD, compared to youth alone, produced greater gains post-treatment in which a higher proportion of youth no longer met criteria for SAD. This is not surprising since parents represent a primary source of facilitating referrals and intervention strategies for young people, which would conceivably produce greater benefits and lasting changes (Gren-Landell et al., 2009).

Furthermore, common occurrences such as peer rejection or exclusion, failed social or performance outcomes, embarrassing or humiliating social encounters often occur in the school setting, highlighting school involvement as particularly important for detecting early warning signs and facilitating treatment for vulnerable children and adolescence (Rodenbaugh et al., 2004). This demonstrates the need for therapeutic interventions during early childhood and adolescence that focus on increasing coping skills, emotion relation strategies and developing social skills, which can foster positive friendships and social performance (Motoca et al., 2012; Rodenbaugh et al., 2004).

In sum, teachers are a pertinent source of identifying and monitoring changes in student’s demeanour, behaviours, and/or peer relationships that may signify onset SAD, and increased efforts should be made to assist facilitation of appropriate referrals and early intervention strategies in classrooms. The early onset of this disorder points towards the importance of screening young populations in mental health care settings and health care providers to prevent detrimental effects of social fears progressing to clinically significant symptoms later in life. Widespread efforts to increase public awareness, psychoeducation, and early intervention programs within communities, is a positive step forward in reducing
psychosocial impairments and distress associated with this remarkably common condition in Western populations (Kessler et al., 2005a; Lampe et al., 2003).

8.16. Strengths and Limitations

This study’s inclusion of both projective (i.e., early memory probe) and self-report measures used to explore conscious and conscious links between early memories and social anxiety severities has a number of strengths and limitations, which will be outlined in the following subsections. Further to this, inherent in the continuous nature of social anxiety, cut-off criteria between normal and pathological poses major challenges in correctly classifying participants into clinical and subclinical groups (Brunello et al., 2000; Faravelli et al., 2000; Van Roy et al., 2009). These and other sampling issues will also be discussed in relation to this study’s analysis of the social anxiety spectrum.

8.16.1. Projective and self-report measures. This study illustrated the benefits of incorporating early memory probes in research as an effective projective technique, which generated a large amount of qualitative data that captured a rich sense of past social situations associated with social anxiety symptom severities, which is typical of qualitative studies (Stopa et al., 2012). Thus, information obtained from memory narratives signified data similar to that obtained from case studies, revealing meaningful and detailed information that is typically indiscernible from pure statistical analyses and self-report measures. In this way, pure exploration of qualitative data was applied to analyse early memories and participants’ responses revealed a range of potential themes associated with the social anxiety spectrum. This approach differed from commonly used quantitative research techniques, restricted to
self-reported conscious appraisals that assess the frequency, or degree to which certain content of predetermined outcome measures is relevant (Clark, 2001; Clark & Purdon, 1995).

This approach extends past research that has relied exclusively on self-report measures for assessing schematic processing of social situations proposed to operate outside of conscious awareness. In this way, memory probes were utilised as a means of activating cognitive and affective products of schematic processing, to reveal important information related to social fears, emotions, and historical influences associated with subclinical and clinical social anxiety that may be inaccessible to self-report. Results generated memory narratives in this study, support the clinical and diagnostic utility of early memory probes and projective techniques in research on homogeneous samples of social anxiety.

For instance, memory probes elicited affective and cognitive themes that were conceptually, empirically, and theoretically relevant to social anxiety (APA, 2013; Clark & Wells, 1995; Beidel & Turner 2007), with this link representing stronger associations for clinical versus subclinical groups relative to the control group. More specifically, the control group projected healthy social and emotional development, as well as themes often unrelated to social anxiety or interpersonal issues (e.g., Sickness, Failing to achieve a Non-Social Goal, and Not Respecting Rules or Limits). These preliminary findings demonstrate ample support for social anxiety as a dimensional construct that differs in degree of severity with distinct projections of emotions, cognitive thoughts, and learning histories compared to normal anxiety experienced by non-clinical controls. Therefore, inclusion of this psychologically healthy comparison group allowed evidence of actual categorical differences between social anxiety groups (Blöte et al., 2009), and provided evidence of discriminant validity.
Subsequently, findings add to existing research based on quantitative self-report measures, and represent an additional source of information supporting the role of memories and potentially unconscious schemas in terms of social anxiety symptom severities. More importantly, the use of projective techniques generated rich and comprehensive qualitative data that allowed detailed examination of conscious or unconscious meanings from memories, activated by schematic processing. This provides valuable insight into ambiguity surrounding boundaries between thresholds that constitute the social anxiety spectrum. Therefore, results from this study broaden support for utilising projective techniques and qualitative research methods for investigating schematic processing that occurs at deeper levels of cognitive processing and may not be accessed via self-report (Clark, 2001). This technique can reveal a better understanding of potential underlying features of social anxiety.

Future investigations wishing to examine the intricacies of aetiological and cognitive factors associated with the social anxiety spectrum would benefit from utilising a combination of projective and qualitative research techniques, such as thematic analysis for exploring the underlying nature of social anxiety. It is important to reiterate, that findings from this study are based on memories of perceived reality, rather than ‘actual’ events. Therefore, recollections may reflect memory biases toward threat related information instead of greater incidence of specific social events. However, based on the theoretical orientation of this research (Bruhn, 1990), it was assumed that factors identified from early memories signified particularly relevant issues associated with current social anxiety. Notwithstanding the benefits of this approach, it is not without limitations.

First, relates to the issue of transference associated with subjective scoring of projections from early memories. In psychoanalytic terms, transference is the examiners projections of issues onto the early memory (Bruhn, 1995). However, one strength of the
CEMSS-R is that items were devised to require minimal rater inference and subsequently maximise the likelihood of acceptable reliability (Last & Bruhn, 1983; Last & Bruhn, 1992). Furthermore, to reduce bias associated with subjectively scoring and interpreting data, the current study analysed categories from the CEMSS-R described as ‘content variables’ (i.e., affect, characters, content), that require the least inference when scoring, thus increasing the validity of findings (Last & Bruhn, 1983; Last & Bruhn, 1985). Therefore, these categories that required minimal personal interpretation were considered appropriate for use in the current study.

Further to this, scoring of memories allowed only the most prominent themes from affect and content categories to be coded (Last & Bruhn, 1992). However, at times the content of memories permitted scoring of two or more themes. For example, memories often contained emotional experiences related to anxiety and embarrassment in social situations. Therefore, findings relating to embarrassment for example, may have been underrepresented if anxiety was the most prominent emotion and scored accordingly. This may explain lower levels of embarrassment found for subclinical groups, thus replication of these preliminary results is required, with particular focus on exploring early memories for themes related to embarrassment, in samples of subclinical socially anxious individuals. This may be implemented by generating a set of early memories, as outlined by the original EMP (1990). This would allow more thorough exploration, which was restricted by this study’s analysis of one early memory per participant.

This method was deemed necessary in order to maximize the number of participants willing to participate in this study, based on the lengthy process of this technique. However, utilising a set of early memories would allow exploration of clues regarding the nature and cause of anxiety experienced in social situations for 30% and 49% of clinical and subclinical
groups respectively, whose earliest social memory projected a neutral or positive affective tone. This finding is quite the opposite of conceptual expectations, which would suggest links between current self-reported social anxiety and negative early social memories. Thus, one explanation for these findings is that negative past events prior to ones ‘earliest’ social memory influenced development of social anxiety, which could be explored across a set of memories. An alternative explanation may suggest the sample of socially anxious participants comprising this study were relatively high functioning.

8.16.2. Sampling characteristics. Most previous studies have investigated memories with either clinical or non-clinical social anxiety groups compared with controls (D’Argembeau et al., 2006; Field et al., 2004; Hackmann et al., 2000; Wenzel & Cochran, 2006). However, this study extended empirical evidence to investigate the social anxiety spectrum, and compared clinical with subclinical social anxiety groups, as well as a control group. This provides clinically useful information regarding social anxiety in the general community, especially in terms of symptoms that do not meet diagnostic thresholds. Furthermore, McLean et al. (2011) suggested that because clinical samples differ from individuals in the general community in terms of degree of dysfunction and comorbidity (Chartier et al., 1998), research on non-clinical samples increases awareness of social anxiety in community populations. Nonetheless, the sample utilised in the current study predominantly comprised young adults from university or tertiary populations, which not only differ from treatment seeking samples of SAD but researchers also suggest university students may not be representative of the general population (Carter & Wu, 2010; Deeber et al., 2011).

The majority of participants in the current study with subclinical symptoms below (90%), and clinical symptoms reaching diagnostic thresholds (87.5%) were enrolled in study.
This high proportion of socially anxious individuals enrolled in higher education (diploma, undergraduate degree, postgraduate degree etc), reflects sampling procedures comprising first year university students, their friends or family, and the doctoral student researcher’s peer network, which formed a large proportion of participants recruited for this study. Even so, these demographic characteristics imply that academic institutions are not commonly avoided social settings for individuals with varied degrees of social anxiety. At first, this appears inconsistent with a wealth of evidence suggesting social anxiety is associated with impairments in academic functioning, increased school dropout, and reduced educational attainment (Brunello et al., 2000; Furmark et al., 1999; Iancu et al., 2006).

However, the high number of socially anxious students comprising the sample does not directly inform issues relating to distress or impairment experienced in academic functioning. For instance, these participants may still experience considerable concerns when required to participate in performance or social interactions, display withdrawn participation in class activities, reduced attendance, or limit time spent on campus given the flexibility of such institutions, in which various aspects of learning can also be completed online (e.g., virtual lectures). Thus, sampling characteristics from this study are consistent with empirical evidence showing a large proportion of individuals with SAD or high social anxiety apply for higher education and successfully complete degrees (Chambless et al., 2008; Tillfors & Furmark, 2007).

In addition to the large proportion of socially anxious students in this study completing tertiary studies, which is typically undertaken as a means of gaining future employment, 67.5% and 65% of clinical and subclinical socially anxious participants were employed. This is in stark contrast with empirical evidence suggesting social anxiety has negatively implications in areas of employment (Fehm et al., 2008; Iancu et al., 2006;
Furmark, 2002). However, demographics of this study’s sample coincide with previous research finding no link between impairments in employment for clinical or subclinical thresholds after controlling for risk status (i.e., family history) and gender (Merikangas et al., 2002). Nonetheless, specific inferences cannot be made in relation to distress or functional impairment in academic or work environments based on demographic information alone.

These demographics may simply reflect the growing importance of educational attainment in contemporary society, for securing increasingly competitive employment opportunities within the workforce. In addition, clinical and subclinical social anxiety groups displayed remarkably similar demographic characteristics with few restrictions in areas of education and employment, which is suggestive of a high functioning sample. Therefore, preliminary findings from this study’s analysis of earliest social memories need replication in clinical populations, in order to ascertain whether themes identified from perceived learning histories generalise to severely impaired patients with a clinical diagnosis of SAD. Further to this, there was no significant difference in the proportion of men and women comprising subclinical and clinical groups in this study.

However, the large proportion of female participants comprising the total sample (70.5%) may not have completely captured men’s early experiences associated with social anxiety symptom severity. For instance, gender differences are reported in relation to peer victimization or maltreatment (Gran-Lendell et al., 2011; Storch et al., 2005), childhood risk factors such as sexual abuse (Chartier et al., 2001; Gran-Lendell et al., 2011), types of feared situations (Turk et al., 1998; Xu et al., 2011), and gender specific relationships with mothers and fathers (McLean et al., 2011; Rork & Morris, 2009). Nonetheless, the equally low proportion of male participants represented across clinical, subclinical, and control groups indicate that results were less likely to be affected by gender discrepancies. It will still be
important for future research to replicate these findings with older adults and from the general community, and greater numbers of men.

A further limitation of this study relates to inherent difficulties associated with correctly identifying and allocating participants into groups, given no clear demarcation between threshold SAD and subclinical social anxiety along the spectrum (Ruscio et al., 2008; Stein et al., 2010). The SPSQ cut-off scores chosen for determining whether participants met criteria for SAD in this study, was based on Furmark et al.’s (1999) recommendation, in which distress scores rated 3 (high) or above (i.e., 4 =severe) for at least one feared situation, as well as positive responses to impairment criterion fulfil criteria for DSM-IV-TR SAD. However, few validation studies exist for this method of determining cut-off scores (Furmark et al., 1999; Gren-Landell et al., 2009; Tillfors & Furmark, 2007) and essentially, diagnosis of SAD represents subjective responses of individual participants. Thus, some participants met all criteria for DSM-IV-TR diagnosis of SAD including criterion of functional impairment but distress was rated moderate (i.e., 2) instead of high (i.e., 3). Therefore, in the absence of clinical judgment, reliance on participants’ subjective interpretations of impairment and distress corresponding to moderate or high levels may have produced inconsistent representations of clinical and subclinical symptoms.

For instance, specific cases that consistently reported moderate instead of high distress across several feared situations, and met functional impairment criteria for SAD were allocated to the subclinical group (as indicated by high scores on the SIAS or SPS) but may have had clinical symptoms. This may have affected accurate comparisons between clinical and subclinical social anxiety groups, which is especially important considering this study’s primary objective was to investigate the continuous nature of the social anxiety spectrum. Nonetheless, the SPSQ has shown good psychometric properties, as well as diagnostic
agreement with the structured clinical diagnostic interview (SCID) in clinical trials (Tillfors & Furmark, 2007). Therefore, this study’s classification of groups based on self-report questionnaires should be interpreted as an indicator of the disorder rather than a formal diagnosis. Future research would benefit from incorporating additional measures for assessing clinical diagnosis of SAD, such as a clinical interview.

Further to this, a small proportion of socially anxious individuals recalled early social situations indicative of bizarre or delusional content, which as expected was not evident for healthy controls. Despite instances of perceptual disturbance or bizarre material being rare, such occurrences were more severe for socially anxious participants in the clinical group (i.e., out of body experience), compared to the subclinical group (i.e., visual distortions), reflecting greater severity of mental health problems for clinical versus non-clinical participants. However, bizarre or psychotic symptoms are not typically associated with social anxiety (APA, 2013; Stopa et al., 2013). Therefore, content revealed from these early memories may represent issues related to comorbid psychological disorders rather than social anxiety, as this study did not control for comorbid conditions in either social anxiety group, only the healthy control group.

This decision was based on two main reasons. Firstly, 22.5% of the SAD reported comorbid psychological disorders and exclusion of these participants would have resulted in a loss of valuable qualitative data and small number of participants with clinical SAD. Secondly, only 10% of the SAD group and 51% of the subclinical group reported normal levels of either trait anxiety or depression, as measured by the DASS (Lovibond & Lovibond, 1995). Thus, high comorbidity between SAD and psychological disorders, typically depression and other anxiety disorders (Brunello et al., 2000; Costello et al., 2005), was reflected in this study’s sample, in which social anxiety rarely occurred in its pure form for a
large proportion of participants. It is speculated, that true representations of SAD involve comorbidity and eliminating depressive or anxious symptoms from clinical and subclinical samples would remove naturally occurring overlap between these symptom presentations (Chiupka et al., 2012; Dozois & Frewen, 2006). Moreover, exploration of content from early social memories indicated that depressive themes were uncommon, thus interpretation of findings are expected to reflect issues associated with social anxiety.

8.17. Suggestions for Future Research

Despite limitations evident in the present study, findings from this research provide useful directions for future research. This is the first study to have utilised memory probes in a socially anxious sample of adults. As suggested by Bruhn and colleagues, careful piloting generated specific content codes to reflect the population of interest (i.e., social anxiety), however the fact that some codes were derived from this study’s sample indicate that results essentially provide preliminary evidence that require replication with a more diverse sample from the community (Bruhn & Schiffman 1982a; Davidow & Bruhn, 1990). Nonetheless, findings appear promising based on early memories of subclinical and clinical groups that projected themes specific to core features of social anxiety, which were typically unrelated themes to those projected by the control group. In considering this, exploration of early memories in younger populations has potential value for identifying youth at risk of early onset SAD, and implementing tailored treatment interventions. Thus, future research substantiating the efficacy of early memories in child and adolescent populations representing this homogeneous group is highly recommended.
Moreover, an important contribution of this research is that it adds to the social anxiety literature by providing preliminary evidence that in addition to heightened anxious arousal, hurtful emotional reactions that caused emotional pain early in life may also represent a core feature of social anxiety. This notable finding suggests early interpersonal encounters that triggered hurt feelings, represents an additional source of fear related to future social interactions for individuals with subclinical and clinical social anxiety. Increased understanding of aetiological pathways of hurtful emotional experiences that directly relate to social interactional anxiety can inform theory, diagnosis, and treatment for individuals who fear social situations due to fears of interpersonal devaluation.

Diagnostic criterion that specifies hurt feelings as a core feature, or fear associated with social interactions may help explicate the nature and source of interaction anxiety related to the social anxiety spectrum. However, results relating to hurtful emotional reactions that occurred early in life require further investigation as to their exact influence in the development or maintenance of clinical and subclinical social fears. Once identified, this may lead to improved treatment outcomes for individuals with varied degrees of social anxiety. From a CPT perspective, early memories should be analysed for affect because emotions associated with particular memories are likely to provide insight into how individuals perceive their major unresolved issues (Bruhn, 1990; Bruhn, 1995). Therefore, assessment of earliest social memories was found to be a useful projective technique for exploring and identifying issues associated with social anxiety severities in the current study, and is suggested for use in future research, especially in relation to investigations of hurtful affect.

An additional finding of this research that would benefit from further investigation was the higher incidence of negative interactions with fathers reported by the clinical group, which may be suggestive of a categorically distinct pathway to developing SAD. However,
negative interactions with fathers were not exclusive to the SAD group and definitive conclusions cannot be made, due to low frequencies of participants from all social anxiety threshold groups who recalled negative relations with fathers. Moreover, analysis of these small proportions of themes from each group indicated the nature of negative interactions corresponded to increased symptom severity. Therefore, in considering fathers play distinct roles in socialisation, development of autonomy, as well as influencing social fears below diagnostic thresholds (Bögels & Perotti, 2011), further investigation into the nature of paternal influences on clinical and subclinical social anxiety would help inform aetiological models of the social anxiety spectrum.

This study’s findings elicited patterns of symptoms and vulnerability factors indicative of social anxiety symptom profiles and have the potential to direct future research for investigating common and distinguishing features of current social fears. An emerging line of research has focussed on negative images experienced during anxiety-provoking social situations for individuals with SAD (Hackmann et al., 2000) and subclinical social anxiety (Chiupka et al., 2012; Moscovitch et al., 2011). One view within the literature proposes that intrusive imagery exists on a continuum from non-pathological to pathological information processing, and differs for clinical and non-clinical populations in terms of degree rather than type (Clark & Rhyno, 2005; Hackmann & Holmes, 2004). However, no known empirical study to date has compared diagnostic thresholds representing the entire social anxiety spectrum in relation to imagery.

Therefore, it would be valuable to extend this study’s research design to explore the range of emotions and symptoms associated the social anxiety spectrum by analysing images. From a cognitive perspective, schematic processing biases are either implicitly or explicitly implicated in the persistence of intrusive thoughts and images (Beck, 1996; McGinn &
Young, 1996; Williams et al., 1997). As was found in the current study, schemas contain meaningful information related to past memories that trigger dysfunctional thoughts and present reactions to events when activated (Beck, 1996; Clark, 2001; McGinn & Young, 1996). Thus, it seems reasonable to assume that content from intrusive images of anxiety provoking social situations, provide a means of accessing meanings related to current concerns (i.e., social fears) and have the potential to elicit emotionally charged reactions (Beck, 1996; McGinn & Young, 1996; Williams et al., 1997) related to social anxiety.

From a psychoanalytic perspective, unwanted thoughts or images are important as they allude to the nature of an individual’s unconscious conflict. Subsequently, “imagery can be used to discover the nature of a client’s problem, as with the traditional uses of projective tests” (Singer, 2006, p.116). Furthermore, images can access emotion, as they often reveal meanings that may not be apparent from verbal instructions (Hackmann et al., 1998). Furthermore, future projections involving expectations of future outcomes can be accessed through images (Singer, 2006). Therefore, similar to memories, images contain projective qualities that can be used as a tool for uncovering meaningful information in research. Replication of this study, by means of imagery probes can increase clinical knowledge and understanding of core features associated with the social anxiety spectrum.

As with memories, imagery has particularly important implications for theory and clinical practice (Brewin et al., 2010; Hackmann et al., 2000), given suggestions from several theorists and clinicians that the focus of therapy should be on meanings, which in addition to verbal thoughts, can be accessed through images (McGinn & Young, 1996; Singer, 2006). Thus, erroneous images should be assessed to correct schematic change, and represents an important focus for treatment (Purdon, 2005). Thematic content of images across social anxiety threshold groups can provide further validation of categorical features associated with
dimensional boundaries of social anxiety thresholds. This information can be useful markers that can help inform future diagnostic manuals for identifying symptoms profiles constituting the social anxiety spectrum and assist clinicians in recognise variations of social anxiety symptom presentations.

Finally, limitations related to the psychometric foundation of this pilot study suggest that findings from codes with small sample sizes and insufficient IRR estimates represent preliminary evidence, which provides valuable direction for future research. However, findings from this study’s socially anxious sample requires replication to substantiate results, due to small subsets of the total sample and multiple independent variables that reduced the power of the study. It would be beneficial to replicate this study with a large sample, including clinical group of participants with diagnosed SAD. Furthermore, it is suggested that future research utilises discriminant function analysis to assess social anxiety as a dimensional construct, by exploring whether social anxiety scores can be predicted from early memory codes.

8.18. Conclusion

Support for conceptualising social anxiety as a spectrum disorder was based on several symptomatic and vulnerability factors found in early memories that attenuated in severity from clinical to subclinical social anxiety, to healthy controls. The key findings of this research have extended upon a growing body of research that suggests social anxiety lies on a continuum of severity rather than reflecting a categorically distinct construct (Kollman et al., 2013; Ruscio, 2010). Overall, negative relations particularly with parents and peers, as well as increased anxiety sensitivity and hurt emotions early in life are relevant when considering pathways to developing social anxiety, in which recurrent or additive risk factors
are associated with clinical SAD. More specifically, increased symptom severity was characterised by earliest social memories containing greater degrees of negative affect, wider range of negative emotional experiences, interactions with others, and adverse conditioning events.

Furthermore, consistent with current conceptualisations of SAD in the DSM-V, fears of embarrassment, humiliation, and negative evaluation represented boundaries between threshold and subclinical social anxiety symptoms (APA, 2013). These increasingly negative markers of perceived learning histories may reflect additive influences analogous to social anxiety symptom severity. These findings contribute to the understanding of potential pathways to social anxiety symptom presentations of the spectrum, which has the potential to inform theory and future diagnostic manuals, of revisions to current classification of SAD. Importantly, this movement towards conceptualising social anxiety as a spectrum disorder has therapeutic implications for the treatment of social anxiety at and below diagnostic thresholds.
References


Dickson, J. (2004). *Autobiographical Memory and Social Anxiety: The Impact of Self-Focus Priming on Recall*. School of Social and Behavioural Sciences, Swinburne University of Technology.


O’Keefe, D.J. (2007). Post hoc power, observed power, a priori power, retrospective power, prospective power, achieved power: Sorting out appropriate uses of statistical power analyses. *Communication Methods and Measures, 1*(4), 291-299. doi.org/10.1080/19312450701641375


Peters, L. (2000). Discriminant validity of the social phobia and anxiety inventory (SPAI), the social phobia scale (SPS) and the social interaction anxiety scale (SIAS). *Behaviour Research and Therapy, 38*(9), 943-950. doi:10.1016/S0005-7967(99)00131-X


APPENDIX A Ethics Approval

Dear Dr Dickson and Ms Howell,

Re: SUHREC Project 2010/198 Investigating themes between early memories and intrusive imagery in social anxiety: submissive and hostile subtypes
Dr Janet Dickson FHEL; Ms Davina Howell; Dr Stephen Theiler
Approved Duration 08/10/2010 To 08/10/2011 [Adjusted]

I refer to the ethical review of the above project protocol undertaken by Swinburne's Human Research Ethics Committee (SUHREC). Your response to the review, as e-mailed on 5/6 October 2010 with attachments, were put to and approved by a SUHREC delegate.

I am pleased to advise that, as submitted to date, the project has approval to proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator-supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants and any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.
- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.
- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact me if you have any queries about the ethical review process, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

Best wishes for the project.
Yours sincerely

Ann Gaeth
for Keith Wilkins
Secretary, SUHREC
Ann Gaeth, PhD

Administrative Officer (Research Ethics)
Swinburne Research (H68)
Swinburne University of Technology
P.O. Box 218
HAWTHORN VIC 3122
Tel: +61 3 9214 5935
Fax: +61 3 9214 5267
Appendix B: Consent Information

Investigating themes of Intrusive Imagery and links with Early Memories in Submissive and Hostile subtypes of Social Anxiety

Miss Davina Howell - Psychology (Doctorate) student
Dr Janet Dickson - Supervisor

The purpose of this study is to gain a deeper understanding of the relationship between certain early memory themes and intrusive imagery that may occur in current social situations. Your responses to the attached questionnaire will provide information that will assist in ascertaining the kind of impact our early memories have on our current thoughts, images and behaviours. It is anticipated that the results of this study will prove beneficial to social anxiety sufferers, by identifying particular issues which can be targeted in later treatment and therapies.

Participation in this study involves the completion of a questionnaire, which will take approximately 30 minutes. The questionnaire consists of various statements requiring you to circle a number to indicate your preferred response. It also requires you to recall an instance where you have felt anxious in a social setting and describe any images that you may have visualised in your mind at the time. It also requires that you recall an early memory which represents the themes present in the visual images. For participants who cannot identify with experiencing spur of the moment images in social situations, it is requested that you recall a memory of being in a social situation. Please answer all questions as honestly as possible, as there are no right or wrong answers.

Some of the questions may require you to disclose personal beliefs and experiences of your past. Your answers to this questionnaire are completely confidential and you will remain anonymous. Your privacy will be protected, as no section in this questionnaire asks for information that would identify you in any way. Student participants receiving course credit for participation are NOT required to provide their names on the REP form, only student ID codes. This form is immediately detached and kept in a different location from the questionnaire at all times. The results of this study may be submitted for publication in a psychological journal, however only group data will be presented (no individual will be identifiable).

Participation in this study is completely voluntary and should you decide not to participate, your status as a student at Swinburne University will not be affected in any way. Also, your initial agreement to participate does not stop you from withdrawing at any time. If you consent to participate in this study on the basis of the project information presented, the submission of your completed questionnaire will be taken as consent for your data to be used in the study. Your participation is very important and greatly appreciated. Thank you for taking the time to complete this survey.

If you experience any questions within the questionnaire as confronting or if this research raises issues that cause you concern and you would like to discuss these with a professional, please call the Swinburne Psychology Clinic which is a low cost service on (03) 9214 8653 or Lifeline on 131114.

If you have any questions related to this study, please contact the researchers:
Davina Howell: 0413 698 290 email: ihowell@swin.edu.au
Janet Dickson: (03) 9215 7146 email: jdickson@swin.edu.au

If you have any concerns or complaints about the conduct of this study you can contact:
Research Ethics Officer: Mr Keith Wilkins, Office of Research & Graduate Studies (H68)
Swinburne University of Technology,
PO Box 218, Hawthorne Vic 3122.
Phone: (03)9214 5218 email: resethics@swin.edu.au/or Orgs OR kwilkins@swin.edu.au
**APPENDIX C: Questionnaire Battery**

### DEMOGRAPHICS

**Age:** ____ years

Please **TICK** the appropriate boxes below:

**Gender:**
- MALE  
- FEMALE

**Are you a **Student:**
- YES  
- NO

If YES please indicate the level of education you are currently enrolled in:

1. Year 12
2. Certificate or Diploma
3. Undergraduate Degree
4. Postgraduate Degree

**Are you currently **Employed:**
- YES  
- NO

Please **CIRCLE** one number to indicate your relationship status:

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<tr>
<th>Status</th>
<th>Number</th>
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<tbody>
<tr>
<td>Single</td>
<td>1</td>
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<tr>
<td>In a committed relationship</td>
<td>2</td>
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<tr>
<td>Married/de facto</td>
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<tr>
<td>Divorced/separated/widowed</td>
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SECTION A

EARLIEST MEMORY OF BEING IN A SOCIAL SITUATION

What is the earliest memory that comes to mind in relation to being in a social situation. Choose an event that you actually remember (leave out instances that someone told you about, that you don’t actually recall). Also, be sure that it is a specific one-time event (“I remember one time...”), and not a recurrent event (“I always used to...”). Please describe in as much detail as your recollection of the event permits. Remember to include how the memory begins for you and how it ends as well as how you felt about what happened.

“I remember one time

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PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE COMMENCING THIS TASK

Usually when people are very anxious, a mixture of thoughts and mental images (or brief pictures) go through their minds. For this task, please recall a specific time in the past when you felt anxious and uncomfortable in a social situation. Once you have recalled an instance please go on to complete the following questions.

Q1. Did you have any spontaneous visual image(s) when you felt anxious in this social situation? OR Do you have any spur of the moment visual image(s) when you are anxious in, or anticipating social situations?

YES  NO

If you answered NO to question 1 go to Section B
If you answered YES to question 1 proceed to question 2

Q2. Please indicate how often (the frequency) spontaneous images occur, when you are either in or anticipating social situations

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<tr>
<td>No images in social situations</td>
<td>Images occur in some social situations</td>
<td>Images occur in social situations more often than not</td>
<td>Images occur in most social situations</td>
<td>Images occur in all social situations</td>
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Q3. Please indicate the level of distress associated with the image

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<td>No Distress</td>
<td>Mild Distress</td>
<td>Moderate Distress</td>
<td>High Distress</td>
<td>Severe Distress</td>
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Q4. Close your eyes and recreate one of the mental images, making it as clear and vivid as possible. Describe what you can see in the image, in as much detail as possible.
Q5. What does the image mean to you, in terms of:

Yourself:
_________________________________________________________________________

Other people:____________________________________________________________

Q6. Rate the clarity of the image you described above, by CIRCLING one number -3 to +3

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<td>The image is very clear, it is crisp</td>
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Q7. Rate how you appeared in the image, by CIRCLING one number from 0 (not at all) to 8 (very much)

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Q8. What emotions/feelings are associated with the image?
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Q9. What can you hear whilst visualising the image? (apart from your own voice)
_________________________________________________________________________

Q10. What can you taste or smell?
_________________________________________________________________________

Q11. What sensations do you have in your body, when either recalling or experiencing the image?
(e.g., blushing, sweaty palms, heart racing, butterflies in your stomach)
_________________________________________________________________________
Q12. Do you find that any of your images are recurrent ones, that is, that they always involve or represent the same kinds of themes?

- YES
- NO

PLEASE READ THE CAPTION CAREFULLY BEFORE COMMENCING THE FOLLOWING QUESTIONS

Questions 1 to 12 referred to experiencing visual images in social situations. Questions 13 to 25 refer to a memory you may have, of actually experiencing the thoughts and emotions reflected in the image you described in the previous questions.

Q13. Do you have a particular memory which seems to be closely linked to the image you described?

- YES
- NO

If you answered NO go to Section B
If you answered YES continue to Question 14

Q14. How old were you in this memory? _____

Q15. Can you please close your eyes, evoke the memory and describe it in as much detail as possible?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
Q16. Rate the clarity of the memory you described above, by CIRCLING one number from -3 to +3

<table>
<thead>
<tr>
<th></th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The memory is not very clear, it is fuzzy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The memory is moderately unclear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The memory is slightly unclear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The memory is neither fuzzy nor clear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The memory is slightly clear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The memory is moderately clear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The memory is very clear, it is crisp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q17. Rate how you appeared in the memory, by CIRCLING one number from 0 (not at all) to 8 (very much)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nervous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Composed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Anxious</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Confident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Embarrassed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Q18. What emotions/feelings are associated with the memory?
_________________________________

Q19. What can you hear whilst visualising the memory? (including your own voice)
_________________________________

Q20. What can you taste or smell?
_________________________________

Q21. What sensations do you have in your body? (when either recalling or experiencing the memory)
_____________________________________________
Q22. Rate the similarity between this memory and the previously described image in terms of its main themes and meaning

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No similarity between themes</td>
<td>Minor similarity between themes</td>
<td>Moderate similarity between themes</td>
<td>Extreme similarity between themes</td>
<td>Exactly the same themes in the image and memory</td>
</tr>
</tbody>
</table>

Q23. Were you anxious in social situations before this event in your memory?

YES □
NO □

Q24. If ‘YES’, did the event in your memory change your feelings of anxiety in any way? (i.e., did it make it better, worse, no different)

_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________

Q25. If the event did NOT lead to anxiety at the time, did you recall it when your anxiety started?

YES □
NO □
For each question, please circle a number to indicate the degree to which you feel the statement is characteristic or true of you.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I become anxious if I have to write in front of other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I become self-conscious when using public toilets</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I can suddenly become aware of my own voice and of others listening to me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I get nervous that people are staring at me as I walk down the street</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I fear I may blush when I am with others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I feel self-conscious if I have to enter a room where others are already seated</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I worry about shaking or trembling when I’m watched by other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. I would get tense if I had to sit facing other people on a train or bus</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I get panicky that others might see me faint, be sick or ill</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. I would find it difficult to drink something if in a group of people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. It would make me feel self-conscious to eat in front of a stranger at a restaurant</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I am worried people will think my behaviour is odd</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. I would get tense if I had to carry a tray across a crowded cafeteria</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I worry I’ll lose control of myself in front of other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I worry that I might do something that would attract the attention of other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. When in an elevator, I am tense if people look at me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. I can feel conspicuous standing in a line</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. I get tense when I speak in front of other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
19. I worry my head will shake and nod in front of others

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. I feel awkward and tense if I know people are watching me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

For each question, please circle a number to indicate the degree to which you feel the statement is characteristic or true of you.
Please rate the level of distress you feel in the following 14 situations:

<table>
<thead>
<tr>
<th>Situation</th>
<th>No Distress</th>
<th>Mild Distress</th>
<th>Moderate Distress</th>
<th>Extreme Distress</th>
<th>Severe Distress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking (or performing) in front of a group of people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Making a phone-call to someone unfamiliar</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Initiating a conversation with someone unfamiliar</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Being addressed in a group of people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Using public toilets</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Dealing with authority figures (eg., boss or teacher)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Maintaining a conversation with someone unfamiliar</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Being alone with someone unfamiliar</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Entering a room in which unfamiliar people are seated</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Writing in front of others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Expressing opinions in front of others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Attending a party (or social gathering)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Eating/ drinking in public</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Interacting with colleagues during coffee or lunchbreaks</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Please TICK the appropriate box(s) in relation to the following questions:

1. In one or more of the following situations I fear that something embarrassing or humiliating will happen to me.

- Speaking (or performing) in front of a group of people
- Making a phone-call to someone unfamiliar
- Initiating a conversation with someone unfamiliar
- Entering a room in which unfamiliar people are seated
- Interacting with colleagues during coffee or lunchbreaks
- Dealing with authority figures (eg., boss or teacher)
- Maintaining a conversation with someone unfamiliar
- Being alone with someone unfamiliar
- Writing in front of others
- Expressing opinions in front of others
- Being addressed in a group of people
- Eating/ drinking in public
- Using public toilets
- Attending a party (or social gathering)

NONE OF THE ABOVE SITUATIONS
2. In the following situations I fear that others will notice that I’m nervous.

<table>
<thead>
<tr>
<th>Speaking (or performing) in front of a group of people</th>
<th>Being alone with someone unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a phone-call to someone unfamiliar</td>
<td>Writing in front of others</td>
</tr>
<tr>
<td>Initiating a conversation with someone unfamiliar</td>
<td>Expressing opinions in front of others</td>
</tr>
<tr>
<td>Entering a room in which unfamiliar people are seated</td>
<td>Being addressed in a group of people</td>
</tr>
<tr>
<td>Interacting with colleagues during coffee or lunchbreaks</td>
<td>Eating/ drinking in public</td>
</tr>
<tr>
<td>Dealing with authority figures (eg., boss or teacher)</td>
<td>Using public toilets</td>
</tr>
<tr>
<td>Maintaining a conversation with someone unfamiliar</td>
<td>Attending a party (or social gathering)</td>
</tr>
</tbody>
</table>

NONE OF THE ABOVE SITUATIONS

3. In the following situations I always become uncomfortably nervous (pounding heart, muscle tension etc).

<table>
<thead>
<tr>
<th>Speaking (or performing) in front of a group of people</th>
<th>Being alone with someone unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a phone-call to someone unfamiliar</td>
<td>Writing in front of others</td>
</tr>
<tr>
<td>Initiating a conversation with someone unfamiliar</td>
<td>Expressing opinions in front of others</td>
</tr>
<tr>
<td>Entering a room in which unfamiliar people are seated</td>
<td>Being addressed in a group of people</td>
</tr>
<tr>
<td>Interacting with colleagues during coffee or lunchbreaks</td>
<td>Eating/ drinking in public</td>
</tr>
<tr>
<td>Dealing with authority figures (eg., boss or teacher)</td>
<td>Using public toilets</td>
</tr>
<tr>
<td>Maintaining a conversation with someone unfamiliar</td>
<td>Attending a party (or social gathering)</td>
</tr>
</tbody>
</table>

NONE OF THE ABOVE SITUATIONS

4. In the following situations my fear is greater than justified (I realise that my fear is exaggerated).

<table>
<thead>
<tr>
<th>Speaking (or performing) in front of a group of people</th>
<th>Being alone with someone unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a phone-call to someone unfamiliar</td>
<td>Writing in front of others</td>
</tr>
<tr>
<td>Initiating a conversation with someone unfamiliar</td>
<td>Expressing opinions in front of others</td>
</tr>
<tr>
<td>Entering a room in which unfamiliar people are seated</td>
<td>Being addressed in a group of people</td>
</tr>
<tr>
<td>Interacting with colleagues during coffee or lunchbreaks</td>
<td>Eating/ drinking in public</td>
</tr>
<tr>
<td>Dealing with authority figures (eg., boss or teacher)</td>
<td>Using public toilets</td>
</tr>
<tr>
<td>Maintaining a conversation with someone unfamiliar</td>
<td>Attending a party (or social gathering)</td>
</tr>
</tbody>
</table>

NONE OF THE ABOVE SITUATIONS

5. I begin to worry in advance when I know that I’m going to face the following situations.

<table>
<thead>
<tr>
<th>Speaking (or performing) in front of a group of people</th>
<th>Being alone with someone unfamiliar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a phone-call to someone unfamiliar</td>
<td>Writing in front of others</td>
</tr>
<tr>
<td>Initiating a conversation with someone unfamiliar</td>
<td>Expressing opinions in front of others</td>
</tr>
<tr>
<td>Entering a room in which unfamiliar people are seated</td>
<td>Being addressed in a group of people</td>
</tr>
<tr>
<td>Interacting with colleagues during coffee or lunchbreaks</td>
<td>Eating/ drinking in public</td>
</tr>
<tr>
<td>Dealing with authority figures (eg., boss or teacher)</td>
<td>Using public toilets</td>
</tr>
<tr>
<td>Maintaining a conversation with someone unfamiliar</td>
<td>Attending a party (or social gathering)</td>
</tr>
</tbody>
</table>

NONE OF THE ABOVE SITUATIONS
6. Due to the discomfort I avoid these situations whenever I can.

| Speaking (or performing) in front of a group of people | Being alone with someone unfamiliar |
| Making a phone-call to someone unfamiliar | Writing in front of others |
| Initiating a conversation with someone unfamiliar | Expressing opinions in front of others |
| Entering a room in which unfamiliar people are seated | Being addressed in a group of people |
| Interacting with colleagues during coffee or lunchbreaks | Eating/ drinking in public |
| Dealing with authority figures (e.g., boss or teacher) | Using public toilets |
| Maintaining a conversation with someone unfamiliar | Attending a party (or social gathering) |
| NONE OF THE ABOVE SITUATIONS |

7. The discomfort I experience in the previously listed social situations is of such nature that it severely interferes with or severely bothers me in my: occupational or academic activities, leisure time activities or social activities.

YES ☐ NO ☐

8. Are you currently using any illegal substances?

YES ☐ NO ☐

9. Do you personally use medication for psychiatric problems?

YES ☐ NO ☐
If yes, briefly state the nature of your problem:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

10. Have you ever been diagnosed with Social Phobia or Social Anxiety Disorder by a psychologist or psychiatrist?

YES ☐ NO ☐
If yes, how old were you when you were diagnosed? ______ years old.
Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Did not apply to me at all</th>
<th>Applied to me to some degree, or some of the time</th>
<th>Applied to me to a considerable degree, or a good part of time</th>
<th>Applied to me very much, or most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was aware of dryness of my mouth</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I couldn’t seem to experience any positive feeling at all</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. I just couldn’t seem to get going</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. I had a feeling of shakiness (eg, legs going to give way)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. I found myself in situations that made me so anxious I was most relieved when they ended</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. I felt that I had nothing to look forward to</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. I felt sad and depressed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. I had a feeling of faintness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. I felt that I had lost interest in just about everything</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. I felt I wasn’t worth much as a person</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. I felt scared without any good reason</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. I felt that life wasn’t worthwhile</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. I had difficulty in swallowing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
16. I couldn’t seem to get any enjoyment out of the things I did & 0 & 1 & 2 & 3

17. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat) & 0 & 1 & 2 & 3

<table>
<thead>
<tr>
<th>Question</th>
<th>Did not apply to me at all</th>
<th>Applied to me to some degree, or some of the time</th>
<th>Applied to me to a considerable degree, or a good part of time</th>
<th>Applied to me very much, or most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. I felt down-hearted and blue</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19. I felt I was close to panic</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20. I feared that I would be “thrown” by some trivial but unfamiliar task</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21. I was unable to become enthusiastic about anything</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22. I felt I was pretty worthless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23. I felt terrified</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24. I could see nothing in the future to be hopeful about</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25. I felt that life was meaningless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26. I was worried about situations in which I might panic and make a fool of myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27. I experienced trembling (eg, in the hands)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28. I found it difficult to work up the initiative to do things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

THANK-YOU FOR YOUR PARTICIPATION!!!
Hi, my name is Davina Howell and I am undertaking my Doctorate in Clinical Psychology. In the past I have facilitated the Social Anxiety Group at the Swinburne Psychology Clinic and am currently conducting research in this area. It is hoped that my research findings will have a therapeutic benefit for people suffering from social anxiety, therefore I ask whether you are willing to participate in my study (keeping in mind that your participation is completely voluntary).

Should you wish to participate, the questionnaire and information regarding the study can be found online at:

http://opinio.online.swin.edu.au/s?u=9431

If you would prefer to complete the questionnaire by hand, please inform the person conducting your assessment and they will provide you with a hard copy of the questionnaire and a reply paid envelope so that you can fill it out and send it back via mail.

Voluntary participation in this study will not affect your chance of placement in the Social Anxiety Group.

Thank-you for your time ☺
Investigating themes of Intrusive Imagery and links with Early Memories in Submissive and Hostile subtypes of Social Anxiety

Miss Davina Howell - Psychology Doctorate Student
Dr Janet Dickson - Supervisor

http://opinio.online.swin.edu.au/s?s=9431

Print off the last page of the online questionnaire and attach it to the bottom of this form to claim 1 hour for REP

REP FORM

Investigating themes of Intrusive Imagery and links with Early Memories in Submissive and Hostile subtypes of Social Anxiety

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Student Number