Why you hide what you know: Neuroscience behind knowledge hiding

Abstract

Knowledge hiding is the deliberate concealment of knowledge when requested. This study underscores three divergent elements of the knowledge hiding process. First, it underlines both the distinct internal and external factors that trigger the knowledge hiding process. Second, it brings out the critical facilitators of knowledge hiding, which do have roots in both the internal and external factors but are inseparable and indistinguishable. Finally, this study brings out a conceptual framework that underscores the vital importance of neuroscience in establishing episodes of knowledge hiding. This final phase of the study categorically establishes the typical need for memory and the frontal lobe integrity in justifying any sequence of events or their combinations as an episode of knowledge hiding.

Introduction

Knowledge management has been the kingpin activity of several organizations that thrive on working under the realm of sustainability (Fait et al., 2019; Wang & Noe, 2010). The underlying knowledge in any organization or institution has to be protected and preserved to make it the institutional memory (Pereira & Mohiya, 2021). The sustainability of organizations is heavily dependent on this enduring institutional memory (Nahapiet & Ghoshal, 1998; Verschoor, 2003). Till the recent past, proper knowledge management essentially meant a secure and compelling platform to share knowledge (Gold, Malhotra, & Segars, 2001).

Essentially, the entire discipline of knowledge management was pinned down to the underlying efficiency of knowledge sharing (Giudice & Maggioni, 2014).

But, in 2012, a relatively new construct of knowledge hiding was established. Knowledge hiding was established as the deliberate concealment of knowledge when requested (Connelly et al., 2012). This study revamped the ways and means of looking at knowledge management. Knowledge hiding has since then obtained more significant weight in the knowledge management studies and researchers have effectively identified different facets of knowledge hiding, i.e., from establishing a dimensionality (Connelly et al., 2012), distinguishing it from other related constructs (Issac & Baral, 2018), underscoring various antecedents (Černe et al., 2017; Kang, 2016; Peng, 2013; Škerlavaj et al., 2018; Zhao et al., 2016), to even underlining the contextual (Issac & Thomas, 2019) and cultural influence (Bilginoğlu, 2019; Issac & Baral, 2019). Knowledge hiding is categorically different from other counter productive workplace behaviours owing to the underlying element of deception in the latter behaviours (A.C. Issac & Baral, 2018). There is also striking difference from some knowledge sharing disengagements like knowledge hoarding (de Geofroy & Evans, 2017), partial knowledge sharing (Staples et al., 2018), knowledge sharing hostility (Michailova & Hutchings, 2006) etc.

In organizational setting, there are many barriers which prevent the individual from effectively sharing knowledge (Morrison, 2014). Many studies have underscored such barriers which are different from the enablers of knowledge hiding as the absence of knowledge sharing is not knowledge hiding (Connelly et al., 2012; A.C. Issac & Baral, 2018). Leadership styles (Anser et al., 2021; Khalid et al., 2018) to systemic issues and workplace characteristics (Shah, & Hashmi, 2019; Irum, Ghosh, & Pandey, 2020) and job insecurity (Feng & Wang, 2019; Serenko & Bontis, 2016) have been identified to cause knowledge hiding in organizations. Apart from these factors the features of the task in hand becomes the most important antecedent of knowledge hiding. Greater the complexity and uncertainty of the task, greater would be the

dependability and therefore, chances and instances of knowledge hiding increase resultantly (Connelly, Ford, Turel, Gallupe, & Zweig, 2014; Labafi, 2017; H. Peng, 2013).
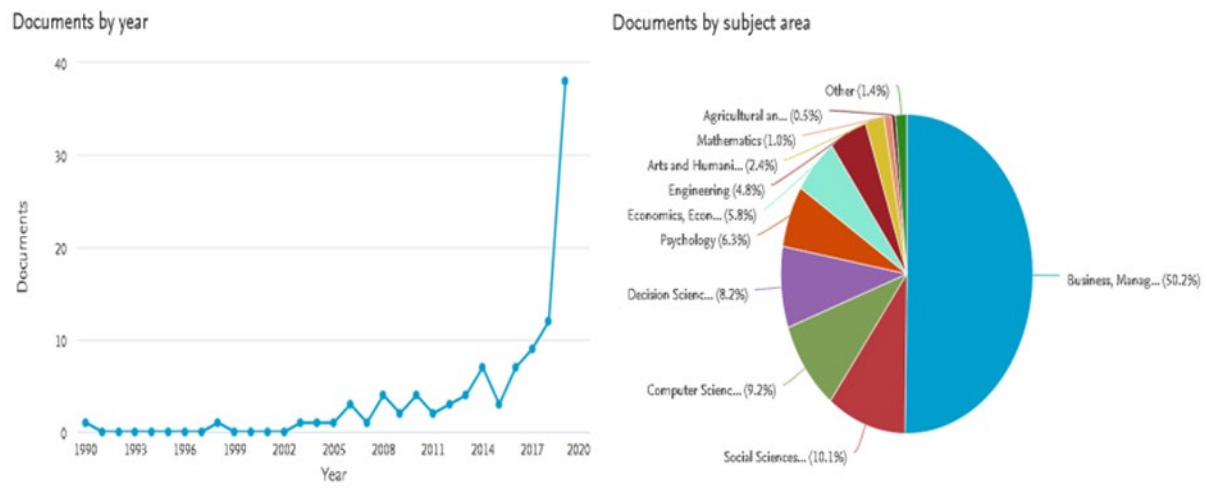
Fig.1 Progress of research in knowledge hiding over the years (Source: Scopus Analytics)

Therefore, a deeper analysis of the extant literature would show that within a relatively smaller period of time, researchers have tried to outline the antecedents of knowledge hiding; but the treatment is more superficial in approach as there is hardly any attempt to know the real reason- the neuropsychology behind knowledge hiding. The organizational approach is more dyadic or team specific but the intent to hide knowledge from an individual perspective would be more revealing and useful for generalizing the outcomes and for initiating specific effective interventions. This study tries to critically elicit the neuroscience behind the knowledge hiding behaviours whose research has increased exponentially, as shown in Fig1 but has not yielded any root causes for the same.

As aforementioned, though there are specific antecedents of knowledge hiding that are already established, but the phenomenon of knowledge hiding process needs an ideal memory platform. This is what distinguishes man from the animals (Broadbent, 1957; Duncan, 1986). This study underscores three divergent factors of the knowledge hiding process. First, this study underlines both the distinct internal and external factors that trigger the knowledge hiding process. Second, the study brings out the critical facilitators of knowledge hiding, which do have roots in both the internal and external factors but are inseparable and indistinguishable.

Finally, this study brings out a conceptual framework that underscores the vital importance of neuroscience in establishing episodes of knowledge hiding. This third phase of the study critically establishes the typical need for memory and the frontal lobe integrity in justifying any sequence of events or their combinations as an episode or process of knowledge hiding.

Theoretical background

Knowledge hiding has been established in the background of the 'theoretical trichotomy,' which underscores the power politics, psychological ownership, and social exchange (Issac & Baral, 2019). But, the neuroscience behind knowledge hiding anchors on the existence of more than mere social exchange. It explains the knowledge hiding from the background of social influence, which categorically describes how individuals modify their behaviour to meet the perceived standards of the environment (Kelman, 1958).

The social influence is mainly manifested as compliance, identification, and internalization. In compliance, there is a deliberate agreement established in public, even though there would be mutual disagreements in private (Issac & Thomas, 2017). In case of identification, there is an inherent admiration towards an influencer, for, eg. a celebrity. Internalization occurs when individuals start accepting a behaviour and agree both privately and publicly. Many a time, the

societal status and public image of a certain person elicits such a social influence from others and thereby, they start accepting even negative behaviours like knowledge hiding knowingly or unknowingly. The neuro-scientific treatment of the construct shows us that knowledge hiding occurs both as a result of informational social influence- underscored by the need to be right and normative social influence- highlighted by the need to be liked.

The existence of knowledge hiding can also be understood as an extension of such social influence initiatives, which are manifested as anomie (Marks, 2014). Such a scenario underlines the lack of normal and ethical or social standards. This marks a higher level of insensitivity within an organization that overlooks even critical physiological and psychological disorders in the work environment.

Therefore, theoretical trichotomy is instrumental in establishing the theory behind the knowledge hiding behaviours, but there could be other considerations. The theory of job characteristics (Hackman & Oldham, 1976) determines the knowledge hiding activities to a great extent. This study essentially identifies the same as an important external factor in engendering knowledge hiding and finally find its place in the conceptual framework. The characteristics of the job or task motivates the knowledge seeker and the hider to play their relevant roles during any dyadic exchange (Issac & Baral, 2020). The organizational environment is equally critical in facilitating knowledge sharing or making individuals disengaged from knowledge hiding (Issac & Thomas, 2019; Mowbray, Wilkinson, & Tse, 2015; Thomas & Issac, 2018; Vasconcelos, 2018). The climate within organization could be controlled in such a way to have e check on the knowledge hiding tendencies within the organization (Deutsch & Gerard, 1955). Many a time the resource constraint within an organization or a system will also act as an underlying factor for knowledge hiding (Hobfoll, 1989).

To synthesize there are lot of critical theories that underscore the possibility and thriving of knowledge hiding practices within an organization. This could be either individualistic and will have manifestations within the neuro-psychological dimension of the person or it could be essentially underlined by external effects and influence. These gets manifested in individual, team or organizational level and act as a vicarious and external factor that control the knowledge hiding dimension within the knowledge transfer ambit in an organization. These range from power politics, psychological ownership, social exchange to task characteristics and organizational climate. We also identify certain integrated factors in this study which have links to the above theory and are vital factors in motivating individuals to hide knowledge.

Internal factors eliciting knowledge hiding

Knowledge hiding is mainly person dependent(Arshad & Ismail, 2018; de Geofroy & Evans, 2017; Demirkasimoglu, 2015). Knowledge hiding is established as the outcome of personality, emotional intelligence (Burmeister, Fasbender, & Gerpott, 2018). Apart from these already established constructs, this study traces out certain neuropsychological factors. These are listed as follows:

YAVIS Syndrome

The term YAVIS which was coined by William Schofield of the University of Minnesota, essentially made it an acronym for "young, attractive, verbal, intelligent and successful." Schofield underlined the typical soft treatment and the extra-element of support towards these types of patients by the mental health professionals. Without any external intervention, these segments of individuals can form a very positive therapeutic relationship (Smith & Dejoie-Smith, 1984; Tryon, 1981). The positive bias of the mental health professionals towards the YAVIS people often facilitates ways of knowledge hiding. This is primarily relevant in the field of mental health treatment and can be very well extended to society in general (Jennings

& Davis, 1977). These characteristics are highly envied upon, and these individuals often tend to get a sort of 'entitlement' in their actions (Meehl, 1997).

These interactions consequently promote distrust. Such distrust to the outside world prevents them from sharing knowledge as they associate themselves as superior, and any attempt against the same may be detrimental to their YAVIS status. Such an action tendency initiates a 'distrust loop,' which acts as the root cause for knowledge hiding behaviours (Connelly et al., 2012; Jha & Varkkey, 2018). The sense of entitlement or superiority reinforced by the distrust can effectively motivate these individuals to indulge in knowledge hiding behaviours. Neuroscientists are trying to reduce the inherent favourable treatment towards YAVIS. But, as discussed, the sense of superiority motivates them to be more hidden and secluded, and subsequently, they turn out to be extroverts. The study has identified that being YAVIS makes them less sensitive to other individuals, and subsequently, they start feeling insecure about any type of knowledge sharing.

Case: a young lawyer with OCD

Mr. A is a 28-year-old lawyer practising as a legal advisor in a multinational company comes with features of Obsessive-Compulsive Disorder (OCD) for which he was referred for Cognitive Behaviour Therapy by the treating psychiatrist. He was open about his symptoms to the psychiatrist when he was interviewed for preparing a hierarchy of his symptoms based on severity for initiating Exposure And Response Prevention (ERP) component of CBT . The therapist was familiar with the client as they spoke the same language and studied in the same school. They had many common friends along with having similar hobbies; both were involved in multiple student clubs and activities even though they were not very much acquainted.

This resulted in the client and therapist develop a good rapport, and the client would behave more like a friend and peer towards the therapist. This, unfortunately, resulted in the client also

hiding information about OCD, especially with regards to his sexual and blasphemous themes of obsession resulting in inadequate symptom elicitation by the therapist and inadequate therapy After multiple sessions, no improvement was noted as the core problem was not identified. The therapist suspected features of YAVIS, which interfered with effective therapy. Hence, independent consultation was planned, which resulted in the identification of unknown symptoms, and later treatment was effective by an alternate therapist.

Progressive Reduction

Progressive reduction is typically a medical condition which can induce the knowledge hiding. This can be an outcome of a range of internal damages (Cannon et al., 2015). The detailed analysis of the cases of progressive reduction points out to certain disorders like schizophrenia (Ho et al., 2003; Jiang et al., 2018). The previous studies undoubtedly establish specific medical condition which aids in the reduction of the brain and thereby adverse effects on memory. This critically shows the importance of memory to sustain episodes of knowledge hiding. Therefore, in a genuine case, knowledge hiding may occur as a result of progressive reduction initiated by specific abnormalities, but, more vividly, the patients tend to hide knowledge without real control over their physiological conditions (Oribe et al., 2015). The opposite of the same can be seen in other neuropsychological conditions, eg. mood disorders like Mania as well as in dementias like frontotemporal dementias wherein there is overfamiliarity and disinhibition due to functional and/or structural disintegrity of the frontal lobes especially the prefrontal cortex thereby resulting in inadvertent sharing of knowledge and inability for knowledge hiding which is often involuntary.

Case: a software team leader with depression

Mr. B, a 56 years old married male, was working as a team leader in a software firm and was able to handle an entire team for software development. He used to share knowledge regarding logistics and pragmatics of approach and development of various softwares. He started developing decreased interest in activities following interpersonal issues with his wife and finally led to separation resulting in a significant low mood, anhedonia, and low energy levels. He developed apathy and was not interested in company affairs. He started not disclosing details of software development with his colleagues and superiors (knowledge hiding). Due to knowledge hiding, his job also suffered, and he was suspended for a month. He was evaluated and noted to have features of major depressive disorder, which was identified as the cause of his executive dysfunction and poor workplace performance. He was evaluated and treated for his depression. Following the same, he improved significantly and was able to return to his work and initiate knowledge sharing.

Personal Attributes

Specific personal attributes like insight, foresight, and hindsight also trigger knowledge hiding tendencies. Insight is not an 'all or none' phenomenon. It refers to the culmination of three different aspects, namely the recognition, compliance, and ability to recall (David, 1990). All these three factors, both individually and combinedly, are capable of inducing knowledge hiding. The recognition can make the individual apprehensive about certain situations, which can trigger knowledge hiding (Qureshi & Evans, 2015; Rhee & Choi, 2017; Vasconcelos, 2018). Compliance, many a time may facilitate knowledge hiding typically in time-specific activities where the individuals seldom need to look lagging and desperate (Connelly et al., 2014; Khalid et al., 2018; Zhao et al., 2016).

Case: a doctor with frontotemporal dementia

Mr. C is a 52 years old doctor who had recently understood that he is suffering from cognitive decline due to which he was unable to perform instrumental activities of daily living independently. He was diagnosed with frontotemporal dementia (FTD). As in usual cases of FTD, he had early impairment of insight, attention, and recent memory but with retained memory functions at least in the initial few months. He was but later noticed to be having features of apathy and later disinhibition. His employers understood the same, and he was not given patients requiring detailed evaluation for management and given simple cases. This can be considered a double blinding process in knowledge hiding.

The ability to recall is critically dependent on the underlying relevance of a memory platform. Many aspects can inspire and influence insight (McEvoy et al., 1989; Wagner et al., 2004). Foresight, on the contrary, can directly act as a reinforcer for knowledge hiding behaviours (Gokhberg, Meissner, & Sokolov, 2016; von Schomberg, Pereira, & Funtowicz, 2019). To get to the target, individuals may deliberately hide knowledge from their colleagues or co-workers. Foresight mainly plays a vital role in setting the aforementioned targets (Arain et al., 2018; Bogilović, Černe, & Škerlavaj, 2017; Nikolova, 2014; Serenko & Bontis, 2016). Foresight can also make individuals fall into the trap of YAVIS, as discussed above (de Finetti, 1992; Jari & Theresa, 2017; Nikolova, 2014; Sardar, 2010). Unlike the above two factors, hindsight triggers knowledge hiding only in later sequences. This can also lead to hindsight bias (Hastie, Schkade, & Payne, 1999; Jari & Theresa, 2017; Rachlinski, 1998; Yopchick & Kim, 2012).

External factors eliciting knowledge hiding

More than the internal factors, some critical extraneous variables induce knowledge hiding behaviours in individuals (Huo et al., 2016; Kumar & Ganesh, 2009). These factors are mainly

not under the control of the individual, and most of the time, there is a sense of helplessness due to the action of these factors. Our review of the extant literature categorically outlines many critical antecedents external to the system that have extraneous influence over knowledge hiding. Issac & Baral (2019) categorically identifies these factors as strategic factors engendering knowledge hiding. Out of this the most external impact is detected in the following factors which are the kingpin factors repeatedly found out as the most potent ones (Issac, Baral, & Bednall, 2021) If the organizations and institutions need to put a leash on knowledge hiding tendencies, then they need to focus on these external factors like:

Task characteristics

The characteristics like the complexity, uncertainty, and the dependency of a task, effect the knowledge hiding behaviours (Kang, 2016; H. Peng, 2013; Staples & Webster, 2008). The complexity of the task determines the cross-functional interactions within an organization (Issac & Baral, 2019). Task uncertainty instigates inter-departmental communications, and this may bring out the differences between the departments to the limelight, which subsequently reinforces further knowledge hiding behaviors (Boz Semerci, 2018; Connelly et al., 2014).

This can be seen especially in army personnel, wherein the soldiers will be posted in different areas during a battle on a non-voluntary basis without their knowledge. This is because of the authority vested with officers higher in the hierarchy. The case is no different in any organizational set-up where a difficult or uncertain task warrants more cooperation and time. Such episodes being height time, cost and labour demanding, the co-workers have an inherent motivation to disengage from knowledge sharing.

Organizational citizenship behaviour is highly sought after in such cases where individuals have to take a moral stand against the ill-effects of the knowledge hiding. They should recognize that it not only hampers the organizational development but also has serious

implications in personnel learning and development. Several times, individuals engage in knowledge hiding episodes due to the dilemma of dilution in the expertise. Individuals generally do not prefer to share the hard-earned expertise on a subject matter and experience in the execution of a difficult task making the task characteristics itself a strong predictor of knowledge hiding.

Territoriality

Kang (2016) had established the existence of territoriality in institutions. In other words, the behavior of individuals in organizations varied across different territories within the institution. These pockets or territories had overt control over the knowledge management processes (Černe et al., 2014; Singh, 2019). The territoriality manifested as a negative group approach that instigated knowledge hiding behaviours. Different territorial behaviors of knowledge withholding like marking and defense behaviors are also established in the literature as the antecedents of knowledge hiding behavior (Kang, 2016).

The commonest examples would be students behaving differently to different teachers based on their rapport with them, as well as the Hawthorne effect wherein the performance increases transiently when the clients are feeling that they are being observed. Such episodes can invariably set in a sense of compartmentalization within the organization where the employees start working as silos (Brown, Lawrence, & Robinson, 2005; Singh, 2019). These external factors do have a detrimental effect in the knowledge sharing climate of the organization, but can easily be kept under check by effective intervention strategies.

Non-availability of knowledge management systems

Though previous studies (Fait et al., 2019; Gold et al., 2001; Lam & Chua, 2005) well establish the importance of knowledge sharing and an effective knowledge management system, still

organizations shy away from installing an effective knowledge management system, which ultimately leads to the closure of the firm (Kidwell, 2010; King & Marks, 2008). Though established by Connelly et al. (2012) that lack of knowledge sharing need not necessarily lead to knowledge hiding. Still, the lack of an efficient and effective knowledge management system is a precursor to knowledge hiding behavioural tendencies.

This is magnified in knowledge-intensive organizations and in organizations that deal with complex knowledge (Fong et al., 2018; Peng et al., 2018; Vasconcelos, 2018). The absence of a systematic knowledge management system will defeat the purpose of effective knowledge transfer. The willing employee, otherwise committed to engage in effective knowledge sharing gets dissuaded and will incline more towards knowledge hiding (King & Marks, 2008; Nahapiet & Ghoshal, 1998). Therefore, the non-availability of a systemic knowledge management system is identified as a major cause in increasing the knowledge hiding propensity within the organization. A careful analysis of the other antecedents will underscore the existence of certain other factors which are in essence external to the system but do have the force multiplier effect in the conceptual framework illustrated in Fig.2

Integrated factors eliciting knowledge hiding

As aforementioned, a vital outcome of this mixed method study is to identify certain critical factors which have a mixed impact from both inside and outside the entities (Černe et al., 2017; Huo et al., 2016; Morrison, 2014). In other words, they may seem to be external factors in appearance but do have the intrinsic manifestation and inevitably these integrated factors do have a significant link with both the aforementioned internal and external factors but are more critical and seldom identified. Such issues do have a multiplying effect owing to the influences

it can bring from both the external and internal dimensions (de Geofroy & Evans, 2017; Kidwell, 2010; Labafi, 2017; Qureshi & Evans, 2015). These factors include:

Culture

The cultural context is very relevant while establishing knowledge hiding behavioural tendencies. Contrasting culture elicits different patterns of knowledge hiding behaviours (Issac & Baral, 2019). Culture as a construct cannot be restricted to either intrinsic or extrinsic; rather, it is an amalgamation of both aspects (King & Marks, 2008; Alexander Serenko & Bontis, 2016). Individualistic culture would motivate employees to be more independent, thereby more knowledge hiding tendencies are observed. Unlike the individualistic cultural orientation, the collectivistic cultural set-up brings in a more robust social buffer.

This inevitably increases the interaction within and between the communities (Issac & Baral, 2019; Issac & Thomas, 2019). Certain cultural settings are thus, very strong proponents of knowledge sharing and they identify it as one of the key drivers for the development and sustainability of the organization. But, unequivocally, there are also certain cultures which do promote more of hiding within the organization. This is more pronounced within employees of a cross-cultural organization (Butt & Ahmad, 2020; Commer et al., 2019). The element of culture has a stand-alone external impact on the knowledge transfer behaviours within an organization but the fact that it is manifested through the individual; mainly at an individual level, makes it an integrated factor in the conceptual framework in Fig.2.

Stigma

Many disorders and diseases can have negative consequences on self-owing to the stigma associated with the same (Corrigan & Kleinlein, 2006; Thornicroft et al., 2007). More than the treatment, patients would be inclined to keep the disorder as a secret from society. This would make them more aloof and secluded. More importantly, individuals tend to hide knowledge

from their near and dear ones. This could turn detrimental when they tend to hide information from their respective doctors who can adversely affect the effective diagnosis (Herek, 1999; Link & Phelan, 2001). In the field of medical science, stigmatization is a fundamental reason for knowledge hiding.

This could be very well extended to organization and society, where certain activities, professions, performances, grades, results, etc. do come under the umbrella of stigmatization. These situations very well see the propagation of knowledge hiding (Link & Phelan, 2001; Thornicroft et al., 2007). Stigma essentially is person-affected but it is mainly portrayed by the organization as such or the society. This will make the hiding inevitable as there are no other options for the individuals under consideration other than non-disclosure. The twin existence of stigma makes it an integrated factor eliciting knowledge hiding as shown in Fig.2.

Table 1 Factors underscoring the neuroscience behind knowledge hiding

Factors	Manifestation	Description	Effects	Illustration	Safeguard
YAVIS syndrome	Internal	The soft treatment and leniency the young, attractive, verbal, intelligent and successful patients receive when compared to their counterparts	Positive bias of the mental health professionals towards the YAVIS people often facilitates knowledge hiding	Meehl, 1997; Smith & Dejoie-Smith, 1984; Tryon, 1981	Equity in approach irrespective of any distinctions. No preferential treatment
Progressive Reduction	Internal	A medical condition due to a range of internal damages	Reduction of the brain and thereby adverse effects on memory	Cannon et al., 2015; Ho et al., 2003	Specific treatment protocol for individual disorders
Personal Attributes	Internal	Personal attributes like insight, foresight, and hindsight also trigger knowledge hiding	Manipulated recognition, compliance, and ability to recall. It may also cause complacency	Gokhberg et al., 2016; Nikolova, 2014; McEvoy et al., 1989	Activities to improve the memory platform and avoid the spirit of complacency
Task characteristics	External	Characteristics like the complexity, uncertainty, and the dependency of task effect the knowledge hiding	Adversely affect the inter-departmental interactions	Kang, 2016; H. Peng, 2013; Staples & Webster, 2008	Improving the communication channel across departments
Territoriality	External	Individuals demark space to establish occupancy or ownership of areas and possessions	Pockets or territories have overt control over the knowledge management processes	Singh, 2019; Kang, 2016	Try to prevent marking and defense behaviours
Non-availability of knowledge management systems	External	Organizations shy away from installing an effective knowledge management system	Lack of proper documentation and codification by individuals within, which Inevitabley leads to hiding of knowledge	Fong et al., 2018; Peng et al., 2018; Vasconcelos, 2018	Effective knowledge management system needs to be established
Culture	Integrated	Contrasting culture elicits different patterns of knowledge hiding behaviours	Individualistic culture advocates more freedom to individuals unlike the collectivistic culture where there is a clear social buffer	Issac & Baral, 2019; Serenko & Bontis, 2016	Systematic cultural de-sensitization
Stigma	Integrated	Many disorders and diseases can have negative consequences on self due to the perceived demeaning behavioural tendencies or approach of people around	Patients would be inclined to keep them as a secret which would make them more aloof and secluded	Corrigan & Kleinlein, 2006; Link & Phelan, 2001; Herek, 1999	Counselling the patients and educating the society
Insurance	Integrated	Providing protection against certain unforseen circumstances or possible eventuality	Absence of the same may prompt individuals to hide knowledge	Wall et al., 2014; Brown & Finkelstein, 2008	Bringing an umbrella cover of insurance by the authorities or making the schemes affordable and mandatory

Insurance

Insurance or such other personal protection or social security policies also have a direct influence on knowledge hiding behaviours. The existence or absence of the same can have an impact on behavioural patterns. Patients may be prompted to hide disorders and illnesses to the insurance agency while taking up a policy (J. R. Brown & Finkelstein, 2008). Similarly, it may also harm the diagnosis as many a time, the patients may execute deliberate attempts to hide knowledge about specific diseases or their symptoms. This type of hiding is more prominent in developing economies where there are no central insurance schemes, or the general insurance penetration is relatively low (Baicker et al., 2012; Wall et al., 2014).

Apart from these, there are certainly other factors like alcohol and substance abuse. Many a time, the relevant information is hidden owing to the stigmatization as aforementioned or due to threat of protection policies; the denial of which can build-up massive economic burden not only on the individual but also on their family (Lochman & van den Steenhoven, 2002; Whiting et al., 2009; Winters, Botzet, & Fahnhorst, 2011). The socio-economic status of individuals is also a critical factor that facilitates knowledge hiding. This is more prominent with certain issues and diseases which have a certain stigma associated with it. The individuals mainly worry whether there may be a detrimental effect on their own families and consequently resort to knowledge hiding (Dunn, 2005; Lochman & van den Steenhoven, 2002).

Discussion: Confirmation of knowledge hiding

The analysis of the aforementioned three factors gives us the confirmatory framework for knowledge hiding. This conceptual framework is presented in Fig.2. The existence of any elements in these three areas of focus can be a prima facie case of knowledge hiding. But, as already underscored, the act of knowledge hiding is critically dependent on a memory platform.

In other words, if a person needs to undertake an action of knowledge hiding successfully, she/he would need to remember that there has been a specific knowledge, and it has been hidden.

The culmination of this chain of events would only substantially contribute to an episode of knowledge hiding. For, this the individual needs to have the frontal-lobe integrity. The conceptual framework in Fig.2 is anchored on this existence of a memory platform. The frontal lobe integrity underscores the presence of such a memory platform. The frontal lobe integrity is the defining feature that distinguishes human beings from other animals.
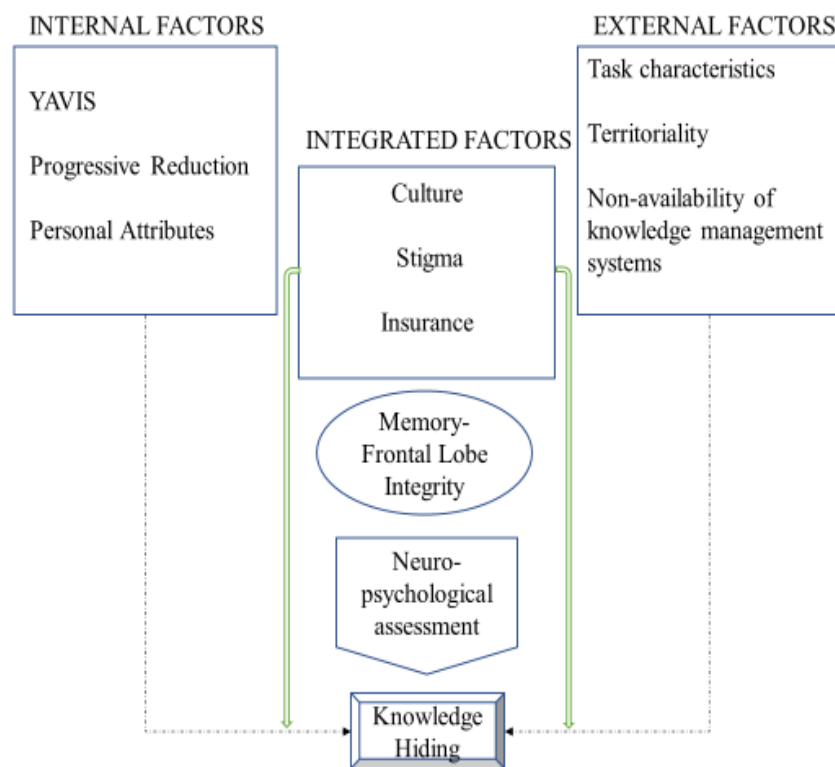

Fig.2 Conceptual framework depicting the confirmatory analysis of knowledge hiding

Knowledge hiding can be even observed in animals. But such a knowledge hiding process would mainly be instinct-driven like hiding their food. But, the neuropsychology of human beings suggests that the knowledge hiding process is strongly evolutionary driven. These

activities are, therefore, tertiary actions and manipulative. To check whether there has been an occurrence of knowledge hiding in human beings, one needs to undertake a neuropsychological assessment to establish the frontal lobe integrity. Apart from the aforementioned factors discussed, including substance or alcohol abuse, an illness like dementia, stroke or aneurysmal subarachnoid haemorrhage, etc. can compromise the frontal lobe integrity of human beings.

Knowledge hiding being an energy-driven process that requires conscious efforts cannot happen in such situations. The implications of such criticalities can be understood by analysing the issues of an unsound mind and Mc Naughten's rule in medicolegal scenarios. Therefore, knowledge hiding can only be confirmed after corroborating the frontal lobe integrity with the aid of valid neuro-psychological assessments.

Implications to theory and practice

Over the last few years, there has been a good amount of research reported in the field of knowledge hiding. Many studies have brought out the relevance of the topic by underscoring the antecedents and dimensionality. Studies have also focused on the impact of knowledge hiding in an organizational scenario. Complementing such studies, this study elicits the neuro-psychology behind knowledge hiding tendencies. This study is a synthesis of many neuro-psychiatric cases. Therefore, it establishes the different critical antecedents of knowledge hiding from a neuroscientific perspective. This approach is vital, as it adds a new dimension of research into the theory of knowledge hiding.

The identification of YAVIS as a reinforcer in knowledge hiding events is one of the critical outputs of the study. The potential possibilities of knowledge hiding in the world of practice are embellished with this identification of YAVIS syndrome and the outcome of the same. Critical medical conditions like progressive reduction could facilitate knowledge hiding tendencies. This understanding could change the way such individuals are treated in

organizations. This may also encourage interventions from the management to cater to the diversity of the organization. This study categorically underlines the significance of understanding the medical condition, including but not limited to progressive reduction and frontotemporal dementia of the individual under consideration before judging the knowledge hiding events and their impact. It adds on to the theory of the construct, which has to date not considered the medical conditions like progressive reduction. There are already certain studies that have categorically established the importance of external factors like task characteristics and territoriality, but identifying these elements in the neuro-psychiatric regime is not common. This study has emphatically given a new dimension of culture as an integrated antecedent of knowledge hiding behaviours.

Both the theory and the world of practice has dramatically ignored the effect of culture in explaining the knowledge hiding tendencies. The role of stigma as an antecedent draws new contours in the realm of knowledge hiding, especially in the world of practice. The study, which is entwined with the medical background, has adequately identified the importance of insurance as a determinant of knowledge hiding behaviours. The world of practice could design steps to mitigate the menace of knowledge hiding by including the social-security aspects. The safeguard measures which this study has identified has inevitably contributed to reinforce such initiatives in organizations. The most critical contribution of this study is in establishing a conceptual framework incorporating all the identified elements of neuro-psychology in finalizing an event as a knowledge hiding event.

Limitations and future research directions

This study essentially brings out the neuroscience behind knowledge hiding from a medical practitioner's perspective. This also brings into the forefront the role of neuropsychological assessments, which can potentially provide clues into patterns of behaviour and cognitions

which can predispose a person for potential knowledge handling strategies. The role of internal factors, external factors as well as attempts in modifying either one or both can influence patterns of knowledge sharing and hiding. Further research can underscore the empirical relevance of the topic in the field of organizational behaviour. The theoretical foundations established by an integrative approach of both observations from the world of practice and the established literature could be further customized and studied for the team and organizational specific outcomes.

This study inevitably addresses the most critical aspects that encourage knowledge hiding by employees within an organization. More focus on the construct may yield other integrated factors that are overlooked in this study. Further studies could also dig deeper into each of the identified internal and external factors and can bring out sector-specific understanding of the knowledge hiding construct. The inter-changeability and the conversion of internal to the external manifestation of the aforementioned factors are also worth considering.

References

Anser, M. K., Ali, M., Usman, M., Rana, M. L. T., & Yousaf, Z. (2021). Ethical leadership and knowledge hiding: an intervening and interactional analysis. *The Service Industries Journal*, *41*(5–6), 307–329. https://doi.org/10.1080/02642069.2020.1739657

Arain, G. A., Bhatti, Z. A., Ashraf, N., & Fang, Y.-H. (2018). Top-Down Knowledge Hiding in Organizations: An Empirical Study of the Consequences of Supervisor Knowledge Hiding Among Local and Foreign Workers in the Middle East. *Journal of Business Ethics*, *0*(0), 0. https://doi.org/10.1007/s10551-018-4056-2

Arshad, & Ismail. (2018). Workplace incivility and knowledge hiding behavior: does personality matter? *Journal of Organizational Effectiveness*, *5*(3), 278–288. https://doi.org/10.1108/JOEPP-06-2018-0041

Baicker, K., Congdon, W. J., & Mullainathan, S. (2012). Health insurance coverage and take-up: Lessons from behavioral economics. *Milbank Quarterly*, *90*(1), 107–134. https://doi.org/10.1111/j.1468-0009.2011.00656.x

Bilginoğlu, E. (2019). Knowledge hoarding: A literature review. *Management Science Letters*, *9*(1), 61–72. https://doi.org/10.5267/j.msl.2018.10.015

Bogilović, S., Černe, M., & Škerlavaj, M. (2017). Hiding behind a mask? Cultural intelligence, knowledge hiding, and individual and team creativity. *European Journal of Work and Organizational Psychology*, *26*(5), 710–723. https://doi.org/10.1080/1359432X.2017.1337747

Boz Semerci, A. (2018). Examination of knowledge hiding with conflict, competition and personal values. *International Journal of Conflict Management*. https://doi.org/10.1108/IJCMA-03-2018-0044

Broadbent, D. E. (1957). A mechanical model for human attention and immediate memory. *Psychological Review*, *64*(3), 205–215. https://doi.org/10.1037/h0047313

Brown, G., Lawrence, T. B., & Robinson, S. L. (2005). Territoriality in organizations. *Academy of Management Review*, *30*(3), 577–594. https://doi.org/10.5465/AMR.2005.17293710

Brown, J. R., & Finkelstein, A. (2008). The Interaction of public and private insurance: medicaid and the long-term care insurance market. *American Economic Review*, *98*(3), 1083–1102. https://doi.org/10.1257/aer.98.3.1083

Burmeister, A., Fasbender, U., & Gerpott, F. H. (2018). Consequences of knowledge hiding: The differential compensatory effects of guilt and shame. *Journal of Occupational and Organizational Psychology*. https://doi.org/10.1111/joop.12249

Butt, A. S., & Ahmad, A. B. (2020). Strategies to mitigate knowledge hiding behavior: building theories from multiple case studies. *Management Decision*, (2015). https://doi.org/10.1108/MD-01-2020-0038

Cannon, T. D., Chung, Y., He, G., Sun, D., Jacobson, A., Van Erp, T. G. M., … Heinssen, R. (2015). Progressive reduction in cortical thickness as psychosis develops: A multisite longitudinal neuroimaging study of youth at elevated clinical risk. *Biological Psychiatry*, *77*(2), 147–157. https://doi.org/10.1016/j.biopsych.2014.05.023

Černe, M., Hernaus, T., Dysvik, A., & Škerlavaj, M. (2017). The role of multilevel synergistic interplay among team mastery climate, knowledge hiding, and job characteristics in stimulating innovative work behavior. *Human Resource Management Journal*, *27*(2), 281–299. https://doi.org/10.1111/1748-8583.12132

Černe, M., Nerstad, C. G. L., Dysvik, A., & Škerlavaj, M. (2014). What goes around comes

around: Knowledge hiding, perceived motivational climate, and creativity. *Academy of Management Journal*, *57*(1), 172–192. https://doi.org/10.5465/amj.2012.0122

Commer, P. J., Sci, S., Shah, M., & Hashmi, M. S. (2019). *Relationship between Organizational Culture and Knowledge Hiding in Software Industry: Mediating Role of Workplace Ostracism and Workplace Incivility*. *Pakistan Journal of Commerce and Social Sciences* (Vol. 13). Lahore: Johar Education Society, Pakistan (JESPK). Retrieved from https://www.econstor.eu/handle/10419/214259

Connelly, C. E., Ford, D. P., Turel, O., Gallupe, B., & Zweig, D. (2014). Antecedents of knowledge sharing under pressure. *Knowledge Management Research and Practice*, *12*(1), 74–85. https://doi.org/10.1057/kmrp.2012.61

Connelly, C. E., Zweig, D., Webster, J., & Trougakos, J. P. (2012). Knowledge hiding in organizations. *Journal of Organizational Behavior*, *33*(1), 64–88. https://doi.org/10.1002/job.737

Corrigan, P. W., & Kleinlein, P. (2006). The Impact of Mental Illness Stigma. In *On the stigma of mental illness: Practical strategies for research and social change.* (pp. 11–44). American Psychological Association. https://doi.org/10.1037/10887-001

David, A. S. (1990). Insight and psychosis. *British Journal of Psychiatry*, *156*(JUNE), 798–808. https://doi.org/10.1192/bjp.156.6.798

de Finetti, B. (1992). Foresight: Its Logical Laws, Its Subjective Sources (pp. 134–174). https://doi.org/10.1007/978-1-4612-0919-5_10

de Geofroy, Z., & Evans, M. M. (2017). Are Emotionally Intelligent Employees Less Likely to Hide Their Knowledge? *Knowledge and Process Management*, *24*(2), 81–95. https://doi.org/10.1002/kpm.1532

Demirkasimoglu, N. (2015). Knowledge Hiding in Academia: Is Personality a Key Factor?

    International Journal of Higher Education, *5*(1). https://doi.org/10.5430/ijhe.v5n1p128

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social

    influences upon individual judgment. *Journal of Abnormal and Social Psychology*,

    51(3), 629–636. https://doi.org/10.1037/h0046408

Duncan, J. (1986). Disorganisation of Behaviour After Frontal Lobe Damage. *Cognitive

    Neuropsychology*, *3*(3), 271–290. https://doi.org/10.1080/02643298608253360

Dunn, D. (2005). Substance abuse among nurses--defining the issue. *AORN Journal*.

    https://doi.org/10.1016/s0001-2092(06)60028-8

Fait, M., Scorrano, P., Mastroleo, G., Cillo, V., & Scuotto, V. (2019). A novel view on

    knowledge sharing in the agri-food sector. *Journal of Knowledge Management*, *23*(5),

    953–974. https://doi.org/10.1108/JKM-09-2018-0572

Feng, J., & Wang, C. (2019). Does abusive supervision always promote employees to hide

    knowledge? From both reactance and COR perspectives. *Journal of Knowledge

    Management*, *23*(7), 1455–1474. https://doi.org/10.1108/JKM-12-2018-0737

Fong, P. S. W., Men, C., Luo, J., & Jia, R. (2018). Knowledge hiding and team creativity: the

    contingent role of task interdependence. *Management Decision*, *56*(2), 329–343.

    https://doi.org/10.1108/MD-11-2016-0778

Giudice, M. Del, & Maggioni, V. (2014). Managerial practices and operative directions of

    knowledge management within inter-firm networks: A global view. *Journal of

    Knowledge Management*, *18*(5), 841–846. https://doi.org/10.1108/JKM-06-2014-0264

Gokhberg, L., Meissner, D., & Sokolov, A. (2016). Foresight: Turning Challenges into

    Opportunities. In *Deploying Foresight for Policy and Strategy Makers* (pp. 1–8).

Springer International Publishing. https://doi.org/10.1007/978-3-319-25628-3_1

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, *18*(1), 185–214. https://doi.org/10.1080/07421222.2001.11045669

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: test of a theory. *Organizational Behavior and Human Performance*, *16*(2), 250–279. https://doi.org/10.1016/0030-5073(76)90016-7

Hastie, R., Schkade, D. A., & Payne, J. W. (1999). Juror judgments in civil cases: Hindsight effects on judgments of liability for punitive damages. *Law and Human Behavior*, *23*(5), 597–614. https://doi.org/10.1023/A:1022352330466

HEREK, G. M. (1999). AIDS and Stigma. *American Behavioral Scientist*, *42*(7), 1106–1116. https://doi.org/10.1177/0002764299042007004

Ho, B. C., Andreasen, N. C., Nopoulos, P., Arndt, S., Magnotta, V., & Flaum, M. (2003). Progressive structural brain abnormalities and their relationship to clinical outcome: A longitudinal magnetic resonance imaging study early in schizophrenia. *Archives of General Psychiatry*, *60*(6), 585–594. https://doi.org/10.1001/archpsyc.60.6.585

Hobfoll, S. E. (1989). Conservation of Resources: A New Attempt at Conceptualizing Stress. *American Psychologist*, *44*(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513

Huo, W., Cai, Z., Luo, J., Men, C., & Jia, R. (2016). Antecedents and intervention mechanisms: a multi-level study of R&D team's knowledge hiding behavior. *Journal of Knowledge Management*, *20*(5), 880–897. https://doi.org/10.1108/JKM-11-2015-0451

Irum, A., Ghosh, K., & Pandey, A. (2020). Workplace incivility and knowledge hiding: a research agenda. *Benchmarking*, *27*(3), 958–980. https://doi.org/10.1108/BIJ-05-2019-

0213

Issac, A.C., & Baral, R. (2018). Dissecting knowledge hiding: a note on what it is and what it is not. *Human Resource Management International Digest*, *26*(7). https://doi.org/10.1108/HRMID-09-2018-0179

Issac, A.C., Baral, R., & Bednall, T. C. (2021). What is not hidden about knowledge hiding: Deciphering the future research directions through a morphological analysis. *Knowledge and Process Management*, *28*(1). https://doi.org/10.1002/kpm.1657

Issac, Abraham Cyril, & Baral, R. (2019). Knowledge hiding in two contrasting cultural contexts TISM and MICMAC. https://doi.org/10.1108/VJIKMS-09-2019-0148

Issac, Abraham Cyril, & Baral, R. (2020). A trustworthy network or a technologically disguised scam: A biblio-morphological analysis of bitcoin and blockchain literature. *Global Knowledge, Memory and Communication*. https://doi.org/10.1108/GKMC-06-2019-0072

Issac, Abraham Cyril, & Thomas, T. S. (2017). Understanding Knowledge Sharing Among Researchers by Social Network Analysis. *AMCIS 2017 Proceedings*. Retrieved from https://aisel.aisnet.org/amcis2017/TREOs/Presentations/70

Issac, Abraham Cyril, & Thomas, T. S. (2019). Whom to appease and whom to circumvent: analyzing knowledge sharing with social networks. *Global Knowledge, Memory and Communication*, (1991). https://doi.org/10.1108/GKMC-03-2019-0041

Jari, K. O., & Theresa, L. (2017). Knowledge management and triangulation logic in the foresight research and analyses in business process management. In *Communications in Computer and Information Science* (Vol. 731, pp. 228–238). Springer Verlag. https://doi.org/10.1007/978-3-319-62698-7_20

Jennings, R. L., & Davis, C. S. (1977). Attraction-enhancing client behaviors: A structured

    learning approach for "Non-Yavis, Jr." *Journal of Consulting and Clinical Psychology*,

    45(1), 135–144. https://doi.org/10.1037/0022-006X.45.1.135

Jiang, Y., Luo, C., Li, X., Duan, M., He, H., Chen, X., … Yao, D. (2018). Progressive

    Reduction in Gray Matter in Patients with Schizophrenia Assessed with MR Imaging by

    Using Causal Network Analysis. *Radiology*, *287*(2), 633–642.

    https://doi.org/10.1148/radiol.2017171832

Kang, S.-W. (2016). Knowledge withholding: Psychological hindrance to the innovation

    diffusion within an organisation. *Knowledge Management Research and Practice*, *14*(1),

    144–149. https://doi.org/10.1057/kmrp.2014.24

KEL, H. C. (1958). Chang'e- 1. *Journal of Conflict Resolution*, *2*(1), 51–60.

Khalid, M., Bashir, S., Khan, A. K., & Abbas, N. (2018). When and how abusive supervision

    leads to knowledge hiding behaviors: An Islamic work ethics perspective. *Leadership*

    and Organization Development Journal, *39*(6), 794–806. https://doi.org/10.1108/LODJ-

    05-2017-0140

Kidwell, R. E. (2010). Loafing in the 21[st]century: Enhanced opportunities-and remedies-for

    withholding job effort in the new workplace. *Business Horizons*, *53*(6), 543–552.

    https://doi.org/10.1016/j.bushor.2010.06.001

King, W. R., & Marks, P. V. (2008). Motivating knowledge sharing through a knowledge

    management system. *Omega*, *36*(1), 131–146.

    https://doi.org/10.1016/j.omega.2005.10.006

Kumar, J. A., & Ganesh, L. S. (2009). Research on knowledge transfer in organizations: A

    morphology. *Journal of Knowledge Management*, *13*(4), 161–174.

https://doi.org/10.1108/13673270910971905

Kumar Jha, J., & Varkkey, B. (2018). Are you a cistern or a channel? Exploring factors triggering knowledge-hiding behavior at the workplace: evidence from the Indian R&D professionals. *Journal of Knowledge Management*, *22*(4), 824–849. https://doi.org/10.1108/JKM-02-2017-0048

Labafi, S. (2017). Knowledge hiding as an obstacle of innovation in organizations a qualitative study of software industry. *AD-Minister*, (june), 131–148. https://doi.org/10.17230/ad-minister.30.7

Lam, W., & Chua, A. (2005). Knowledge Management Project Abandonment: An Exploratory Examination of Root Causes. *Communications of the Association for Information Systems*, *16*(October). https://doi.org/10.17705/1cais.01635

Link, B. G., & Phelan, J. C. (2001). Conceptualizing Stigma. *Annual Review of Sociology*, *27*(1), 363–385. https://doi.org/10.1146/annurev.soc.27.1.363

Lochman, J. E., & van den Steenhoven, A. (2002). Family-based approaches to substance abuse prevention. *Journal of Primary Prevention*. https://doi.org/10.1023/A:1016591216363

Marks, S. R. (2014). Durkheim ' s Theory of Anomie Durkheim ' s Theory of Anomie '. *American Journal of Sociology*, *80*(2), 329–363.

McEvoy, J. P., Joy Apperson, L., Appelbaum, P. S., Ortlip, P., Brecosky, J., Hammill, K., … Roth, L. (1989). Insight in schizophrenia. Its relationship to acute psychopathology. *Journal of Nervous and Mental Disease*, *177*(1), 43–47. https://doi.org/10.1097/00005053-198901000-00007

Meehl, P. E. (1997). Credentialed Persons, Credentialed Knowledge. *Clinical Psychology:*

Science and Practice, *4*(2), 91–98. https://doi.org/10.1111/j.1468-2850.1997.tb00103.x

Michailova, S., & Hutchings, K. (2006). National Cultural Influences on Knowledge Sharing: A Comparison of China and Russia. *Journal of Management Studies*, *43*(3), 383–405. https://doi.org/10.1111/j.1467-6486.2006.00595.x

Morrison, E. W. (2014). Employee Voice and Silence. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 173–197. https://doi.org/10.1146/annurev-orgpsych-031413-091328

Mowbray, P. K., Wilkinson, A., & Tse, H. H. M. (2015). An Integrative Review of Employee Voice: Identifying a Common Conceptualization and Research Agenda. *International Journal of Management Reviews*, *17*(3), 382–400. https://doi.org/10.1111/ijmr.12045

Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *Academy of Management Review*, *23*(2), 242–266. https://doi.org/10.5465/amr.1998.533225

Nikolova, B. (2014). The rise and promise of participatory foresight. *European Journal of Futures Research*, *2*(1). https://doi.org/10.1007/s40309-013-0033-2

Oribe, N., Hirano, Y., Kanba, S., del Re, E., Seidman, L., Mesholam-Gately, R., … Niznikiewicz, M. (2015). Progressive Reduction of Visual P300 Amplitude in Patients With First-Episode Schizophrenia: An ERP Study. *Schizophrenia Bulletin*, *41*(2), 460–470. https://doi.org/10.1093/schbul/sbu083

Peng, H. (2013). Why and when do people hide knowledge? *Journal of Knowledge Management*, *17*(3), 398–415. https://doi.org/10.1108/JKM-12-2012-0380

Peng, J., Wang, Z., & Chen, X. (2018). Does Self-Serving Leadership Hinder Team Creativity? A Moderated Dual-Path Model. *Journal of Business Ethics*, 1–15.

https://doi.org/10.1007/s10551-018-3799-0

Pereira, V., & Mohiya, M. (2021). Share or hide? Investigating positive and negative
employee intentions and organizational support in the context of knowledge sharing and
hiding. *Journal of Business Research*, *129*, 368–381.
https://doi.org/10.1016/j.jbusres.2021.03.011

Qureshi, A. M. A., & Evans, N. (2015). Deterrents to knowledge-sharing in the
pharmaceutical industry: A case study. *Journal of Knowledge Management*, *19*(2), 296–
314. https://doi.org/10.1108/JKM-09-2014-0391

Rachlinski, J. J. (1998). A Positive Psychological Theory of Judging in Hindsight. *University
of Chicago Law Review*, *65*(2), 571. https://doi.org/10.2307/1600229

Rhee, Y. W., & Choi, J. N. (2017). Knowledge management behavior and individual
creativity: Goal orientations as antecedents and in-group social status as moderating
contingency. *Journal of Organizational Behavior*, *38*(6), 813–832.
https://doi.org/10.1002/job.2168

Sardar, Z. (2010). The Namesake: Futures; futures studies; futurology; futuristic; foresight-
What's in a name? *Futures*, *42*(3), 177–184.
https://doi.org/10.1016/j.futures.2009.11.001

Serenko, A., & Bontis, N. (2016). Understanding counterproductive knowledge behavior:
antecedents and consequences of intra-organizational knowledge hiding. *Journal of
Knowledge Management*, *20*(6), 1199–1224. https://doi.org/10.1108/JKM-05-2016-0203

Serenko, Alexander, & Bontis, N. (2016). Understanding counterproductive knowledge
behavior: antecedents and consequences of intra-organizational knowledge hiding.
Journal of Knowledge Management, *20*(6), 1199–1224. https://doi.org/10.1108/JKM-

05-2016-0203

Singh, S. K. (2019). Territoriality, task performance, and workplace deviance: Empirical

evidence on role of knowledge hiding. *Journal of Business Research*, *97*(June 2018),

10–19. https://doi.org/10.1016/j.jbusres.2018.12.034

Škerlavaj, M., Connelly, C. E., Cerne, M., & Dysvik, A. (2018). Tell me if you can: time

pressure, prosocial motivation, perspective taking, and knowledge hiding. *Journal of

Knowledge Management*, *22*(7), 1489–1509. https://doi.org/10.1108/JKM-05-2017-0179

Smith, M., & Dejoie-Smith, M. (1984). Behavior therapy for non-White, non-YAVIS clients:

Myth or panacea? *Psychotherapy: Theory, Research, Practice, Training*, *21*(4), 524–

529. https://doi.org/10.1037/h0085998

Staples, D. S., & Webster, J. (2008). Exploring the effects of trust, task interdependence and

virtualness on knowledge sharing in teams. *Information Systems Journal*, *18*(6), 617–

640. https://doi.org/10.1111/j.1365-2575.2007.00244.x

Staples, D. S., Webster, J., Vasconcelos, A. F., Qureshi, A. M. A., Evans, N., Issac, A. C. A.

C., … Suresh, M. (2018). A framework to enhance agile manufacturing system: A total

interpretive structural modelling (TISM) approach. *Journal of Knowledge Management*,

24(2), 0–3. https://doi.org/10.1080/1359432X.2017.1337747

Thomas, T. S., & Issac, A. C. (2018). Real time Monitoring of the Health of Infants. *AMCIS

2018 Proceedings*. Retrieved from

https://aisel.aisnet.org/amcis2018/TREOsPDS/Presentations/98

Thornicroft, G., Rose, D., Kassam, A., & Sartorius, N. (2007, March). Stigma: Ignorance,

prejudice or discrimination? *British Journal of Psychiatry*.

https://doi.org/10.1192/bjp.bp.106.025791

Tryon, G. S. A. J. (1981). YAVIS-Type Characteristics and Sex as Related to Therapists' Selection of Clients. *Journal of the NAWDAC*, *44*(4), 20–25.

Vasconcelos, A. F. (2018). The lack of spiritual perspective of organizations: an exploratory study. *International Journal of Organizational Analysis*, *26*(5), 915–940. https://doi.org/10.1108/IJOA-02-2018-1345

Verschoor, C. C. (2003). Eight ethical traits of a healthy organization. *Strategic Finance*, NA-NA. Retrieved from https://go.galegroup.com/ps/anonymous?id=GALE%7CA118951795&sid=googleSchol ar&v=2.1&it=r&linkaccess=abs&issn=1524833X&p=AONE&sw=w

von Schomberg, R., Pereira, Â. G., & Funtowicz, S. (2019). Deliberating foresight knowledge for policy and foresight knowledge assessment. In *Interfaces between Science and Society* (pp. 146–174). Routledge. https://doi.org/10.4324/9781351280440-10

Wagner, U., Gais, S., Haider, H., Verleger, R., & Born, J. (2004). Sleep inspires insight. *Nature*, *427*(6972), 352–355. https://doi.org/10.1038/nature02223

Wall, H. K., Hannan, J. A., & Wright, J. S. (2014, November 19). Patients with undiagnosed hypertension hiding in plain sight. *JAMA - Journal of the American Medical Association*. American Medical Association. https://doi.org/10.1001/jama.2014.15388

Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, *20*(2), 115–131. https://doi.org/10.1016/j.hrmr.2009.10.001

Whiting, J. B., Simmons, L. A., Havens, J. R., Smith, D. B., & Oka, M. (2009). Intergenerational transmission of violence: The influence of self-appraisals, mental

disorders and substance abuse. *Journal of Family Violence*, *24*(8), 639–648. https://doi.org/10.1007/s10896-009-9262-3

Winters, K. C., Botzet, A. M., & Fahnhorst, T. (2011, October). Advances in adolescent substance abuse treatment. *Current Psychiatry Reports*. https://doi.org/10.1007/s11920-011-0214-2

Yopchick, J. E., & Kim, N. S. (2012, February). Hindsight bias and causal reasoning: A minimalist approach. *Cognitive Processing*. https://doi.org/10.1007/s10339-011-0414-z

Zhao, H., Qingxia, He, P., Sheard, G., & Wan, P. (2016). Workplace ostracism and knowledge hiding in service organizations. *International Journal of Hospitality Management*, *59*, 84–94. https://doi.org/10.1016/j.ijhm.2016.09.009