



Moulding, R., Kyrios, M., & Doron, G. (2006). Obsessive-compulsive behaviours in specific situations: the relative influence of appraisals of control, responsibility and threat.

Originally published in *Behaviour Research and Therapy*, 45(7), 1693–1702.
Available from: <http://dx.doi.org/10.1016/j.brat.2006.08.020>

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Running head: CONTROL, THREAT AND RESPONSIBILITY APPRAISALS IN OCD

Obsessive-Compulsive behaviors in specific situations:

The relative influence of appraisals of control, responsibility and threat

PREPRINT VERSION. FULL VERSION AT [doi:10.1016/j.brat.2006.08.020](https://doi.org/10.1016/j.brat.2006.08.020)

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Abstract

Obsessive-Compulsive Disorder (OCD) is characterized by repeated and persistent attempts by the individual to control their thoughts and by taking action through rituals in order to prevent feared or personally distressing outcomes. While cognitive theories of OCD have generated supportive research findings and effective treatments, they have not considered broader control beliefs that may motivate aspects of OC-phenomenology. We have previously proposed that broader control beliefs, specifically desire for control and sense of control, may play a role in OC-symptoms (Moulding & Kyrios, in press). In the present study, non-clinical participants (N=219) were presented with four hypothetical scenarios relevant to an OCD-checking concern, and using a manipulation paradigm, the relationship between control constructs and appraisals hypothesized to be relevant to OCD (threat, responsibility) was examined. Desire for control was moderately affected to responsibility and threat appraisals, while sense of control did not relate to these constructs. The relationship between aspects of OC-phenomenology and appraisals of control, responsibility and threat were also investigated. Higher desire for control predicted both affect and action, while a lower sense of control predicted higher distress and action, over-and-above appraisals of threat and responsibility. Control appraisals were particularly relevant to use of action, and to affect in the low responsibility situations. A possible interactive model of desire for control, threat and responsibility is discussed.

Key Words: Cognitive Theory; Obsessive Compulsive Disorder; Cognition; Psychological Needs.

Appraisals and Obsessive-Compulsive behaviors in specific situations:

The relative influence of appraisals of control, responsibility and threat

1. Introduction

Obsessive Compulsive Disorder (OCD) is characterized by the occurrence of intrusive, repetitive and distressing thoughts (obsessions), and compulsive actions performed in order to relieve the distress or prevent the harm related to the obsessions (American Psychological Association, 2000). It is one of the most incapacitating of the anxiety disorders, and is rated as a leading cause of disability by the World Health Organisation (Murray & Lopez, 1996). While a range of aetiological theories for OCD have been proposed, cognitive-behavioral models of OCD have generated a large body of empirical evidence, and have led to the development of effective treatments (Frost & Steketee, 2002).

Cognitive theories propose that individuals with OCD misappraise the significance of common intrusive thoughts, leading to neutralization strategies such as compulsions in an attempt to ameliorate the potential negative outcomes. This paradoxically serves to worsen the intensity and frequency of the intrusive thoughts, leading to obsessions (e.g., Salkovskis, 1985). Cognitive models suggest that the likelihood of such misappraisals is increased by dysfunctional beliefs, centered around themes of responsibility, threat, the importance of thoughts, the need for thought control, perfectionism, and an intolerance for uncertainty (see Frost & Steketee, 2002; Obsessive Compulsive Cognitions Working Group [OCCWG], 2005). However, it has recently been found that a substantial proportion of individuals with OCD do not show high levels of

the dysfunctional beliefs identified by the OCCWG (e.g., Taylor et al., 2006), suggesting that additional cognitive structures may be important in this disorder.

It has been previously proposed that broader control beliefs may be important to OCD, and contribute to why individuals with OCD feel such an excessive need to act in response to their intrusive thoughts (Moulding & Kyrios, in press). Specifically, the concept of *desire for control* (DC; also termed need or motivation for control) has long been suggested to be a fundamental human motivation, along with other needs such as attachment (e.g., Skinner, 1995; White, 1959; see Doron & Kyrios, 2005 for a discussion of attachment and OCD). Burger (1992) defined desire for control as an individual's general motivation to exert control over events in their lives. Individuals showing high DC are generally assertive, decisive and active in their lives, but also try to avoid failure or unpleasant situations by manipulating events to ensure desired outcomes (Burger, 1992).

A related, but conceptually distinct construct to desire for control, is the individual's *sense of control* (SC). SC is defined as the individual's perception of the level of control that is available within a particular context, and incorporates the extent to which an individual believes they can perform an action and the extent to which they believe that such an action will lead to a desired outcome or avoid an undesirable outcome (Skinner, 1996).

Desire for control has been linked to attempts to gain a higher sense of control (Burger, 1992). However, there is emerging evidence that individuals with a high DC may demonstrate increased anxiety when their sense of control is undermined or does not reach the level they desire (e.g., Evans, Shapiro & Lewis, 1993). For instance, it has been

found that the group of individuals with a high DC and low SC concerning dental procedures were more likely to experience fear and distress prior to such procedures, and were the only group to benefit from a control enhancing intervention (Baron & Logan, 1993; Law, Logan, & Baron, 1994). Thus, a mismatched level of DC and SC would motivate attempts to control the situation, to increase levels of SC.

In the context of OCD, extensive questionnaire-based evidence suggests that individuals have a higher desire to control their thoughts (e.g., OCCWG, 2005; see Purdon & Clark, 2002 for a review), but may hold a lower sense of control over intrusive thoughts than non-clinical participants (Churchill, 1990; Freeston & Ladouceur, 1997; Ladouceur et al., 2000). Studies examining more general levels of desire for control in OCD are limited, but the findings are consistent with the idea that individuals with OC symptoms may hold a higher level of DC (Brown, 2001; Sookman, Pinard, & Beck, 2001), and a lower SC over the self and world (McLaren & Crowe, 2003; Zebb & Moore, 2003; cf. Kennedy, Lynch, & Schwab, 1998; see Moulding & Kyrios, in press for a review).

Recently, Moulding and Kyrios (submitted) found that in a non-clinical student population, higher levels of general DC and lower levels of SC were linked with higher levels of OC-related beliefs and OC-symptoms. Consistent with conceptualization of DC as a core-level belief, control beliefs were found to predict other OC-beliefs. However, it has been shown that individual's appraisals of DC can vary with respect to specific situations (e.g., Baron & Logan, 1993; Wise, Roos, Leland, Oats, & McCrann, 1996). The link between OC phenomena and perceptions of control would be more strongly evident in particular situations where the individual's SC is undermined (e.g., in

situations appraised as threatening). In such situations, DC may lead to the use of short-term strategies aimed at regaining this sense of control. Thus, it would be of interest to see how situation-specific appraisals of control are related to OC-relevant actions and affect, as well as how control relates to other OC-relevant appraisals. For instance, Salkovskis' definition of responsibility as individuals' perception that "one has power which is pivotal to bring about or prevent subjectively crucial negative outcomes" (Salkovskis & Freeston, 2001 p.4) implies that higher levels of SC should be linked to higher perceived responsibility (i.e., possession of a "pivotal power"). However, more recent definitions of responsibility emphasize fear of guilt rather than feeling a pivotal power over negative outcomes (e.g., Mancini, D'Olimpio, & Cieri, 2004; Mancini & Gangemi, 2004). For instance, Mancini and Gangemi defined responsibility as individuals' perception that their "behaviour will not be in keeping with his/her moral standards, or the potential that she/he will act unfairly in a given situation" (p.115). This definition suggests a weaker relationship between SC and responsibility, as perceived control should not relate as strongly to a fear of guilt through acting in an unjust manner.

Threat is generally defined as the perceived severity and probability of the occurrence of negative outcomes (e.g., Salkovskis, Forrester & Richards, 1998). Studies of self-efficacy link higher threat to lower appraisals of SC levels, as stressful or threatening situations undermine one's belief that they can effectively act in such situations (Bandura, 1997). Given the links between responsibility/threat and compulsive actions, it is likely that individuals would have a higher desire to control situations where there are higher levels of responsibility and threat (see Moulding & Kyrios, submitted).

This study explored the relationship between specific appraisals of control, OC-related beliefs and phenomena. A pen-and-paper experimental manipulation was used whereby the degree of threat and responsibility experienced by the individual in a hypothetical OC-relevant situation (a dripping tap) was varied (for other experiments using similar methodologies, see Forrester, Wilson, & Salkovskis, 2002; Menzies, Harris, Cumming, & Einstein, 2000; Rhéaume, Ladouceur, Freeston, & Letarte, 1995).

In this study, the level of threat in each situation was manipulated by varying whether the individual thought a tap was dripping into an unplugged sink (i.e., low threat condition where few negative outcomes would occur), versus thoughts that the sink was possibly blocked (i.e., high threat condition). The high threat condition was designed to elicit appraisals of a higher probability of negative outcomes, and appraisals of more severe negative outcomes, including both visible (flooded house, electrical damage, fire, etc.) and invisible (criticism from friend, damage of the friendship, guilt, etc.).

Responsibility was varied by altering whether the possible negative outcomes in the situations was due to the participant's actions, or those of a friend (following Menzies et al., 2000). This manipulation fits with naïve notions of responsibility for outcome, as well as with Mancini & Gangemi's (2004) revised definition of responsibility. That is, the individual will feel that they could be held to have not acted responsibly within the situations, and would fear the possible guilt.

The first aim of the study was to examine the influence of threat and responsibility manipulations on control appraisals. Based on the theory reviewed above, it was hypothesized that increasing the levels of responsibility and threat would increase

the individual's DC. Sense of control was predicted to increase with responsibility and decrease with threat.

The second aim of the study was to explore the relative contribution of control constructs to the different aspects of OC-phenomenology such as affect and propensity to confront threat (based on Lee & Kwon, 2003). Higher DC and lower SC were predicted to be associated with urge/affective discomfort, and with the use of action to resolve the situation. These relationships were predicted to remain when controlling for threat and responsibility appraisals. The analyses were conducted separately for each vignette, to allow a more detailed examination of the role of DC, SC, responsibility and threat within situations.

2. Method

2.1 Participants

There were 219 participants (M age = 20.7; SD = 5.95; range = 18-58; 59 males). Participants were undergraduate students who received course credit for participating in the study. Most participants were born in Australia (59.8%) and Asia (28.8%).

The use of non-clinical populations within research on OCD is a common practice (e.g., Lee & Kwon, 2003; Tolin, Woods & Abramowitz, 2003). Such studies follow findings that non-clinical populations experience similar intrusive thoughts to clinical populations, albeit with lesser frequency and resulting distress (e.g., Rachman & de Silva, 1978). As such, contemporary cognitive models of OCD follow dimensional models of beliefs and symptomatology (e.g., Salkovskis, 1985)

2.2 Design

A 2 X 2 repeated measures design was used, with all subjects completing the four vignettes in random order. The vignettes varied in threat (low/high) by responsibility (low/high).

2.3 Measures

The Obsessive-Compulsive Vignette Questionnaire (OCVI)¹ was designed for this study. It consisted of four scenarios relevant to an obsessive-compulsive concern, doubt over whether a tap was left running (see Table 1). The scenarios were designed to vary in terms of threat level (low/high) and responsibility (low/high). Participants were asked to place themselves in the situation “as if it was actually happening to you”, and to imagine the “possible negative outcomes that could occur”. Following each scenario were a series of questions, assessing appraisals (responsibility, threat, control) and response (affect/action). Specifically, two appraisal questions concerned responsibility (“personal responsibility” and “negative outcomes depending only on you”) and two assessed threat (“severity” and “probability” of negative outcomes, adapted from Rhéaume et al., 1995). Three questions assessed appraisals of perceived control (over the outcome, your emotions/thoughts and behaviours/actions), and four assessed desire for control (over outcome, the certainty of outcome, emotions/thoughts, their behaviours/actions). Affect was assessed through two items (level of discomfort/distress, urge to do something), and action was measured by four items rating the likelihood the individual would use strategies to deal with the threat (adapted from Purdon & Clark, 1994). These strategies were designed to confront the threat, and included - take action, reason with myself, seek assurance from others, and reassure myself (classification based on Lee and Kwon,

2003)². Finally, one question following all the scenarios assessed the relevance of the scenarios to the participant's life³.

Insert Table 1 about here

2.4 Procedure

Participants were tested in classrooms at the University of Melbourne. The scenarios were presented in a random order.

3. Results

Analysis was performed using SPSS 11.0. Preliminary analysis did not indicate any outliers with excessive influence using Cook's Distance. Screening identified a small level of missing data, which was replaced with item means.

3.1 Manipulation of Responsibility and Threat

To examine the influence of manipulations of responsibility and threat on control and outcome measures, a series of 2(threat) X 2(responsibility) ANOVAs were performed (see Table 2). A Bonferroni-adjusted alpha level of 0.007 was used for the interpretation of

¹ The full OCVI is available from the contact author.

² The use of strategies assessing avoidant strategies were also assessed (distract myself, replace the thought, say stop, do something lucky). Analyses are available from the contact author.

³ The item assessing the personal relevance of the scenarios correlated at a moderate-to-strong level with the OCD symptoms measured with the Padua Inventory-Revised ($r=.46, p<.001$; Burns, Keortge, Formea & Sternberger, 1996), supporting the relevance of the scenarios to OC concerns.

effects. In all analyses interaction terms were not significant, and thus only main effects are discussed.

Firstly, as a manipulation check, the effect of the manipulation on responsibility and threat appraisal ratings was examined. Responsibility appraisals were significantly higher in the high versus low responsibility conditions, and the high versus low threat conditions, with the larger effect size due to the responsibility manipulation. Threat ratings were also significantly higher in the high versus low responsibility conditions, and the high versus low threat conditions, with the larger effect due to the threat manipulation. Thus, the manipulation had the expected effects.

Secondly, the effect of the manipulations on affect and the use of confrontational strategies was examined. Urge/distress and confrontation strategy use were both significantly higher in the high versus low responsibility conditions, and in the high versus low threat conditions, with large effect sizes for urge/distress and moderate effects for action.

Finally, appraisals of desire to control were significantly higher in the high versus low responsibility conditions, and the high versus low threat conditions, with the effects of moderate size. In contrast, sense of control appraisals were not significantly affected by the threat manipulation. SC appraisals were significantly higher in the high versus low responsibility conditions, but this effect was of a small size, only just reaching significance.

Insert Table 2 about here

3.2 Relationship of Appraisals to Affect and Strategy Use

To examine the relationship between appraisals and responses, hierarchical linear regression analyses were performed for each scenario, with the affect/action measures as outcome variables, and the appraisal measures as predictors (Table 4). Appraisal measures were entered according to the following blocks. To control for threat and responsibility appraisals, these were entered in the first block (Tabachnik & Fidell, 1996), followed by DC and SC variables in the second block.

Firstly, the relationship of appraisals to affect was examined (see Table 4). In all four scenarios, responsibility and threat explained a moderate-to-large proportion of the variance, where higher levels of both responsibility and threat were related to higher levels of negative urge/distress. However, in all but the high threat/high responsibility condition, control variables predicted additional variance in affect. In these situations, higher DC was related in to higher urge/distress. In contrast, lower SC was related to higher urge/distress in the two low responsibility situations. Control variables were particularly important in the low responsibility/high threat situation where they predicted 14% of the variance over-and-above responsibility and threat appraisals.

Secondly, we examined the relationship of appraisals to the use of action (see Table 4). Responsibility and threat predicted a significant amount of the variance of confrontational strategies in all situations except high threat/high responsibility. However, only threat was a significant predictor after step 2 of the regression, being related to higher strategy use in two of the situations. Importantly, control variables predicted significant additional variance in the use of action in all conditions. This was particularly true in the high threat conditions where control variables predicted more

variance than both threat and responsibility cognitions. In all scenarios, higher desire to control was moderately related to higher confrontational strategy use, while lower sense of control had a small-to-moderate relationship to higher confrontational strategy use.

Insert Table 3 about here

4. Discussion

In this study, we examined the relationship of control constructs to other beliefs previously identified as OC-relevant. As predicted, desire for control was moderately increased by threat and responsibility. However, sense of control was largely independent of these constructs. We also examined how appraisals of control, responsibility and threat relate to different aspects of OC-phenomenology. Consistent with hypotheses, higher levels of DC and lower levels of SC were generally related to propensity to act in response to threat and negative affective response, over-and-above responsibility and threat levels.

Situation-specific appraisals of DC were found to increase with manipulations of responsibility and threat. The increase in DC with threat and responsibility was of a moderate size, and smaller than the effects of the manipulation on responsibility and threat appraisals. These findings suggest that while DC is related to responsibility and threat, it is not interchangeable with these concepts. In contrast, the experimental manipulation of personal responsibility resulted in a relatively small increase in SC. Considering SC was defined as the extent individuals feel they *can* perform an action that

leads to desired outcome, this finding is somewhat inconsistent with the conceptualization of responsibility as perceptions of pivotal influence in the prevention of harm from occurring (Salkovskis et al., 1996, cited in Salkovskis & Freeston, 2001). According to this definition responsibility would be a particular case of SC. However, these findings are more consistent with inflated sense of responsibility resulting from fear of guilt (Mancini & Gangemi, 2004). Indeed, previous studies have also found that SC is differentiable from responsibility (Lopatka & Rachman, 1995; Moulding & Kyrios, submitted) and Salkovskis and Freeston (2001) note that individuals may feel responsible even though they “may not be able to influence the event in the way they would like” (p.4). Thus, the findings of this study further indicate that separate consideration of the SC and responsibility may be merited in cognitive theory.

Unexpectedly, levels of SC did not change with the manipulation of threat. These findings are inconsistent with the hypothesis that perceiving a situation, or one’s reactions to it, as out of one’s control can lead to increased feelings of threat (Bandura, 1997). While lower levels of SC predispose individuals to appraise situations as more threatening, the reverse may not be the case. Future research manipulating sense of control in real-life situations, in order to overcome possible ceiling effects of a scenario manipulation, could shed more light on this apparent asymmetry between the constructs.

In the examination of the relationship between control appraisals and outcomes, higher DC and lower SC were found to contribute to the prediction of both negative affect and the propensity to act, over-and-above the influence of responsibility and threat cognitions. This is consistent with predictions, in particular with the suggestion that discrepancies between DC and SC may partially motivate direct action in distressing

situations. Importantly, control variables were of particular significance in predicting distress and action in the scenarios with low responsibility, but high threat levels. Thus, in specific situations where feared consequences may occur, perceptions of control may be a determining factor in the motivation to act out compulsions regardless of perceptions of personal responsibility. This is suggestive of a possible aetiological role for DC in leading to OC-beliefs and behaviours. Thus, individuals who act in an attempt to control a situation may be more likely to judge themselves as responsible for the outcomes of their actions. This, in turn, would increase the individual's DC, and also appraisals of threat (Lopatka & Rachman, 1995; Menzies et al., 2000; Shafran, 1997), further motivating actions to control the situation. This implies a vicious cycle that may work to escalate levels of OC-beliefs and behaviors (i.e., DC leads to action, which increases responsibility, which in turn increases DC and threat, etc.). Indeed, such a process may help to explain why if individuals possess a fear of guilt, they are driven to assume a position where they are likely to be held accountable for their actions.

However, the findings of this study await replication, particularly with clinical cohorts. While analogue participants experience similar intrusive thoughts and responses to clinical participants, there may be differences due to personality characteristics and OC-related impairment. Based on the results of this study, it is suggested that clinical cohorts with OCD would report higher appraisals of DC and lower levels of SC than non-clinical groups, as well as higher levels of threat and responsibility. The degree to which such appraisals differ from other anxiety disorders would indicate the specificity of this discrepancy to OCD. Future studies should consider also using in-vivo experimental situations, to extend the clinical relevance of findings using such scenario measures.

Finally, studies should consider directly manipulating control, and examining the suggestion that responsibility and threat appraisals would increase with DC. For example, an individual's need for an outcome could be varied (e.g., see Biner, Huffman, Curran, & Long, 1998), while assessing effects on responsibility and threat appraisals.

The relationship between control appraisals and OCD has implications for psychological treatment, if replicated in subsequent studies. Individuals with higher DC, but lower SC, may be more vulnerable to experiencing OC-phenomena, particularly with respect to negative affect and the likelihood to act on intrusive phenomena. In such individuals, it may be necessary to challenge their tendency to act in response to intrusions, through teaching emotional tolerance skills and mindfulness strategies, and learning to discriminate when active responses are required, with cost/benefit analyses strategies regarding the outcome of confrontational responses (see Moulding & Kyrios, in press). Strategies to increase individuals' SC may also be beneficial in reducing the level of negative emotion and likelihood to act in response to intrusions.

In conclusion, this paper examined the relationship of desire to control and sense of control to OC-relevant beliefs and to OC-symptomatology. Appraisals of DC were moderately related to responsibility and threat. In contrast, SC showed little or no relationship with these constructs. However, both DC and SC were relevant to affect and behaviors in hypothetical OC-relevant situations, over-and-above responsibility and threat. In particular, when DC is high and SC is low the individual may experience negative affect, and be motivated to use direct strategies to confront the threatening situation. Thus, it appears that the discrepancy between desire and sense of control may

be one plausible motivational factor for the driven and action-oriented nature of compulsive behaviours to neutralize threat.

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Table 1. The four scenarios used in the Obsessive-Compulsive Vignette Inventory by threat/responsibility condition

| Condition | Scenario |
|-------------------------------------|---|
| Low threat Low responsibility. | You are at a friend's house, and your friend feels thirsty so they get themselves a drink of tap-water. Later you both go to a restaurant, and while you are there your friend tells you that they are not sure if they turned off the tap, which was dripping slightly . Your friend also states that they think that the sink did not have a plug in it, so the water could drain out. Your friend lives alone. |
| Low threat High responsibility | You are at a friend's house, and you are feeling thirsty so you get yourself a drink of tap-water. While you are drinking, you are distracted by a lively discussion with your friend. Later you both go to a restaurant, and while you are there you realise that you are not sure if you had turned off the tap, which was dripping slightly . You also think that the sink did not have a plug in it, so the water could drain out. Your friend lives alone. |
| High threat Low responsibility | You are at a friend's house, and your friend feels thirsty so they get themselves a drink of tap-water. Later you both go to a restaurant, and while you are there your friend tells you that they are not sure if they had turned off the tap, which was running rather strongly . Your friend also states that they think the sink might have had a plug in it, and that it was next to some appliances such as a toaster and microwave oven, which were plugged in. Your friend lives alone. |
| High threat High responsibility. | You are at a friend's house, and you are feeling thirsty so you get yourself a drink of tap-water. While you are drinking, you are distracted by a lively discussion with your friend. Later you both go to a restaurant, and while you are there you realise that you are not sure if you had turned off the tap, which was running rather strongly . You also think that the sink might have had a plug in it, and that it was next to some appliances such as a toaster and microwave oven, which were plugged in. Your friend lives alone. |

Table 2. Means (*SE*) for appraisals and affect/action responses by threat/responsibility conditions, and *F* statistics (partial η^2) for main effects.

| Measures | Means (<i>SE</i>) | | | | <i>F</i> (partial η^2). | |
|-----------------------|---------------------|------------|-------------|------------|-------------------------------|----------------|
| | Low Threat | | High Threat | | Responsibility | Threat |
| | Low Resp | High Resp | Low Resp | High Resp | | |
| Appraisals | | | | | | |
| Resp | 2.28 (.09) | 6.35 (.13) | 3.29 (.11) | 7.54 (.09) | 1209.16** (.85) | 158.98** (.42) |
| Threat | 2.80 (.10) | 3.53 (.12) | 6.00 (.11) | 6.50 (.10) | 66.74** (.23) | 637.51** (.74) |
| Control | | | | | | |
| SC ^a | 5.74 (.11) | 6.10 (.10) | 5.87 (.09) | 5.96 (.11) | 7.75** (.03) | .00 (.00) |
| DC | 5.78 (.11) | 6.64 (.10) | 6.53 (.10) | 7.25 (.08) | 110.55** (.34) | 103.65** (.32) |
| Affect/Act | | | | | | |
| Urge/Dis | 2.82 (.11) | 4.23 (.13) | 5.75 (.12) | 7.07 (.10) | 265.32** (.55) | 666.62** (.75) |
| Confront ^a | 4.51 (.13) | 5.41 (.11) | 5.43 (.10) | 5.98 (.10) | 92.19** (.30) | 70.56** (.25) |

Note: Urge/Dis=Urge/Discomfort, Confront=Confrontational Strategy; Resp=Responsibility, SC=Sense of Control, DC=Desire for Control.

** $p < 0.007$ (Bonferroni-adjusted significance level).

Table 3. Summary of the hierarchical multiple regression analyses for appraisals of threat, responsibility, sense of control and desire for control predicting urge/distress and strategy use, within the four scenarios (threat by responsibility conditions).

| | Low Threat | | | | | | High Threat | | | | | |
|---|--------------------|-------------------------|----------|---------------------|-------------------------|----------|--------------------|-------------------------|----------|---------------------|-------------------------|----------|
| | Low Responsibility | | | High Responsibility | | | Low Responsibility | | | High Responsibility | | |
| | <i>F</i> Δ | <i>R</i> ² Δ | <i>β</i> | <i>F</i> Δ | <i>R</i> ² Δ | <i>β</i> | <i>F</i> Δ | <i>R</i> ² Δ | <i>β</i> | <i>F</i> Δ | <i>R</i> ² Δ | <i>β</i> |
| PREDICTING URGE/DISTRESS | | | | | | | | | | | | |
| <u>Step 1</u> (threat, resp) | 68.48 | .39*** | | 111.39 | .51*** | | 62.40 | .37*** | | 150.07 | .58*** | |
| <u>Step 2</u> (SC, DC) | 8.62 | .05*** | | 3.29 | .02* | | 30.50 | .14*** | | 0.50 | .00 | |
| Threat | | .39*** | | | .54*** | | | .38*** | | | .59*** | |
| Resp | | .25*** | | | .20*** | | | .18*** | | | .22*** | |
| SC | | -.27*** | | | -.10 | | | -.15** | | | -.04 | |
| DC | | .25*** | | | .16* | | | .45*** | | | .04 | |
| PREDICTING USE OF CONFRONTATIONAL STRATEGIES | | | | | | | | | | | | |
| <u>Step 1</u> (threat, resp) | 6.43 | .06** | | 20.88 | .16*** | | 6.08 | .05** | | 0.36 | .00 | |
| <u>Step 2</u> (SC, DC) | 4.95 | .04*** | | 5.86 | .04** | | 9.99 | .08*** | | 5.48 | .05** | |
| Threat | | .08 | | | .21** | | | .18* | | | -.04 | |
| Resp | | .12 | | | .14 | | | -.05 | | | .00 | |
| SC | | -.18* | | | -.23** | | | -.26*** | | | -.23** | |
| DC | | .27** | | | .23** | | | .30*** | | | .18* | |

Note: Resp=Responsibility, SC=Sense of Control, DC=Desire for Control. Responsibility and threat entered in Step 1, Sense of control and desire for control entered in Step 2. Beta coefficients and significance for Step 2. Transformations to improve normality did not affect results, so untransformed analyses presented. *** $p < .001$, ** $p < 0.01$, * $p < .05$

Acknowledgements

The authors wish to acknowledge Maja Nedeljkovic for comments on an earlier draft of this manuscript. The authors would also like to thank the Editor and two anonymous reviewers for their thoughtful comments.