

KNOWLEDGE HIDING IN ORGANIZATIONS: A RETROSPECTIVE NARRATIVE REVIEW AND THE WAY FORWARD

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Abstract

Knowledge serves as a strategic competitive asset for any organization to increase and sustain competitive advantage. Organizations have promoted knowledge sharing by implementing Knowledge Management Systems. Despite having ingrained policies for sharing knowledge, most employees refrain from practicing this in their workplace. Connelly et al. (2012) termed this phenomenon knowledge hiding and defined it as “an intentional attempt by an individual to withhold or conceal what has been requested by another person.” Given the importance of knowledge hiding and the importance of this growing construct, this study systematically and retrospectively reviews 35 research articles on knowledge hiding published between 2008 and 2018. The review summarizes study characteristics as research profiles and then explores knowledge hiding, which is categorized and framed under respective sub-topics. The scope and significance of the topic is discussed with reference to existing studies. Potential avenues for future research from theoretical, methodological, thematic, and demographic perspectives are highlighted along with managerial implications.

Keywords: *knowledge hiding, systematic narrative review, future agendas, organizations, employees*

1. INTRODUCTION

In the contemporary scenario, knowledge management systems are an integral part of any organization. Knowledge management systems are considered as a channel that facilitates organizations to create, share, and use knowledge (Brent, 2002). Knowledge consists of insights and interpretations, often is personalized, and refers to specific situations (Andriessen, 2006). Knowledge includes the ideas, information, and expertise that are relevant for the tasks performed by the members of an organization (Bartol & Srivastava, 2002). Theoretically, the knowledge that can be shared among employees is of two types: tacit and explicit. Tacit knowledge is informal, experiential, and intangible

whereas explicit knowledge is factual, codable, and formal, which potentially can be maintained (as databases, records, etc.). Moreover, knowledge transfer is defined as a “dyadic exchange of organizational knowledge between a source and a recipient unit in which the identity of a recipient matters” (Szulanski, 1999). A knowledge transfer process continuously operates in organizations thereby creating and constituting the organizational knowledge.

Organizations actively promote knowledge sharing practices among their employees, which is a key that leads to organizational success (Webster et al., 2008). Human resources policies in some organizations mandates senior employees to devote time to transfer knowledge to novices and juniors.

Therefore, knowledge sharing is considered vital for improving the performance of the organization because it acts as a determinant of organizational success. Although organizations engage in rigorous knowledge sharing practices, employees at times withhold (hide) knowledge. Knowledge hiding is defined as an “an intentional attempt to withhold or conceal knowledge that has been requested by another individual” (Connelly et al., 2012). There are three ways in which employees may hide requested knowledge: rationalized hiding (providing a rational reason for not sharing the knowledge being requested), evasive hiding (providing misleading information or promising to share the requested knowledge in the future) and playing dumb (claiming to have no idea about the knowledge being requested).

Blau’s (1964) social exchange theory proposes that a history of reciprocity among colleagues or institutional members is responsible for their engaging in hiding behaviors. More recently, Lanke (2018) studied the intricacies of knowledge hiding behaviors by breaking down the understanding of knowledge as tacit and explicit. According to Lanke (2018), explicit knowledge may be coded, and hence can be passed on without any obstacles; however, tacit knowledge is not factual and is experience driven, and therefore employees cannot be obligated to share tacit knowledge. Lanke (2018) further claimed that knowledge hiding cannot be prevented by knowledge sharing; therefore organizations need to take up alternate measures to prevent this practice. These measures can include making employees aware of the negative consequences of knowledge hiding, providing interdepartmental/cross-departmental training to employees and monitoring off-job interactions. Owing to the phenomenon of social desirability, one assumes that, similar to the ways in which employees tend to avoid reporting counterproductive behaviors, they may refrain from reporting hiding behaviors as well. Connelly et al. (2012) identified the need to explore knowledge hiding despite several studies examining it as deception (Takala & Urpilainen, 1999), counterproductive behaviors (Pearson, Anderson, & Porath, 2004), or knowledge withholding behaviors (Connelly et al., 2012). Their study established that knowledge hiding is

different from other counterproductive workplace behaviors such as deception, social undermining, incivility, aggression, mobbing behavior, violence, and bullying.

Connelly et al.’s (2012) seminal work demonstrated and validated the existence of knowledge hiding behaviors among organizations. Extending the phenomenon, three factors of knowledge hiding emerged, excluding knowledge sharing and knowledge hoarding. They labelled these three dimensions of knowledge hiding rationalized hiding, evasive hiding, and playing dumb. The study reported that knowledge sharing and knowledge hoarding were different constructs and were not significantly correlated with knowledge hiding. Taking the established measure and assessing the presence of knowledge hiding, the researchers found it important to analyze the situational and interpersonal factors. In summary, the study concluded that complexity of the knowledge requested predicted evasive hiding, whereas task-relatedness (specific knowledge about the assigned tasks) negatively predicted rationalized hiding and positively predicted evasive hiding. In addition, interpersonal distrust predicted knowledge hiding and a knowledge sharing climate predicted evasive hiding among employees. Thus, the pioneering work on knowledge hiding laid its foundation as a prevalent practice among organizations.

2. THEORETICAL BACKGROUND

2.1 Knowledge sharing and knowledge hiding: Distinction

Issac and Baral (2018) emphasized the distinction between knowledge hiding, knowledge sharing and other counterproductive workplace behaviors. Knowledge hiding is not meant to harm any other employee in the organization, whereas counterproductive workplace behaviors intend to harm other employees. Knowledge sharing and knowledge hiding are not opposites on a continuum because facilitating knowledge sharing does not keep employees from hiding knowledge. For example, a situation in which an employee shares requested information is knowledge sharing, whereas when an employee not sharing requested information of which he or she is

unaware of is not knowledge hiding. However, if the employee has information about the knowledge requested but deliberately does not share it, this is termed knowledge hiding. The difference between the two is that employees may hide knowledge for several reasons, but employees might not share knowledge simply because they do not have the requested knowledge. Ideas about why employees hide knowledge have grown from the literature of how employees withhold knowledge and engage in such behavior (for example, territoriality, power, psychological ownership, social exchange, etc.) (Connelly, Zweig, Webster, & Trougakos, 2012).

2.2 Scope and rationale

Scholars and practitioners have identified several factors responsible for the manifestation of knowledge hiding behaviors. These include territoriality (Brown, Lawrence, & Robinsohn, 2005), personal motives, secrecy (Webster et al., 2008) and others, as elaborated in this paper. In addition, employees may engage in withholding or hiding knowledge due to differences in personality, perceptions of injustice, power, reciprocity, or distrust (Webster et al., 2008). Despite all the good aspects of knowledge sharing, employees tend to engage in hiding knowledge; hence it is essential to identify, understand, and comprehend the reasons underlying knowledge hiding behaviors. To channel resources of knowledge in the direction of optimal functioning, exploring mechanisms that cause knowledge hiding is imperative. Several researchers reported the intricacies of knowledge hiding behavior at individual, team, and organizational levels, and these also have appeared in a variety of academic outputs. This study amalgamates and summarizes the extant literature on knowledge hiding. To the best of the author's knowledge, it is the first study to synthesize findings on knowledge hiding and to present directions for future research. It is believed that this ready reckoner will be a sought-after document for researchers and practitioners to advance knowledge hiding research. Researchers may combine their insights with the propositions made in this study to broaden the scope of scientific study on knowledge hiding.

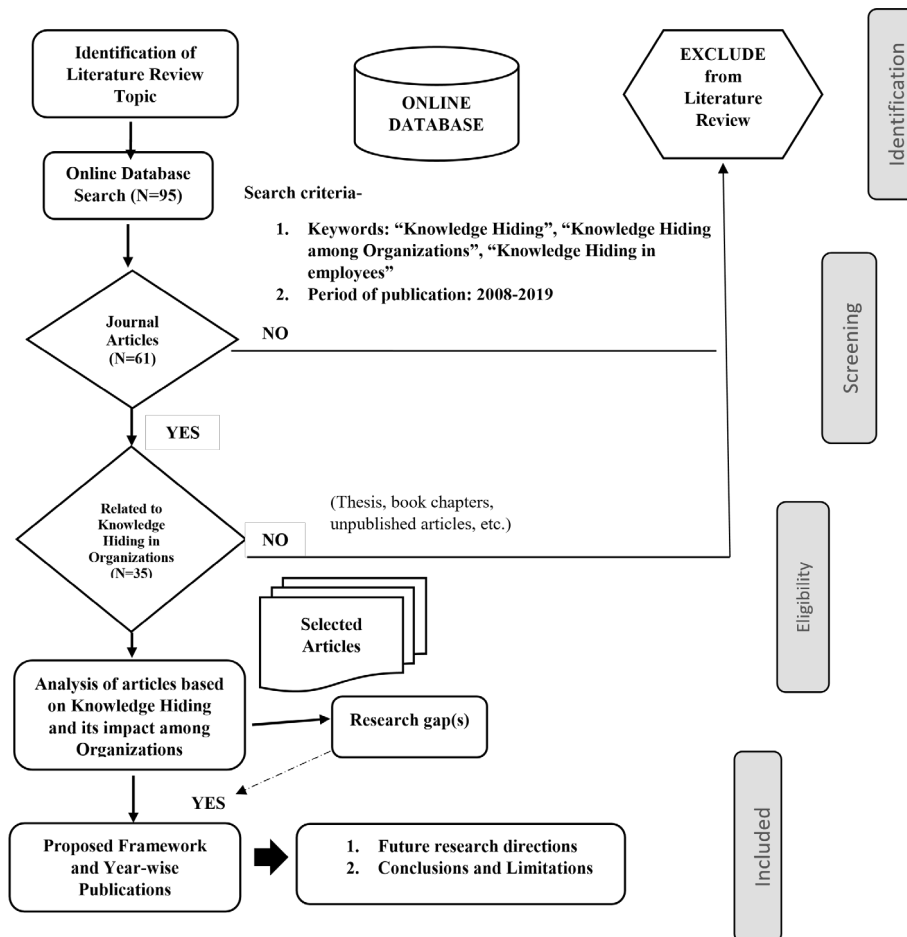
3. METHODOLOGY

3.1 Review strategy

Knowledge hiding is a relatively new phenomenon, and a small number of available studies exist in this domain. For instance, Xiao & Cooke (2018) summarized 22 published research articles on knowledge hiding in the Chinese context. To extend the scope of the academic literature on knowledge hiding, the present paper reviewed knowledge hiding studies published from 2008 to 2018. This paper comprehensively discusses the existing research on knowledge hiding and proposes a framework to outline the gaps in the existing research. A narrative analysis rather than a systematic review or meta-analysis was conducted for the following reasons: (1) a systematic review is objective and has a narrow scope of findings because they are objective in nature (Collins & Fauser, 2005); and (2) a meta-analysis consolidates the findings of empirical papers, and this study includes conceptual papers as well. Therefore, this narrative review provides an overview of knowledge hiding research carried out across the globe.

A narrative review describes and evaluates published research articles. Its uses and applications include general debates, appraisal of previous studies, present lack of knowledge in the area, and rationales for future research (Ferrari & Ferrari Milan, 2015). This paper considered only peer-reviewed journal articles, and excluded master's or doctoral dissertations, conference proceedings publications or conference presentations, and project reports on knowledge hiding construct. The articles reviewed in this paper were retrieved from databases such as Web of Science, Scopus, Google Scholar, Emerald, Wiley, SAGE, EbscoHost, and ProQuest. Following the PRISMA guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009), 35 research articles published in various peer-reviewed journals were included in this narrative review (Figure 1). Broadly speaking, knowledge hiding has been studied along with a variety of constructs such as mistreatment behaviors, distrust, job characteristics (task interdependence, decision-making autonomy), motivational climate, leadership (ethical and transformational), psychological ownership, personality, innovation, and creativity in the workplace.

Figure 1: PRISMA flowchart of studies included for the review



To add rigor to the methodology, the research profiling approach was integrated into the narrative review. This approach is employed to provide a macro focus to and enhance the scope of narrative reviews of the existing literature on a particular topic to uncover techniques, unusual applications, and secondary variables. Research profiling generates central issues related to a topic, emphasizes techniques to study those individuals from the scholarly community who are engaged in the particular research domain, and determines how the research domain has progressed over time (Pei & Porter, 2011). This paper used the technique to study the methodologies employed (Table 1) to better understand this phenomenon through the depiction of samples used across countries (Table 2) and the journals in which knowledge hiding research has been published. Research profiling aims

at putting together (by tabulation or graphic tools) research and illustrating the publications to answer the following questions: (1) What is the annual progression of research articles published on the topic? (Figure 2); and (2) Which journals have published research on knowledge hiding? (Table 3).

Table 1. Types of papers included in the review of knowledge hiding research (2008 – 2018)

S. No.	Type of Paper	Frequency
1.	Conceptual	6
2.	Quantitative	25
3.	Mixed Design	2
4.	Qualitative	2
5.	Review	1

Table 2: Sampling and geographical distribution of knowledge hiding research (2008–2018)

Sample Characteristics	Country	Authors/Year
190 knowledge workers	China	Peng, 2013
150 leader–follower dyads (N = 300)	China	Tang, Bavik, Chen and Tjosvold (2015)
417 samples (universities, R&D)	China	Huo, Cai, Luo, Men, and Jia (2016)
253 samples in 15 Chinese hotels	China	Zhao, Qingxia, He, Sheard, and Wan (2016)
393 employees from 87 knowledge worker teams	China	Fong, Luo. and Jia (2018)
436 employees	China	Men et al. (2018)
251 employees	China	Pan, Zhang, Teo, and Lim (2018)
475 members from 121 R&D Teams	China	Peng, Wang, and Chen (2018)
240 employees from 34 groups; 132 graduate students	Two Slovenian Companies; students of Slovenian university	Černe, Nerstad, Dysvik, and Škerlavaj (2014)
240 employees and 34 supervisors	Slovenian companies	Černe, Hernaus, Dysvik, & Škerlavaj (2017)
285 employees from European firms; 62 students	Europe; Slovenian university	Škerlavaj, Connelly, Černe, and Dysvik (2018)
210 scholars, 11 educational institutions	UK	Hernaus, Černe, Connelly, Vokic, and Škerlavaj (2018)
194 employees	North America and Canada	Connelly and Zweig (2015)
691 knowledge workers	American Union	Serenko and Bontis (2016)
137 participants from various sectors in America; 275 participants various sectors in Germany	America, Germany	Burmeister, Fasbender, and Gerpott (2018)
621 employees in 70 teams; 104 international students in 24 teams	Culturally diverse sample from different industries	Bogilovic, Cerne, and Škerlavaj (2017)
214 employees from 37 teams	Managers enrolled in executive MBA, South Korea	Rhee and Choi (2017)
321 employees across organizations	Korea	Cui, Park, and Paik (2018)
386 academicians (asst. professors and RA's)	Turkey	Demirkasimoglu (2015)
20 software engineers	Iran	Labafi (2017)
355 employees	Jordan	Aljawarneh and Atan (2018)
224 employees – three time lags	Pakistan hospitality industry	Khalid, Basheer, Khan, & Abbas (2018)
296 salespersons and 83 supervisors	Market expansion companies, Myanmar	Wang, Han, Xiang, and Hampson (2018)
298 employees from software companies; 252 employees from banking sector	Turkey	Semerci (2018)
108 employees from 18 teams	Malaysia	Arshad & Ismail (2018)
19 R&D professionals	India	Jha and Varkkey (2018)
316 faculty members	Pakistan	Malik et al. (2018)
317 dyads	Saudi Arabia	Arain, Bhatti, Ashraf, & Fong (2018)

Figure 2: Growth of knowledge hiding research (2008–2018)

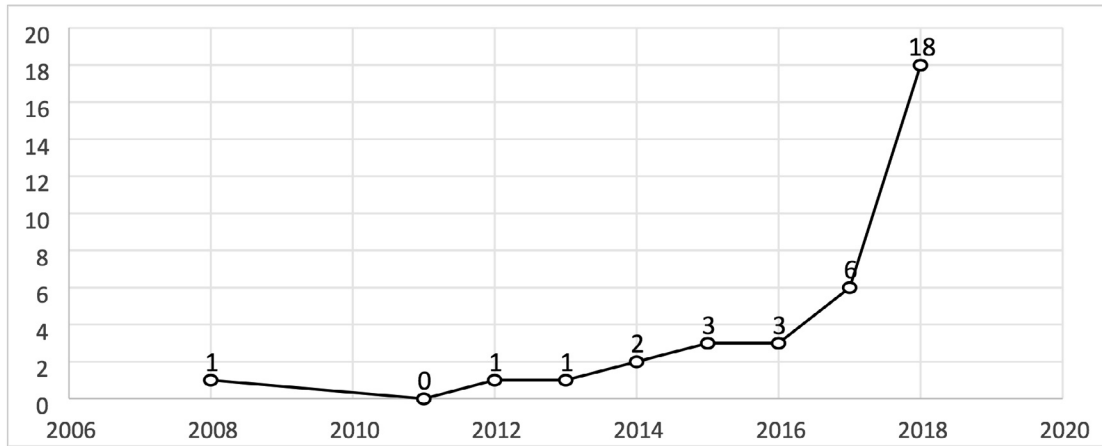


Table 3: Journal information related to knowledge hiding research (2008–2018)

Publication	Publisher	Frequency
Journal of Knowledge Management	Emerald	7
Journal of Business Ethics	Springer	3
European Journal of Work and Organizational Psychology	Taylor & Francis	2
Human resource management International Digest	Emerald	2
Journal of Organizational Behaviour	Wiley	2
Journal of Occupational and Organizational Psychology	Wiley	1
Academy of Management Journal	Academy of Management	1
Personality and Individual differences	Elsevier	1
Research in Personnel and Human Resources Management	Emerald	1
Korean Journal of Business Administration		1
Journal of Business and Retail Management Research		1
Archives of Business Research	Society for Science and Education	1
International Journal of Hospitality Management	Elsevier	1
Lingnan University Staff Publications		1
Human Resource Management Journal	Wiley	1
AD-Minister		1
International Journal of Higher Education		1
Knowledge and Process Management	Wiley	1
Management Decision	Emerald	1
Negotiation and Conflict Management Research	Wiley	1
International Journal of Information Management	Elsevier	1
Leadership and Organizational Development Journal	Emerald	1
International Journal of conflict management	Emerald	1
Journal of Organizational Effectiveness: People and Performance	Emerald	1
Journal of Business Research	Elsevier	1

Table 4: Studies of knowledge hiding and related constructs (2008–2018)

Knowledge hiding and other variables	n	References
Knowledge hiding studies (n = 36 included studies)	35	Malik et al. (2018); Jha and Varkkey (2018); Connelly et al. (2012); Peng (2013); Anand and Jain (2014); Cui, Park, and Paik (2018); Ladan, Nordin, and Belal (2017); Webster, Brown, Zweig, Connelly, Brodt, and Sitkin (2008); Zhao, Qingxia, He, Sheard, and Wan (2016); Connelly and Zweig (2015); Tang, Bavik, Chen, and Tjosvold (2015); Huo, Cai, Luo, Men, and Jia (2016); Rhee and Choi (2017); Bogilović, Černe and Škerlavaj (2017); Serenko & Bontis (2016); Černe, Hernaus, Dysvik, & Škerlavaj (2017); Labafi (2017); Černe, Nerstad, Dysvik, and Škerlavaj (2014); Demirkasimoglu (2015); Geofroy and Evans (2017); Fong, Luo, and Jia (2018); Men et al. (2018); Aljawarneh and Atan (2018); Lanke (2018); Pan, Zhang, Teo, and Lim (2018); Khalid, Basheer, Khan, & Abbas (2018); Hernaus, Černe, Connelly, Vokic, and Škerlavaj (2018); Wang, Han, Xiang, and Hampson (2018); Semerci (2018); Issac and Baral (2018); Škerlavaj, Connelly, Černe, and Dysvik (2018); Peng, Wang and Chen (2018); Burmeister, Fasbender and Gerpott (2018); Arshad & Ismail (2018); Arain, Bhatti, Ashraf, & Fong (2018).
The study of knowledge hiding with other variables:		
Evasive hiding	1	Hernaus, Černe, Connelly, Vokic, and Škerlavaj (2018)
Creativity	5	Malik et al. (2018); Černe, Nerstad, Dysvik, and Škerlavaj (2014); Bogilovic, Černe, and Škerlavaj, (2017); Rhee & Choi (2017); Fong, Luo, and Jia (2018)
Perceived motivational climate	3	Černe, Nerstad, Dysvik, and Škerlavaj (2014); Černe, Hernaus, Dysvik, & Škerlavaj (2017); Men et al. (2018)
Personality	3	Demirkasimoglu (2015); Anand and Jain (2014); Pan, Zhang, Teo, and Lim (2018)
Job characteristics (task interdependence, decision-making, autonomy)	2	Černe, Hernaus, Dysvik, & Škerlavaj (2017); Fong, Luo, and Jia (2018)
Personal values/ Islamic values	2	Semerci (2018); Malik et al. (2018)
Distrust	2	Arain, Bhatti, Ashraf, & Fong (2018); Connelly et al. (2012)
Territoriality	2	Huo, Cai, Luo, Men and Jia (2016)
Workplace incivility	2	Aljawarneh and Atan (2018); Arshad and Ismail (2018)
Employee cynicism	1	Aljawarneh and Atan (2018)
Abusive supervision	1	Khalid, Basheer, Khan, & Abbas (2018)
Conflict management	1	Semerci (2018)
Guilt and shame	1	Burmeister, Fasbender, and Gerpott (2018)
Perceived organizational politics	1	Malik et al. (2018)
Workplace ostracism	1	Zhao, Qingxia, He, Sheard, and Wan (2016)
Workplace deviance	1	Singh (2019)
Transformational leadership	1	Ladan, Nordin, and Belal (2017)
Ethical leadership	1	Tang, Bavik, Chen, and Tjosvold (2015)
Psychological ownership	1	Huo, Cai, Luo, Men, and Jia (2016)
Innovative workplace behaviors; obstacle for innovation	1	Černe, Hernaus, Dysvik, & Škerlavaj (2017); Labafi (2017)
Intra-organizational (individual and team level)	1	Serenko & Bontis (2016)
Goal orientations	1	Rhee and Choi (2017)
Prosocial motivation	1	Škerlavaj, Connelly, Černe, and Dysvik (2018)

Professional commitment	1	Malik et al. (2018)
Psychological engagement	1	Tang, Bavik, Chen, and Tjosvold (2015)
Cultural intelligence	1	Bogilović, Černe, and Škerlavaj (2017)
In-group social status	1	Rhee and Choi (2017)
Emotional intelligence	1	Geofroy and Evans (2017)
Psychological safety	1	Men et al. (2018)
Competition	1	Semerci (2018)
Time pressure	1	Škerlavaj, Connelly, Černe, and Dysvik (2018)
Perspective taking	1	Škerlavaj, Connelly, Černe, and Dysvik (2018)
Organizational citizenship behavior – supervisor directed	1	Arain, Bhatti, Ashraf, & Fong (2018)

4. KNOWLEDGE HIDING GRAND NARRATIVE: ANTECEDENTS AND RELATIONSHIPS

To establish the construct, researchers have attempted to establish the reasons that employees hide knowledge, how leadership influences knowledge hiding, how the practice of this behavior hampers creativity and innovation at work, under what conditions knowledge is hidden, and the consequences of knowledge hiding for intra- and inter-organizational relationships. The reviewed literature was classified into six sub-sections. Table 4 summarizes the knowledge hiding studies from the last decade.

4.1 Knowledge hiding and psychological ownership

Peng (2013) reported that having a strong sense of psychological ownership over the possessed knowledge makes employees hide it. Peng explored knowledge-based psychological ownership with knowledge hiding through territoriality. Having feelings of ownership attached to knowledge makes an individual hide knowledge. In addition, territoriality was found to be a contributing factor to knowledge hiding. Because knowledge is acquired, created, and controlled by employees, they tend to treat knowledge as their personal property. Huo, Cai, Luo, Men, and Jia (2016) investigated antecedents and intervention mechanisms of research and development teams on a multilevel platform. Their results revealed that at an individual-level,

psychological ownership is positively related to knowledge hiding, and territoriality fully mediates the relationship between psychological ownership and knowledge hiding. Moreover, the presence of perceived knowledge value strengthened the relationship between psychological ownership and territoriality. Furthermore, speculations over justice can weaken the positive relationship between territoriality and knowledge hiding for team members who have higher justice perceptions. Procedural justice and interactive justice can weaken the positive relationships between evasive and rationalized hiding and territoriality. Ladan, Nordin, and Belal (2018) proposed a framework of knowledge hiding and its negative impact on organizations. The framework suggests that transformational leadership through psychological ownership may lead employees to refrain from knowledge hiding behavior.

4.2 Knowledge hiding and leadership

Tang, Chen, & Tjosvold (2015) found that ethical leadership decreases knowledge hiding. Perceptions of employees about a leader being ethical keep employees from hiding knowledge. Men, Fong, Huo, Zhong, Jia, and Luo (2018) extended this finding by investigating the moderated mediation role of psychological safety and mastery climate (an environment that values efforts of employees, self-development, learning and cooperation) in the relationship between ethical leadership and knowledge hiding. Ethical leadership fosters psychological

safety, which in turn reduces knowledge hiding, and this relationship was stronger or weaker in a perceived mastery climate. This simply means that in a high mastery climate, the effect of ethical leadership on knowledge hiding through psychological safety is weakened. This contributes to the literature in light of positive leader behaviors.

Peng, Wang, and Chen (2018) found that self-serving leaders reduce psychological safety, thereby making employees engage in more knowledge hiding behaviors, which adversely affects team creativity. Moreover, team task interdependence buffered the adverse effects of self-serving leadership on team creativity through knowledge hiding.

4.3 Knowledge hiding and creativity

Cerne, Nersted, Dysvik, and Skerlavaj (2014) revealed that knowledge hiding diminishes the creativity of an organization. It also diminishes the creativity of the knowledge hider. They reported that less-creative employees engage in hiding knowledge because they might have difficulty generating ideas. Employees who perceive a mastery climate were less likely to engage in knowledge hiding (Bogilović, Černe, & Škerlavaj, 2017). On the other hand, a high-performance climate (an environment that is characterized by social competition among teams and social comparison) significantly decreased the relationship between knowledge hiding and creativity. When the study was replicated among students, the results showed that knowledge hiding decreased creativity when a performance climate was perceived. Moreover, distrust among employees, and the relationship between knowledge hiding and creativity, was stronger in both motivational climates.

Taking this study a step further from the individual level of knowledge hiding, Bogilović et al. (2017) carried out two studies to assess knowledge hiding among employees and students at the individual and the team levels. The results from both samples indicated that individual knowledge hiding diminishes creativity of individuals and teams, thereby further diminishing overall team creativity. Among employees, cultural intelligence moderated/strengthened the relationship between knowledge hiding and creativity; i.e., that lower the level

of cultural intelligence, more likely employees are to engage in knowledge hiding while encumbering the creativity of individuals, and vice-versa. Rhee & Choi (2017) reported that knowledge hiding was negatively associated with creativity. Individuals with avoidance goal orientations (e.g., anxiousness about one's incompetence concerning knowledge being requested) tend to hide knowledge. Knowledge hiding restricts employees from the network of mutually exchanging ideas. Knowledge hiding and status (high status of employees in the organization) interact with each other and significantly decrease creativity. This finding backs high-status employees but is not supportive for low-status employees, which essentially proves that goal orientation is positively related to knowledge hiding.

Malik, Shahzad, Raziq, Khan, Yusaf, and Khan (2018) testified that perceived organizational politics is a strong predictor of knowledge hiding which further hampers creativity. However, professional commitment acts as a catalyst to weaken the relationship between perceived organizational politics and knowledge hiding. Cui, Park, and Paik (2016) suggested that low organizational politics, low fairness sensitivity, and lack of prosocial motivation makes employees engage in knowledge hiding behaviors. Fong, Men, Luo, and Jia (2018) validated earlier findings on knowledge hiding and employee creativity by establishing a negative relationship between the two. Moreover, negative consequences of knowledge hiding on creativity can be exerted through absorptive capacity. When there is low-task-interdependence environment, knowledge hiding greatly influences absorptive capacity, thereby affecting team creativity.

4.4 Knowledge hiding and innovative workplace behaviours

There is a significant two-way and three-way interaction which suggests that mastery climate, task interdependence, and autonomy in decision-making moderates the relationship between knowledge hiding and innovative workplace behaviors (IWBs). High mastery climate, low task interdependence, and high autonomy in decision-making facilitate the highest levels of IWBs within a knowledge hiding environment. A low mastery climate along with high

autonomy for decision-making or a high level of task interdependence temper the negative relationship between knowledge hiding and IWB. The presence of a strong mastery climate and relatively autonomous self-contained tasks can neutralize or reverse the fact that knowledge hiding reduces IWBs (Černe, Hernalus, Dysvik, & Škerlavaj, 2017). Even and Labafi (2016) asserted that the transfer of knowledge and information helps organizations build a competitive advantage; however, employees hide knowledge to build their own portfolios (social desirability). The study outlines the factors of hiding behavior, including complexity of knowledge, individual behavioral characteristics, lack of responsibility for sharing knowledge, knowledge learning ability of the person requesting knowledge, power of the person requesting knowledge, level of trust among colleagues, the effect of ubiquitous media, a sense of internal competition, incentives provided by organization for sharing knowledge, level of personal contacts with colleagues, deceiving employees, and negative feedback from the organization.

4.5 Knowledge hiding and personality

Anand and Jain (2014), based on their theoretical framework drawn from the literature, outlined the relationship between the big-five personality traits and knowledge hiding. They concluded that extraversion, neuroticism, and agreeableness were negatively related to knowledge hiding, whereas conscientiousness and openness to experience were positively related to knowledge hiding. Demirkasimoglu (2015) studied knowledge hiding and big-five personality traits among academic professionals in a Turkish milieu. The study found that the phenomenon of knowledge hiding was less prevalent among academic professionals, but reasoned that Turkey is a collectivist country. Although insignificant, academicians did engage in knowledge hiding – mostly evasive hiding, then rationalized hiding, and least often by playing dumb. It is noteworthy that academicians use rationalized hiding when dealing with a colleague and play dumb when a supervisor requests some information, and that neuroticism was negatively related to playing dumb. Contrary to the theoretical framework proposed by Anand and Jain (2014), Demirkasimoglu found that extroverts hide knowledge by

playing dumb. Demirkasimoglu also validated the knowledge hiding questionnaire by Connelly et al. (2012), and did so in the Turkish context.

Pan, Zhang, Teo, and Lim (2018) examined the effect of dark triad of personality (Machiavellianism, narcissism, and psychopathy) on knowledge hiding behaviors. These dark personality factors were positively related to knowledge hiding. Machiavellianism was most strongly associated with evasive hiding. Narcissism was strongly associated with rationalized hiding, and psychopathy was strongly related to playing dumb. These results were supported through the psychological contract theory claiming that such behaviors can be attributed to transactional psychological contracts. Employees with these dark triads of personality do not believe in the norm of reciprocity.

4.6 Dyadic Intra-organizational relationships

Connelly and Zweig (2015) documented the effect of knowledge hiding on interpersonal relationships. Their research established that employees who engaged in rationalized hiding recognized the negative impact of their behavior on the relationship they shared with the target but did not anticipate that their behavior would lead the target to withhold knowledge in future. They perceived that their behavior involved a certain degree of deception and hence were unable to justify their behavior that maintains their self-belief of honesty. Evasive hiding and playing dumb have negative implications on the relationship between the hider and the target inasmuch as evasive hiding leads to greater intentions of targets to hide knowledge in the future. Employees who engaged in evasive hiding, perhaps the most deceptive form of hiding knowledge, anticipated damage to interpersonal relationships and retaliation by the target. Playing dumb is not as deceptive as evasive hiding. This explains why hidere do not perceive playing dumb to be harmful to their relationship; however, hiding is involved. Therefore, employees who play dumb foresee that targets would hide knowledge from them in the future.

A study investigating intra-organizational knowledge hiding highlighted that employees estimate their own engagement to a lesser degree compared to their coworkers (Serenko & Bontis, 2016). The existence of

stringent procedures concerning knowledge management systems and policies has no effect on knowledge hiding among employees in an organization. A culture of knowledge sharing that emphasizes group identity significantly decreases knowledge hiding among employees. Job insecurity promotes knowledge hiding, and employees reciprocate knowledge hiding or sharing behavior. They are likely to share knowledge if they have received knowledge, and they hide knowledge if a colleague has refrained from sharing knowledge in the past. More importantly, intra-organizational knowledge hiding promotes turnover, which may lead the organization to face financial as well as human capital losses (Serenko & Bontis, 2016).

Likewise, Arain, Bhatti, Ashraf, and Fang (2018) explored the supervisor–supervisee dyadic relationship with respect to knowledge hiding from the supervisor by the supervisee and organizational citizenship behavior directed by the supervisee toward the supervisor. The study found that subordinate distrust in the supervisor leads to the subordinate engaging in knowledge hiding behaviors. This finding is more prominent among foreign employees than local employees. Khalid, Basheer, Khan, & Abbas (2018) studied the relationship between abusive supervision and knowledge hiding behaviors and found that the two are positively related, and interpersonal injustice mediates this association. However, Islamic workplace behaviors moderated this relationship: in the presence of these behaviors, the association between abusive supervision and knowledge hiding is mitigated. Furthermore, Arshad and Ismail (2018) found that workplace incivility has a significant relationship with knowledge hiding in the workplace. The presence of neuroticism among employees further strengthened this relationship.

Knowledge hiding is an inescapable phenomenon at the workplace which may cause severe economic losses to companies. Zhao, Qingxia, He, Sheard, and Wan (2016) studied workplace ostracism as a potential antecedent of knowledge hiding. Their study used a time-lagged design that collected data from five-star hotels in China. Perceptions of being left out (ostracism) among employees led them to engage in knowledge hiding behaviors. Workplace ostracism made employees engage in evasive hiding and playing dumb. In addition, negative reciprocal beliefs and moral disengagement strengthened the correlation

between workplace ostracism and evasive hiding or playing dumb. There was no effect (linear or moderator: reciprocity and moral disengagement) of workplace ostracism on rationalized hiding.

4.7 Knowledge hiding: Other significant paradigms

Jha and Varkkey (2018) carried out in-depth interviews among research and development professionals in India. Their study identified factors that contributed to knowledge hiding behavior among employees. Their study identified personal factors such as distrust; perceived career insecurity; lack of reciprocity; lack of trust in one's own knowledge; lack of recognition, and organizational factors such as a competitive work environment, a threat to supremacy, and no rewards for sharing knowledge. Furthermore, the interviews identified strategies used by employees to hide knowledge. Extending the three types of knowledge hiding behaviors described by Connelly et al. (2012) – playing innocent (playing dumb), as in pretending to have no clue about the knowledge being asked for; being misleading (evasive hiding) by holding important facts about the information being requested, and rationalized hiding by giving excuses or postponing a discussion – Jha and Varkkey found counter-questioning by probing or asking the seeker for information to be a new type of knowledge hiding.

Hernaus, Černe, Connelly, Vokic, and Škerlavaj (2018) investigated evasive hiding in academia and particularly the resistance to sharing tacit knowledge. The study determined that academicians hide more tacit than explicit knowledge, and that personal competitiveness predicts evasive hiding of knowledge (tacit and explicit). However, if task interdependence and social support are high, the effect of personal competitiveness on evasive hiding can be reduced.

Wang, Han, Xiang, and Hampson (2018) documented the consequences of knowledge hiding on seekers' sales performance and team viability. The study asserted that perceived knowledge hiding has a positive effect on knowledge seekers' performance, whereas this is not true for seekers with high levels of social interaction. Moreover, perceived knowledge hiding has a negative influence on team viability. Nonetheless, extrinsic rewards can hamper this rela-

tionship and diminish knowledge hiding. In addition, Aljawarneh and Atan (2018) found that employee cynicism significantly moderates the relationship between workplace incivility and knowledge hiding.

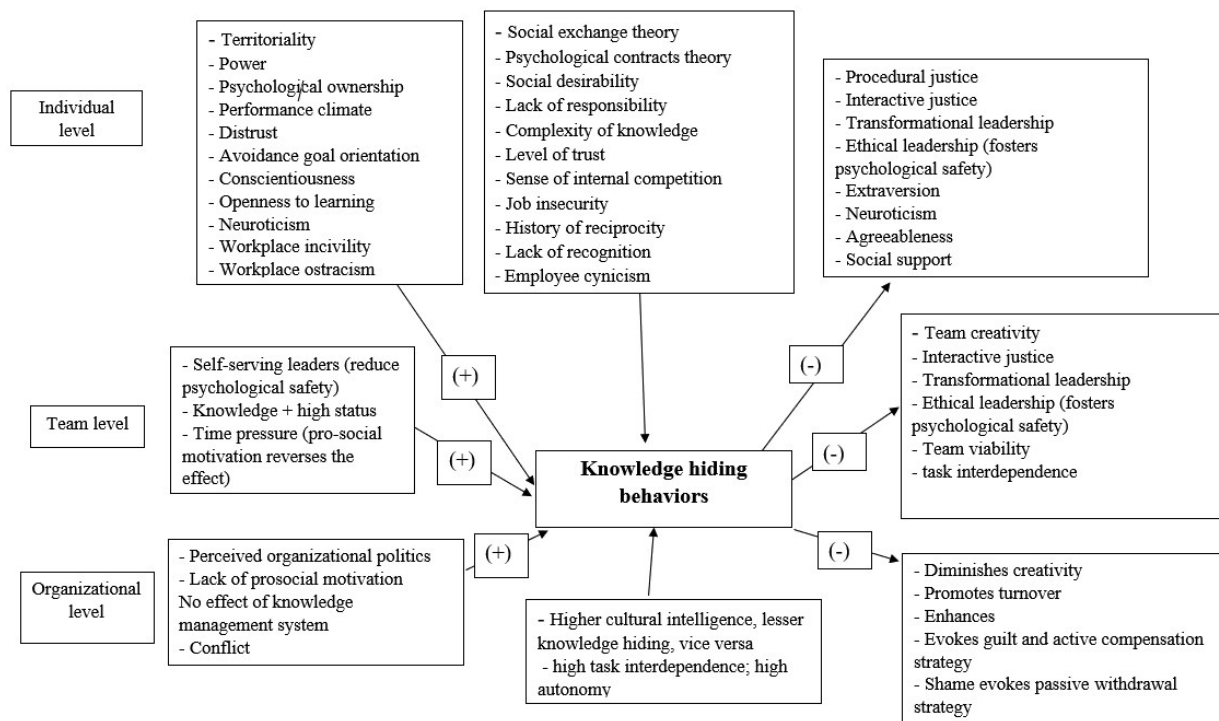
Semerci (2018) studied knowledge hiding behaviors and conflict and found that among employees in the software industry, conflict (task and relationship) was positively related to knowledge hiding, whereas perceived competition was not related to knowledge hiding behaviors. Assessing personal values as a moderator in the conflict and knowledge hiding relationship, Semerci observed that personal values moderate the relationship between task conflict and knowledge hiding. In other words, the effect of task conflict on knowledge hiding is higher if employees have individualistic personal values.

Škerlavaj, Connelly, Černe, and Dysvik (2018) moved away from the common method of self-report studies and studied knowledge hiding, perspective taking, time pressure, and prosocial motivation among employees of an insurance company through surveys and a laboratory experiment. Their survey results reported that time pressure was positively

related to knowledge hiding, and that prosocial motivation did not moderate the relationship between time pressure and knowledge hiding. To validate these findings, they experimentally tested these variables among undergraduate students of a Slovenian university and found that knowledge hiding differed depending on time pressure. Unlike the self-report study, the laboratory experiment demonstrated that prosocial motivation reverses the negative effect of time pressure on knowledge hiding.

Burmeister, Fasbender, and Gerpott (2018) examined the consequences of knowledge hiding as guilt or shame of the perpetrator. Their study found that evasive hiding and playing dumb (higher-order types of knowledge hiding) evoke greater feelings of guilt and shame among perpetrators who engage in hiding knowledge. Guilt elicits an active compensation strategy among employees, and shame elicits a passive withdrawal strategy that further governs their behavior. This finding was most appropriate in the case of playing dumb over evasive hiding, but it did not apply to rationalized hiding. Figure 3 presents a thematic map of these findings.

Figure 3: Consolidated thematic map of positive and negative relationships at the individual, team, and organizational levels



5. KNOWLEDGE HIDING REVIEW: SCOPE AND SIGNIFICANCE

Research published on knowledge hiding acknowledges the bias of self-report scales and the phenomenon of social desirability which makes employees report the behaviour less than their actual degree of practice. Hence, the use of qualitative measures using a mixed methodology (cross-ratings) would help to validate the actual degree of knowledge hiding. Case study examples of organizations implementing strategies to build trust among employees and to promote a mastery climate and ethical and transformational leadership can provide empirical insights to other organizations that may potentially help mold their policies and eliminate this practice in their respective organizations. Therefore, the constructs with potential associations with knowledge hiding have proliferated, thereby making knowledge hiding a vibrant phenomenon in recent times (Figure 2).

Furthermore, there are frameworks proposed by researchers that require further testing and validation. For example, Anand and Jain (2014) created a theoretical framework of the possible relationship between the big-five personality traits and knowledge hiding. They suggested that the framework should be empirically tested. Research must explore the work conditions/situations that stimulate or deter the negative relationship between knowledge hiding and creativity, especially within the purview of the motivational climate. DeGeofroy and Evans (2017) purported that emotional intelligence competencies (empathy, self-management, self-awareness, and relationship management) are positively associated with trust, organizational commitment, and teamwork, therefore reducing knowledge hiding behavior to a large extent. However, this theoretical assumption needs empirical testing which may facilitate the understanding of knowledge hiding behaviors and open prospects for developing interventions. Issac and Baral (2018) stated that job insecurity may be a causal factor of knowledge hiding which is yet to be tested.

Connelly and Zweig (2015) suggested potential dispositional moderators of knowledge hiding. For instance, Machiavellianism, agreeableness, automatic hostility, aggressiveness, irritability, anger, and Type-A personality characteristics may influence knowledge hiding and perceptions of targets who tend to hide

knowledge. Certainly, more research is required to holistically understand the costs of knowledge hiding and the interplay of the outlined factors among organizations. Demirkasimoglu (2015) studied knowledge hiding in collectivist cultures and recommended that the construct must be explored in other cultures as well. Additionally, individualistic and collectivist cultures can be compared with respect to the suggested variables. Huo, Cai, Luo, Men, and Jia (2016) recommended that a research design that integrates questionnaires with experiments must be considered for further research. Keeping in mind that justice perceptions reduce knowledge hiding behaviors and taking into consideration intervention factors such as organizational fairness as control factors in an experimental design could provide more-accurate results in exploring the intervention mechanism of knowledge hiding.

Serenko and Bontis (2016) recommended studying temporal periods that may trigger sharing or hiding behavior (for example, new employees may choose to share knowledge; however, established, and experienced employees may hide knowledge due to perceived threats to career progression). Moreover, the influence of gender and personality types on knowledge hiding also should be examined. Zhao, Qingxia, He, Sheard, and Wan (2016) suggested that a longitudinal design should be adapted to observe the effects of workplace ostracism on knowledge hiding. They also suggested observing the relationship between abusive supervision, knowledge hiding, and workplace ostracism.

Only one of the included studies used a culturally mixed group for assessing knowledge hiding; of the other 35, 20 studies related to collectivist cultures (China, Pakistan, India, Iran, South Korea, Jordan, Malaysia, Myanmar, and Turkey), and the remainder were carried out in individualistic cultural settings (the United States, Canada, Europe, Slovenia, and the United Kingdom) and were published in a variety of journals (Table 4). Collectivist cultures promote reciprocity, cooperation, and prosocial behaviors, but regardless of this fact, extensive knowledge hiding behavior has been reported in these cultures. The dearth of research on knowledge hiding in individualistic cultures calls for theoretical and empirical investigation and a cross-cultural examination of the construct for better understanding. For example, Burmeister, Fasbender, and Gerpott (2018) reported that knowledge

hiding can be reduced by eliciting an emotion for the behavior exhibited; however, their study was restricted to American and German cultures, so these results may vary for non-Western cultures. Moreover, there is no comparison of knowledge hiding among individualistic and collectivist cultures. To understand this construct in increasingly diverse organizations, it is important to compare factors that make employees hide knowledge, keeping in mind the idea of cultural diversity.

Černe (2014) established that knowledge hiding diminishes the creativity of an individual. Likewise, Bogilović, Černe, and Škerlavaj (2017) studied knowledge hiding, creativity, and cultural intelligence among individuals and teams, and concluded that individual knowledge hiding has an adverse effect on individual and team creativity and has a direct impact on the social exchange processes. They suggested that further research should be carried out to assess the effect of cultural diversity on knowledge hiding and creativity. Methods such as colleagues' assessment, leaders' assessment, or direct observation may be used, including self-report measures to validate self-report data. Knowledge transfer among organizations is a dyadic process; hence, knowledge hiding also must be observed in dyads, in addition to the individual level and the team level. According to Rhee and Choi (2017), the literature available on knowledge hiding and its antecedents can be extended by focusing on social isolation, shrinking of available knowledge over time, and simple social retaliation of underrecognized persons at work. Fong, Luo and Jia (2018) recommend exploring why and how knowledge hiding affects creativity by using experimental instead of self-report measures.

Černe, Hernaus, Dysvik, & Škerlavaj (2017) studied the relationship between knowledge hiding and innovative work behaviors such as mastery climate and job characteristics (task interdependence and decision-making autonomy) using a self-report and supervisor-rated method. The study further suggested that for such research, a longitudinal design is warranted. They suggested that future research should include a greater number of service organizations to address the heterogeneity among various industries. Similarly, Rhee and Choi (2017) suggested that further studies should adopt extended methodologies such as longitudinal panel design or laboratory experiments to observe knowledge hiding behaviors. Because qualitative research suggests that knowledge hiding is prominent practice owing to

various linkages outlined in the previous section, an assessment of human resource policies and knowledge hiding behaviors can be simultaneously carried out.

Future research can study psychological ownership, psychological safety, knowledge hiding, mastery climate, and ethical leadership together. For example, Men et al. (2018) suggested that moral attractiveness (perceptual and reflective) may reduce unethical decisions/behaviors, thereby proposing ethical behaviour could decrease knowledge hiding. Likewise, Arshad and Ismail (2018) could be extended by further studying how team-level incivility influences knowledge hiding. This will help organizations tackle this behavior, because it hinders the organization on creative, innovative, and performance fronts. Scholars essentially provide recommendations based on the assessment of their study and the methodology they have used, and if this phenomenon needs to be addressed, it has to be done in a systematic manner. Overall, experimental interventions in varied work contexts using dual methodologies and powerful statistical techniques such as conditional process analysis may give researchers noteworthy insights into the existing literature on the significant topic of knowledge hiding behaviors.

6. ADDRESSING KNOWLEDGE HIDING: PROSPECTS AND IMPLICATIONS

Research thus far helped understand the establishment and progression of the construct and described its linkages with respect to its adverse effects on an organization (diminishing creativity and innovation); transformational and ethical leadership; performance; goal orientations; perceived motivational climate; abusive supervision; mistreatment behaviors; and psychological ownership, including intra-organizational aspects. The dyadic knowledge hiding process has a major underpinning in social exchange theory and is well documented in the literature.

Although Connelly et al. (2012) acknowledged that knowledge hiding is a socially undesirable phenomenon among organizations, the base rate of employees reporting such behavior is less than the degree to which they practice it in the workplace. This may be addressed through qualitative studies in which assuring employees of the confidentiality

of the results shows that knowledge hiding does occur in organizations. Knowledge hiding can be due to a lack of personal knowledge resources or to personal interests, and its implications would also be worthy of research investigation.

Because trust has been identified as a significant predictor of knowledge hiding, human resource managers should work on building trust among employees through conducting workshops that aim at building cohesion among employees. Constantly sharing feedback with employees (say, every fortnight or once a month) may facilitate a mastery climate among teams. A mastery climate promotes cooperation, learning, and skill development, which in turn promote knowledge sharing. Nurturing a mastery climate in an organization also promotes psychological safety and will help reduce knowledge hiding behaviors among teams. Perspective-taking that involves employees getting to know each other may reduce knowledge hiding. In addition, time pressure has been identified as an antecedent of knowledge hiding, so organizations seeking to promote knowledge transfer may decrease role overload, role ambiguity, work overload, and sudden deadlines. Organizations may become more productive if employees face less time pressure for completing tasks urgently. Burmeister et. al. (2018) stated that knowledge hiding has emotional sentiments attached to it and is based on the emotion-based reciprocity mechanism. Therefore, if employees are made to emotionally attach themselves, they may become involved in moral and organization-oriented behaviour rather than immoral and self-oriented behaviour.

Khalid et al. (2018) implied that values and beliefs serve as a safeguard against abusive supervision and keep employees stable and make them refrain from knowledge hiding behaviours. Subsequently, building ethical values among employees can reduce the adverse effects of abusive supervision among employees. Likewise, Arshad and Ismail (2018) found that identifying neurotic employees and training them can help reduce knowledge hiding behaviours in the workplace. Personal competitiveness can be an antecedent of evasive knowledge hiding, and training can prove beneficial in up-skilling and making employees competent. In addition, the combination of job characteristics, especially task interdependence, social support, decision making, autonomy, and a mastery climate, are significant conditions which can hampered knowl-

edge hiding behavior to a large extent, thus keeping employees on the track of creativity, innovation, enhanced performance, and productivity.

6.2 Prospects: The Way Forward

Several facets of knowledge hiding are yet to be examined. On the basis of four broad themes, namely theoretical perspectives, employee behaviours, demographic learning, and team-level predictors, we suggest recommendations for future research of parameters which have not yet been considered by researchers.

From a theoretical and employee behaviour standpoint, we propose a couple of theories and behaviours that can extend the academic literature on knowledge hiding. Firstly, the theory of planned behaviour (Ajzen, 1991) can explain whether employees plan hiding knowledge. Secondly, the job demands resources theory (Bakker & Demerouti, 2014) explains that employees craft their jobs (using social and structural job resources) to cope with the demands the job places on them. Knowledge hiding here can be understood in two ways: do employees hide knowledge because of the demands their job places on them, or do employees use knowledge as a resource to cope with their job demands, and hence engage in hiding it? Studies of these research perspectives will not only enrich literature but also provide insights for managers to deal with knowledge hiding behaviours. Thirdly, the time perspective of an individual (Zimbardo & Boyd, 1999) can be measured to predict knowledge hiding behaviours. Time perspective is the totality of the perception of past, present, and future of an individual at a point in time. There are five types of time perspective, namely past positive, past negative, present hedonistic, present fatalistic, and futuristic. Does being in a perspective lead to employees hiding knowledge? Decreasing knowledge hiding practices is beneficial for healthy organizational functioning at all levels. Therefore, we suggest studying knowledge hiding with special reference to the aforementioned questions to understand the construct in a comprehensive manner.

Some of the demographic learnings can be of great benefit for practitioners and organizational development experts, such as the effect of gender, career stage, and work experience in predicting knowledge hiding. Furthermore, adding to the theory of planned be-

haviour, the interaction effect between work experience and the position held within a team can be assessed to understand and decrease knowledge hiding behaviours. The proposed framework is presented in Figure 4.

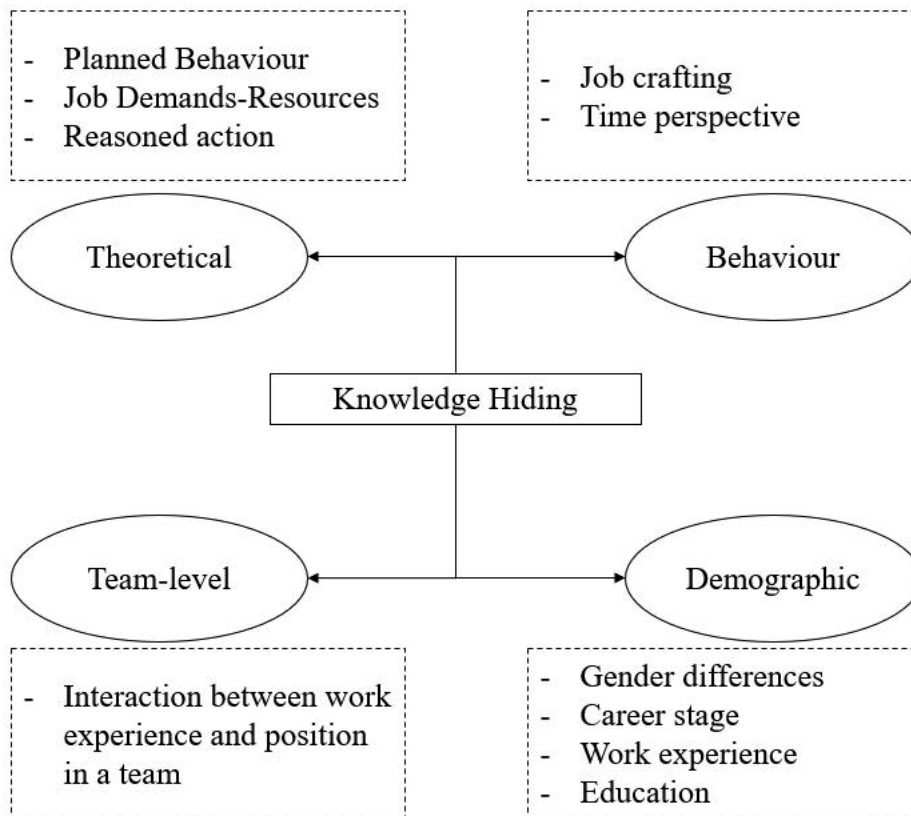
6.2 Managerial implications

Overall, the greatest implication lies in training and development professionals to conduct training that enhances the emotional intelligence of employees. Such human resource development activities may save employees from engaging in knowledge hiding practices and can build accountability among the employees. Thus, learning experiences from the training and development activities will further help understand employee behaviors. This, in turn, will help in formulating suitable human resource policies to facilitate individual and situational norms to be adopted by employees. Moreover, promoting prosocial behaviours and organizational citizenship among employees and ingraining a sense of community will largely reduce knowledge hiding behaviours.

7. DISCUSSION AND CONCLUSION

This retrospective narrative review with research profiling of knowledge hiding behaviours and related research is a ready reckoner for researchers and practitioners which eventually will improve the knowledge management systems. Taking into account prominent studies of knowledge hiding, the review summarizes the major areas of literature, namely psychological ownership, leadership, personality, creativity, innovative workplace behaviours, and dyadic relationships. It also addresses the linkages and associations of knowledge hiding with other paradigms along with its implications and future extensions. Above all, it provides a framework for future courses of research using possible theoretical paradigms. Our review might present a myopic viewpoint of perceived differences in perspectives including sampling methodologies, and this narrative analysis is no exception. Thus, we recommend that sophisticated systematic reviews and meta-analysis should also be carried out on the construct.

Figure 4: Directions for future research



EXTENDED SUMMARY/IZVLEČEK

Znanje je sredstvo za povečanje in ohranjanje konkurenčne prednosti vsake organizacije. Slednje spodbujajo izmenjavo znanj preko uvedbe sistemov za upravljanje znanja. Kljub temu, da imajo organizacije že integrirane različne politike za izmenjavo znanja, se večina zaposlenih vedno ne poslužuje prakse izmenjave na svojih delovnih mestih. Raziskava avtorjev Connelly et al. (2012) ta pojav poimenuje "skrivanje znanja" in ga opredeli kot "naklepni poskus posameznika, da se prekrije informacija ali znanje, ki jo zahteva druga oseba." Zaradi pomembnosti in vse večje pojavnosti omenjenega konstrukta avtorji študije sistematično in retrospektivno analizirajo 35 raziskovalnih člankov na temo skrivanja znanja, objavljenih med letoma 2008 in 2018. Prispevek tako podaja glavne ugotovitve omenjenih analiz ter raziskuje prakse skrivanja znanja, razvrščene v kategorije in ustrezne podteme. Na podlagi obstoječih raziskav avtorji dodajajo svoje ugotovitve o obsegu in pomenu skrivanja znanja. Izpostavljene so možnosti nadaljnjega raziskovanja s teoretičnega, metodološkega, tematskega in demografskega vidika ter implikacije za managerje.

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