

Practices that Mitigate Organizational Knowledge Hiding: A Systematic Literature Review

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Abstract: The importance of Knowledge sharing (KS) within organizations is well recognized. Despite efforts by firms to facilitate KS, employees are sometimes unwilling to share their knowledge. Inefficient KS can lead to reduced productivity and innovation and increased employee frustration. Knowledge hiding (KHi) occurs when someone withholds knowledge when asked to share it. While the literature contains much about the antecedents of KHi, our systematic literature review found very few articles that discuss how to mitigate it. Hence, this study sought to associate KS practices with organizational KHi motivations and to find ways to mitigate the behavior. To do so, a systematic literature review was conducted in two main sources: Scopus; and Web of Science. The collected data were then subjected to content analysis. The results show KS practices designed to reduce organizational motivations for KHi are based on HR practices (recruitment, training, and mentoring) and organizational structure (teamwork, interdependence between tasks, job rotation, knowledge mapping, best practices, and communities of practice). KS practices such as face-to-face interaction and informal conversation appear to build trust and reduce KHi. Organizational antecedents of KHi, such as workplace bullying and incivility, are related with the organizational culture, and leadership is relevant to avoid negative events. Explicit and tacit KS practices can mitigate KHi. This research offers academic and managerial contributions on the KHi and how to mitigate it. Building on this study, future research could empirically test the relationship between KHi motivations and KS practices to mitigate KHi.

Keywords: Knowledge hiding, Knowledge sharing practices, Knowledge hiding mitigation, Systematic literature review, Knowledge hiding antecedents

1. Introduction

Knowledge Management (KM) began to gain the attention of business executives in the late 1990s (Hansen *et al.*, 1999), when knowledge sharing (KS) was identified as a source of sustainable competitive advantage (Mahdi and Nassar, 2021). However, employees may not always be willing to share their knowledge, even when the company wants to facilitate it, resulting in ongoing issues with KS (Gagné *et al.*, 2019). This is where the concepts related to knowledge hiding (KHi), which occurs when someone withholds knowledge when requested (Connelly *et al.*, 2012), come into play and the reason why researchers continue to discuss KHi behavior today (Ruparel *et al.*, 2021; Koay and Lim, 2021).

Although organizations may encourage knowledge sharing (KS), these efforts often fail (Hislop, 2002). There are various reasons for this, including abusive supervision (Khalid *et al.*, 2018), unethical leadership (Qin *et al.*, 2021), organizational politics (Malik *et al.*, 2019), and employee exclusion (Miminoshvili and Černe, 2021). As a result, there is a lack of both KS and knowledge retention. Knowledge hiding (KHi) negatively affects employee creativity (Malik *et al.*, 2019) and other important constructs.

Panopto (2018) found 60% of employees in surveyed companies struggle to access the knowledge they need from their colleagues. Jiang *et al.* (2019) found that 17% of individuals who hide their knowledge tend to be unsuccessful at work. Additionally, Myers (2017) reported that companies on the Fortune 500 list lose \$31.5 billion per year due to ineffective knowledge sharing by employees. Again, according to Panopto (2018), inefficient knowledge sharing also results in productivity losses of \$47 million each year for large US businesses. Other studies have shown that 81% of employees feel frustrated when they cannot access the knowledge they need to complete their work, and they spend an average of 5.3 hours per week waiting for support or collaboration from their colleagues (Panopto, 2018).

The literature has identified various antecedents of knowledge hiding (KHi), including the predictive effect of abusive supervision (Islam *et al.* 2021) as well as six broadly related categories, namely psychological, behavioral, interpersonal, performance, motivational, organizational, and moral and belief factors (Garg *et al.* 2021a). This study focuses on the organizational antecedents, as it is the responsibility of the organization to mitigate KHi. To minimize KHi, Di Vaio *et al.* (2021) suggest there is a need to understand why and when people hide

knowledge, and adopt strategies accordingly. However, while the literature on KHi antecedents is extensive, few studies have addressed how to mitigate KHi. Therefore, the objective here is to link knowledge sharing (KS) practices to KHi motivations in the organizational category, with the aim of reducing KHi.

2. Knowledge Hiding, KHi Mitigation and KS Practices

2.1 Knowledge Sharing

Knowledge sharing (KS) is an important process in which both tacit and explicit knowledge are exchanged, leading to the generation of new knowledge (Hooff and Ridder, 2004). This two-way process involves both the donation and collection of knowledge, with one side requesting knowledge and the other supplying it. For firms to acquire competitive advantage, this exchange of knowledge is essential. Knowledge donation occurs when knowledge is transmitted without a specific request, while knowledge collection occurs when someone requests knowledge from another and it is shared (Hooff and Ridder, 2004).

Mechanisms or practices have a crucial role in facilitating the interaction between tacit and explicit knowledge. These mechanisms can be defined as intentional ways of disseminating knowledge that support KM processes (Oliveira et al., 2014). Meetings (Nonaka, 1994), videoconferencing, mentoring, and other forms of interaction enable the sharing of tacit knowledge and its conversion into explicit knowledge (Nonaka and Konno, 1998). Explicit knowledge can be organized through repositories or other means (Nonaka, 1994). Individuals can internalize knowledge through lessons learned, best practices, and storytelling. KS mechanisms include mentoring, socialization, simulation, staff meetings, cooperation, community of practices (COP), discussions, training, workshops, and many others (Raudeliuniene et al., 2020).

Numerous studies have explored knowledge sharing (KS) and its prerequisite conditions (Nonaka and Konno, 1998). However, despite the attention given to KS practices, they are still not commonly implemented in organizational environments (Aljuwaiber, 2016). To analyze this situation, KHi has emerged as a useful construct. In the next section, we will explore and detail this concept.

2.2 Mitigating Knowledge Hiding

Building on the previous section's concept of KS as a process of donation and collection, KHi can be seen as a counterproductive behavior that hinders the knowledge collection aspect of KS. Essentially, KHi arises when someone withholds knowledge that is being requested by another individual. To understand this concept more clearly, one can simply ask oneself: Do I have the knowledge that is being requested? If the answer is yes, and I agree to pass on the knowledge, it is shared through the process of collection. However, in the case where I have the knowledge, and decide to withhold the knowledge, I am engaging in KHi. As a result, the knowledge collection process is obstructed, and KS does not occur as effectively (Oliveira et al., 2021).

Few studies have focused on understanding how firms can mitigate KHi (Butt et al., 2020; Butt, 2021; Men et al., 2020). For instance, Butt (2020a) identified five managerial characteristics that can help to diminish KHi in a buyer-supplier relationship: self-monitoring; self-efficacy; professional commitment; personal friendship; and, intrinsic motivation. Additionally, shared goals have been found to decrease KHi among individuals (Butt et al., 2021a), while cultivating a collaborative environment has been shown to be beneficial in reducing KHi (Xiong et al., 2021). Table 1 provides a summary of suggested strategies for KHi mitigation from various authors (Abdillah et al., 2020; Koay and Lim, 2021; Men et al., 2020; Butt, 2020b; Nadeem et al., 2020; Xiong et al., 2021; Butt et al., 2021a; Dodokh, 2020; Arain et al., 2020; Oubrich et al., 2021; Jasimuddin and Saci, 2022) based on the organizational category presented by Garg et al. (2021a).

Table 1: Suggestions for Mitigating KHi (Organizational Category)

Suggestions for mitigating KHi	Types
Leader's unselfish action and voluntary helping behaviour, leadership development programs (Abdillah et al., 2020); leaders should lead by example, ethical leadership behaviour, leaders' ethical behaviour as part of the performance appraisal (Koay and Lim, 2021); to establish fairness through the distribution of tasks (Oubrich et al., 2021).	Leader
KS culture (Butt, 2020b); procedures to foster KS behaviour (Arain et al., 2020);	KS culture

Suggestions for mitigating KHi	Types
team mastery climate (Men et al., 2020): learning, cooperation, skill development.	
Including KS criteria when revising employee work contracts (Butt, 2020b; Butt <i>et al.</i> , 2021a); rapid promotion in the career, career progression (Jasimuddin & Saci, (2022); procedural instructions for work decisions (Oubrich et al., 2021); non-discriminatory HR policies (Arain et al., 2020); hiring people who have altruistic attitudes and behaviour (Abdillah et al., 2020); performance appraisal (Koay and Lim, 2021); active encouragement (Jasimuddin & Saci, (2022).	HR practices
Reduce hierarchical layers, open space workstations and reducing chain of command (Butt, 2020b; Butt <i>et al.</i> , 2021a); interaction with top management (Oubrich et al., 2021).	“Open doors”
Training for knowledge and information management (Arain et al., 2020); training programs to develop Emotional Intelligence (de Geofroy and Evans, 2017); ethics training (Koay and Lim, 2021; Men et al., 2020).	Training
Information-sharing practices (Dodokh, 2020); developing informal interaction (Butt, 2020b; Butt <i>et al.</i> , 2021a); communicate shared goals (Nadeem et al. (2020); institutionalized platforms for communication and Knowledge Exchange, and formal and informal mentoring programs (Men et al., 2020); supporting conference attendance, patents, and publishing papers (Jasimuddin & Saci, (2022).	Interaction

3. Method

To identify the antecedents of KHi behavior and the mechanisms or practices that could be used to mitigate it, a Systematic Literature Review (SLR) was conducted. Scopus and Web of Science, which are the main sources for this area/theme, were used to conduct the SLR. Multiple queries were run on both databases to define the corresponding research string for each. The final query used on the Scopus database to date was: (TITLE-ABS-KEY(("knowledge hid*" OR "knowledge conceal" OR "knowledge withhold*")) AND TITLE-ABS-KEY(("practic*" OR "mechanism*"))) AND (LIMIT-TO(DOCTYPE, "ar")) AND (LIMIT-TO(LANGUAGE, "English")). As of October 11th, 2021, the Scopus database yielded 160 articles.

The corresponding research string format used on the Web of Science database was: ((TI=("knowledge hid*" OR "knowledge conceal" OR "knowledge withhold")) OR (AB=("knowledge hid*" OR "knowledge conceal" OR "knowledge withhold")) OR (AK=("knowledge hid*" OR "knowledge conceal" OR "knowledge withhold"))) AND ((TI=("practic*" OR "mechanism*")) OR (AB=("practic*" OR "mechanism*")) OR (AK=("practic*" OR "mechanism*"))) AND (DT=(Article)) AND (LA=(English)). This query was executed and yielded 130 items in the Web of Science database as of October 11th, 2021.

To remove duplicate items, we used Excel to sort the articles by alphabetical order. There were 124 duplicate articles between Scopus and Web of Science. Six articles that were only present in the Web of Science database were added, bringing the total number of articles to 166. After removing the duplicates, the titles and abstracts of the remaining articles were read to determine their relevance to the subject under investigation. Forty (40) articles were found to be unrelated to the subject and were removed, leaving 126 articles. After reading these articles in full, the researchers selected 24 articles for organizational antecedents of KHi and 19 articles for mechanisms, resulting in a total of 42 articles (one of which discussed both antecedents and mechanisms).

The data analysis process followed the Content Analysis method (Bardin, 2009), which involves pre-analysis, exploration of the material, and treatment of the results. During the pre-analysis, the antecedents of KHi were matched with KS mechanisms by two different researchers. Any differences between the choices were discussed

by the same researchers until a consensus was reached, as recommended by Krippendorff (1980). This two-step process ensured the accuracy and reliability of the analysis.

4. Data Analysis and Results

The systematic literature review (SLR) revealed several factors that motivate organizational KHi, as well as many pertinent knowledge sharing (KS) practices. To address each of the antecedents that contribute to KHi, we matched a KS practice that can help reduce the likelihood of this behavior. In Table 2, the first column lists the antecedents that increase KHi, while the second column lists the KS practices that can help mitigate this behavior.

Table 2: KHi Antecedents and Proposed KS Practices to Mitigate Their Effects

ANTECEDENTS OF KHi	KS PRACTICES
Leadership (transformational/ ethical/ empowering/ knowledge) Abdillah <i>et al.</i> (2020); Anser <i>et al.</i> (2021); Ladan <i>et al.</i> (2017a); Ladan <i>et al.</i> (2017b); Lin <i>et al.</i> (2020); Men <i>et al.</i> (2018); Xia <i>et al.</i> (2019)	(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020). (c) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Lang (2001). (d) Mentoring - Al-Ghassani (2002); Egbu <i>et al.</i> (2003); Henriques and Curado (2009).
Workplace incivility Arshad and Ismail (2018); Irum <i>et al.</i> (2020)	(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020).
Abusive supervision Hamza <i>et al.</i> (2021); Jahanzeb <i>et al.</i> (2019); Khalid <i>et al.</i> (2018)	(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020).
Workplace ostracism Riaz <i>et al.</i> (2019); Zhao <i>et al.</i> (2019)	(a) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020). (b) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Lang (2001). (c) Teamwork - Kong and Thomson (2009). (d) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011).
Organizational identification Yao <i>et al.</i> (2020); Zhao <i>et al.</i> (2019)	(a) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Egbu <i>et al.</i> (2003); Lang (2001). (b) Teamwork - Kong and Thomson (2009). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Communities of Practice - Ruggles (1997); Egbu <i>et al.</i> (2003); Al-Ghassani <i>et al.</i> (2005).
Organizational justice Abubakar <i>et al.</i> (2019)	(a) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Egbu <i>et al.</i> (2003); Lang (2001). (b) Teamwork - Kong and Thomson (2009). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020).

<p>KM systems; Organizational policies; culture; job insecurity Serenko and Bontis (2016)</p>	<p>(a) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Egbu <i>et al.</i> (2003); Lang (2001). (b) Teamwork - Kong and Thomson (2009). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020). (e) Mentoring - Al-Ghassani (2002); Egbu <i>et al.</i> (2003); Henriques and Curado (2009).</p>
<p>Organizational psychological ownership Ladan <i>et al.</i> (2017b)</p>	<p>(a) Knowledge mapping - Yasin and Egbu (2010). (b) Interdependence between tasks - Garg <i>et al.</i> (2021b). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Job Rotation - Lu and Yang (2015).</p>
<p>ANTECEDENTS OF KHI</p>	<p>KS PRACTICES</p>
<p>Lack of recognition Jha and Varkkey (2018)</p>	<p>(a) Communities of Practice - Ruggles (1997); Egbu <i>et al.</i> (2003); Al-Ghassani <i>et al.</i> (2005). (b) Best Practices - Benbya and Belbaly (2005). (c) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Egbu <i>et al.</i> (2003); Lang (2001).</p>
<p>Restrictions from senior management, norms, and expectations of the firm Butt and Ahmad (2019)</p>	<p>(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Mentoring - Al-Ghassani (2002); Egbu <i>et al.</i> (2003); Henriques and Curado (2009).</p>
<p>Perceived organizational politics Malik <i>et al.</i> (2019)</p>	<p>(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020).</p>
<p>Leader-signaled KHi Offergelt <i>et al.</i> (2019)</p>	<p>(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020).</p>
<p>Job tension Riaz <i>et al.</i> (2019)</p>	<p>(a) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Egbu <i>et al.</i> (2003); Lang (2001). (b) Teamwork - Kong and Thomson (2009). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Mentoring - Al-Ghassani (2002); Egbu <i>et al.</i> (2003); Henriques and Curado (2009).</p>
<p>Task conflict and relationship conflict Boz Semerci (2019)</p>	<p>(a) Face-to-face interaction - Al-Ghassani <i>et al.</i> (2005); Egbu <i>et al.</i> (2003); Lang (2001). (b) Teamwork - Kong and Thomson (2009). (c) Informal Conversation (Happy-Hours, informal meetings) - Hansen <i>et al.</i> (1999); Hautala (2011). (d) Mentoring - Al-Ghassani (2002); Egbu <i>et al.</i> (2003); Henriques and Curado (2009).</p>
<p>Leadership demands Butt <i>et al.</i> (2020)</p>	<p>(a) Recruitment - Tan <i>et al.</i> (2010); Al-Ghassani <i>et al.</i> (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani <i>et al.</i> (2005); Koay and Lim (2021); Abdillah <i>et al.</i> (2020).</p>

Workplace Yao et al. (2020)	bullying	(a) Recruitment - Tan et al. (2010); Al-Ghassani et al. (2005). (b) Training (leadership development programs, ethics program, KS) - Al-Ghassani et al. (2005); Koay and Lim (2021); Abdillah et al. (2020).
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This category of antecedents, which includes workplace bullying and workplace incivility, is closely connected to the organizational culture. Effective leadership plays a critical role in preventing such negative incidents. This aligns with the views of Koya and Lim (2021), who recommend that leaders should serve as role models for their staff.

5. Conclusion

This study has sought to focus on means of mitigating KHi by identifying KS practices that address organizational motivations for KHi. To achieve this goal, both explicit and tacit KS practices, as well as formal and informal interactions, were considered. The identified KS practices were essentially HR related, such as recruitment, training, and mentoring, as well as organizational structure practices such as teamwork, interdependence between tasks, job rotation, knowledge mapping, best practices, and communities of practice.

Based on our analysis, face-to-face interaction and informal conversation appear to be effective means of avoiding KHi because they build trust. Specifically, face-to-face interaction was associated with most of the identified KHi motivations (8 out of 12). However, the shift towards remote work has made it challenging to rely on face-to-face interaction as a means of mitigating KHi. Nevertheless, KS practices such as training, mentoring, and task relatedness were found to be effective in facilitating task execution while also mitigating KHi.

In summary, the main academic and managerial contribution of this research is the aggregation of knowledge on how to mitigate KHi. However, the study is limited as it only focuses on the Organizational category. Future research can build on this study by exploring the other categories proposed by Garg et al. (2021a) and employing empirical research to verify the relationship between KHi motivations and KS practices.

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