



Research Article

Openness to experience moderates the effect of abusive supervision on knowledge-hiding behavior

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ABSTRACT

Organizations recognize knowledge as a source of a competitive edge. Organizations have made significant efforts to improve the scope of information sharing among employees to improve creativity and innovation. Despite these safeguards, employees continue to conceal their knowledge from their coworkers. Further, leadership style plays a crucial role in employee behavior. Therefore, this study investigates the relationship between abusive supervision and knowledge hiding behavior. Moreover, the moderating role of openness to experience has been explored. Data were collected from faculty members (N=309) from the different universities using questionnaires following a simple random sampling technique. The results revealed a direct relationship between abusive supervision and knowledge hiding. Openness to experience was negatively correlated with knowledge hiding. Further, the moderating role of openness to experience between abusive supervision and knowledge hiding relationship was low but significant. The implications and limitations of this study are also discussed.

Keywords: *Abusive Supervision; Knowledge Hiding; Openness to Experience*

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1. INTRODUCTION

Usually, all companies, including academic institutions, prioritize team development and information sharing. Nonetheless, despite major knowledge management efforts, some cases of knowledge hiding have been identified both in corporate and educational institutions (Ghani et al., 2020). In the current dynamic environment, organizations' survival is based on innovation (Barrett et al., 2015) which is not possible by concealment of knowledge. It is essential to transfer knowledge (Argote & Fahrenkopf, 2016) which enhances productivity (Abubakar et al., 2019).

Considering such importance, early studies have been focused on positive work behavior, for example, knowledge sharing Webster et al. (2008), to the detriment of addressing counterproductive activities such as knowledge concealing (Serenko & Bontis, 2016). Knowledge hiding is the concealment of knowledge when demanded (Connelly et al., 2012) and is not contrary to knowledge sharing, and is a dissimilar construct (Connelly & Zweig, 2015). Knowledge hiding has unfavorable effects on both individuals and organizations (Zhao et al., 2016) for example, low performance (Connelly et al., 2019), creativeness (Fong et al., 2018), interpersonal distrust (Bjorvatn & Wald, 2020), and



interpersonal relationship (Connelly & Zweig, 2015). Interpersonal and knowledge-related factors have been studied concerning knowledge hiding (Butt, 2020) and little attention has been given to the dysfunctional behavior of a leader (Ayub et al., 2021).

The current study brings two objectives. The first objective is to consider the recommendations of Khalid et al. (2018), and Connelly et al. (2019), who called for further studies on abusive supervision and knowledge hiding behavior. It is important to provide a comprehensive view of exploited employees' various KH behaviors as a result of exposure to harmful supervising conduct. Supervisors are organizational authorities and main key persons, their actions may have a significant impact on subordinates' voluntary behaviors, for example, knowledge concealment (Srivastava et al., 2006). Abusive supervision is the employees' opinion to which their managers indulge in impolite and unfriendly behaviors (Tepper, 2000). Zhang et al. (2019), highlighted that abusive supervision is a prevalent organizational phenomenon that degrades positive behaviors and encourages negative behaviors and as a result, it imposes a significant influence on employees' behavior. Furthermore, it has also been identified that abusive supervision is a significant occupational stressor that results in increased psychological suffering in mistreated subordinates (Restubog et al., 2011).

Second, the relation between personality and knowledge hiding is unexplored (Malik et al., 2019) further, this study seeks to follow the recent recommendations of Zhou et al., (2022) who called to explore the personality traits as moderating role for negative behavior i.e. knowledge hiding. Personality traits predict work attitude and behavior (Staw et al., 1986) and it appears highly plausible that certain personality characteristics can make people more or less inclined to conceal knowledge (Demirkasimoglu, 2016). Big Five are significantly correlated to behavioral goals and knowledge sharing (Guadagno et al., 2008). According to Penney et al. (2011), openness to experience is less studied as compared to other traits in Big Five. It is a significant consideration that openness to experience promotes intellectual curiosity and might be connected to innovation, which explores new independent methods of investigation and manifestation (Simha & Parboteeah, 2020) and knowledge sharing (Cabrera et al., 2006). It recommends that this trait is relevant for beneficial knowledge-related activities; yet, results associated with deviant behaviors are limited and inconsistent. Likewise, research has found a negative link between openness to experience and knowledge withholding intention in an educational setting (Wang et al., 2014). The investigation of openness to experience with knowledge hiding would deliver novel insights into the available literature.

Based on the conservation of resource theory COR (Hobfoll, 2002). COR proposes that individuals with limited resources will suffer a downward spiral (Hobfoll, 1998). Workers subjected to abusive supervision can agonize psychologically as a result of a loss of internal resources (Hobfoll, 2001), which would contribute to employees' feelings of workplace stress, anxiety (Harvey et al., 2007), and other negative outcomes. This sense of the psychological cost of resources would encourage mistreated subordinates to conceal information from workmates to protect their present resources and status in organizations. Therefore, grounded on the COR, this study investigates the moderating role of openness to experience between abusive supervision and knowledge hiding.

Workers are driven to appraise whether their exhausted resources can be effectively refilled by their companies when faced with prospective or genuine resource loss in a scenario involving supervisory abuse (Lee et al., 2018). Innovative employees may help colleagues to share and discuss the new possible methods of achieving the targets and thus may not hide the knowledge. Employees may experience good or bad reciprocal connections they might create with colleagues in organizations, as well as varying levels of organizational support employees may get under abusive supervision. Our study extends the abusive supervision and knowledge hiding relation (Khalid et al., 2018) by exploring the moderating role of openness to experience. Employees who are open to experiences may not consider the loss of resources and mitigate the knowledge hiding even in the environment prevailing the abusive supervision.

This study is significant in an academic setting as like other industries' counterparts, involvement of cooperation among employees, competitive constraints to achieve, if not outperform others (Hernaus et al., 2019). Knowledge sharing is the top reason for educational institutes' growth, success, and survival (Samdani et al., 2019). Such institutions are designed for knowledge dissemination, though knowledge hiding prevails even among students (Hernaus et al., 2019; Ghani et al., 2020). Knowledge is a source of competitive advantage and thus can be experienced in academic institutions (Chaudhry, 2005). The available essential literature on Knowledge hiding anticipates its progressively increasing relevance in the future. Nonetheless, research investigating organizational behavior and knowledge management, the concept remains scarce in academic contexts (Garg & Anand, 2020; Ghani et al., 2020). Thus, it is significant to investigate this phenomenon as information transfer and management are the most crucial products of an academic institution (Annansingh et al., 2018). This construct has toxic consequences for both educational institutions and other organizations as well (Bari et al., 2020; Cerne et al., 2014; Fong et al., 2018). This educates the need to explore how to mitigate knowledge hiding.

2. LITERATURE REVIEW

2.1. ABUSIVE SUPERVISION AND KNOWLEDGE HIDING

Knowledge hiding may not harm the colleague directly, rather is an unreceptive response in certain situations like abusive supervision (Khalid et al., 2018). Subordinates who are subjected to abusive supervision frequently suffer dissatisfaction and also a loss of personal control (Ashforth, 1997). According to Mitchell and Ambrose (2007), When they believe that direct reprisal may elicit more retaliation, they may respond directly against the abuser or convey violent behaviors to less influential or more approachable targets (e.g. coworkers). Supervisors hold higher authority and are the decision makers (Tepper et al., 2009) thus playing a crucial role in proficiency, target attainment, and engagement. As a result, employees would believe that direct replies toward the boss not only are expected to discontinue ill-treatment but can provoke more acute antagonism on the side of the initiator. As a result, a subordinate is reluctant to actively retaliate against the

abuser to resolve the circumstances (Zellars et al., 2002) and exhibits anger against the organization instead of supervisors (Mitchell & Ambrose, 2007).

Based on the social exchange theory, relations are based on Social relationships are established on mutual support (Blau, 1964). The subordinate's behavior is based on the attitude and treatment of the supervisor (Gouldner, 1960). Positive and respectful behavior of the supervisors results in positive behavior from the employees, while when employees are treated abusively, they tend to respond in counterproductive behavior (Wu & Lee, 2016). Similarly, displaced aggression theory (Dollard et al., 1939) recommends that due to the supervisor's power and authority, victims of abusive leaders do not exhibit their hurtful attitudes and behaviors explicitly to their supervisors (Wang & Noe, 2010) and such employees as the retaliatory reaction may engage in negative behavior i.e. knowledge hiding (Mitchell & Ambrose, 2007).

Abused employees may attempt to retaliate against their abusers by withholding acts that benefit the organization and its members which can be detrimental to both organizations and employees. Individual-targeting knowledge hiding and negative knowledge behaviors against colleagues can be detrimental to the company and its members. Therefore, employees would retort to abusive supervisors by hiding their knowledge, therefore;

H1. Abusive supervision is positively related to knowledge-hiding behaviors.

2.2. THE MODERATING ROLE OF OPENNESS TO EXPERIENCE

Personality is the unique set of behaviors, perceptions, and affective processes that emerge as a result of both biological and environmental elements (Corr & Matthews, 2020) which predicts individuals' behavior (Staw et al., 1986). The most studied traits in personality are the Big Five (John & Srivastava, 1999). Among these traits, the focus is on openness to experience, which is well-established with positive behavior while unsettled with negative behavior (Simha & Parboteeah, 2020). Individuals who are open to experience are imaginative, inventive, refined, and intelligent (Gupta, 2008). Low openness to experience has been linked to weaker levels of morality and ethics (McAdams, 2009) similarly, it leads to nonstandard behavior (Amiri et al., 2011). Individuals with higher openness are fascinated both about their inner and outer worlds, and they are open to considering innovative ideas and exceptional values and are intense receptive to both positive and negative emotions, which may influence desired and unsolicited behaviors like knowledge sharing or hiding (Anand & Jain, 2014). Such employees participate in developmental activities (Major et al., 2006). This trait is related to both ethics (Simha & Parboteeah, 2020) and deceitfulness (Nguyen & Biderman, 2013). Individuals having this trait are likely to engage less in deviant behavior (McAdams, 2009). Simha and Parboteeah, (2020) believe that this is because people who are open to experience are more inclined to innovativeness and explore novel alternative modes of expression and inquiry. Consequently, this aspect of their personality is quite likely to dominate and shield their dishonest behavior (Simha & Parboteeah, 2020) and they would

share knowledge than hiding it (Matzler & Mueller, 2011). This is because open individuals incline to contribute knowledge and also strive for other people's perspectives.

Individuals higher on openness to experience would be less engaged in knowledge hiding. When an individual is higher on openness to experience would not think of abusive supervision and would try to share the knowledge. We expect that knowledge hiding is observed in an academic setting as individuals consider their pay-off while sharing or hiding knowledge (Lee et al., 2010). Academicians, based on their personality traits may approach knowledge hiding selectively. Based on the COR (Hobfoll, 1998), the motivation to learn and enhance knowledge, employees try to promote pleasurable situations (Ng, 2015). Abusive supervision is negative conduct and in return, employees would be involved in deviant behavior. However, openness denies negative behavior and helps to maintain a positive attitude even under abusive supervision. Thus, openness serves as an important moderator that buffer the knowledge hiding behavior. Therefore, the following hypotheses have been developed:

H2: Openness to experience has a significant relationship with knowledge hiding.

H3: Openness to experience moderates the relationship between abusive supervision and knowledge hiding in such a way that the relation is weaker for higher openness to experience.

3. METHODOLOGY

3.1. SAMPLE AND PROCEDURE

The main purpose of the study was to investigate the moderating role of openness to experience in a link between abusive supervision and knowledge hiding in academia. Knowledge management has gained momentum and recent studies have focused on this phenomenon (Shujahat et al., 2020; Kianto et al., 2019) and even on the role of abusive supervision (Khalid et al., 2018; Gul et al., 2021). Consistent with the study (Butt et al., 2019) we operationalized knowledge workers as individuals with a minimum of 16 years of education and are not engaged in physical work but knowledge work. The focus was on the faculty of the universities who are actively involved in teaching and research. Faculty is knowledge-intensive (Bari et al., 2020) and are required to disseminate knowledge and must be involved in the knowledge management process (Shujahat et al., 2020) to enhance organizational performance thus, providing an appropriate perspective (Cappa et al., 2020). Further, knowledge is considered a source of competitive advantage (Ahmed et al., 2021), and there is continuous pressure on employees regarding fulfilling the requirements for promotion.

For this study data was collected from faculty in different universities in Khyber Pakhtunkhwa, a province in Pakistan. A total of 40 public, and private universities, and degree-awarding institutes are established in Khyber Pakhtunkhwa (Zhou et al., 2022). The nature of the target population was homogeneous as the selected organizations were of the same nature. Data was collected in two different phases to reduce common method bias. The period between the phases could be from three to six weeks (Donia et

al., 2016) thus, three weeks gaps between the phases was applied. The researcher accessed the respondents after getting formal approval from the registrars of the selected universities.

At time 1 (T1) we disseminated 500 questionnaires among the respondents by adopting the purposive sampling technique. In the first phase, we collected data regarding abusive supervision and openness to experience. Among the distributed questionnaires, 387 questionnaires were received, having a response rate of 77.4%. In the second round at time 2 (T2) we distributed questionnaires to record the responses of knowledge hiding. among the 500 distributed questionnaires, 361 were received having a response rate of 72.2%. Questionnaires were coded before distribution so they could be matched after receiving. Matching the received questionnaires and scrutinizing for the missing or incomplete responses, we found 309 usable questionnaires that were used for further analysis. Details of the distributed and received questionnaires have been provided in table 1.

Table 1. Questionnaire detail

Particulars	No. of the questionnaires distributed	Response rate Percentage (%)
Composition of questionnaire		
Distributed	500	
Received (T1)	387	74.5%
Received (T2)	361	72.2%
Discarded	191	38.2%
Useable questionnaire	309	61.8%

The demographic analysis yielded that 76% of the respondents were male while the rest 24% were female. Most respondents (81%) were having formal 18 years of education, while the minimum experience in the current institute was recorded as 7 years.

3.2. MEASURES

To measure the study variables, questionnaires were adopted. To assess the abusive supervision, a questionnaire developed by Tepper (2000) was adopted which contained 15 items. Knowledge hiding was measured through 12 items scale developed by Connelly et al. (2012), and lastly, to measure the openness to experience the 9 items were adopted from a questionnaire developed by John and Srivastava (1999).

3.3. ANALYTICAL STRATEGY

We conducted the analysis in three stages. First, confirmatory factor analysis (CFA) was conducted to confirm the validity of the scales. We used a combination of the χ^2 test statistic with corresponding degrees of freedom and statistical significance (χ^2/df , p), comparative fit index (CFI), and the root means square error of approximation (RMSEA) to assess the fit of our CFA models (Hu & Bentler, 1999). Harman single factor was conducted to check out for common method bias. Next, structural equation modeling (SEM) and bootstrapping were used to test the hypotheses. Lastly, the moderating analysis was conducted by multiple regression.

4. RESULTS

4.1. CONFIRMATORY FACTOR ANALYSIS (CFA)

To validate the validity of the study variables confirmatory analysis was conducted. The three-factor model was fit than the one-factor model as $\chi^2/df = 1.93$; IFI = 0.94; TLI = 0.95 CFI = 0.93; RMSEA= 0.06 provided in table 2. The obtained values confirmed the validity.

Table 2. Model Fit

Model	$\chi^2(df)$	RMSEA	CFI	TLI
Three Factors (Hypothesized)	985.831 (509)	0.04	0.96	0.93
One factor (All items on a single factor)	2644.599 (568)	0.09	0.90	0.98

To measure the convergent and discriminant validity we calculated average variance extracted (AVE) and mean shared variance (MSV). Table 3 given below, exhibits that AVE was higher than MSV. Similarly, the AVE was above the threshold value of 0.5 and composite reliability (CR) was above the value of 0.7, confirming the convergent validity.

Table 3. Convergent and discriminant validity

Variables	CR	AVE	MSV
Abusive supervision	0.90	0.76	0.46
Knowledge hiding	0.94	0.61	0.48
Openness to experience	0.84	0.76	0.48

To check out the common method bias in the data, we run the Harman single-factor test. 46 percent of the total data was explained, above the threshold value and was in the acceptable range. The obtained value was above the threshold (Podsakoff et al., 2003).

4.2. HYPOTHESIS TESTING

Table 4 provides the detail about means, standard deviations, correlations, and reliabilities. The values demonstrate that there is a direct correlation between abusive supervision and knowledge hiding. Further, the relationship between openness to experience and knowledge hiding was inversely correlated at a significant level of 0.01. All the values were found in the proposed directions and provided initial support for the hypotheses.

We tested H1 and H2 in AMOS by applying the structural regression approach. We tested the main effect of abusive supervision on knowledge hiding behavior. The standardized estimates found a direct relationship between abusive supervision and knowledge hiding behavior ($\beta = 0.74$, $P < 0.05$). Thus, H1 was supported.

4.3. CORRELATION

Table 4. Mean, Standard Deviations, Correlations, and Reliabilites

S. No	Variable	Mean	SD	AS	KH	Opp to exp
1	AS	2.48	0.95	(0.79)		
2	KH	2.98	0.81	0.71	(0.98)	
3	Opp to exp	3.53	0.91	-0.32	-0.67	(0.67)

N = 309; Cronbach's alpha presented in parenthesis.

*** Correlation is significant at the 0.01 level.*

4.4. MODERATION ANALYSIS.

To test the moderating effect of openness to experience in the relationship between abusive supervision and knowledge hiding analysis was conducted by following bootstrapping method developed by Preacher and Hayes (2004). We used model 1 to explore the moderating effect.

Table 5. Moderation Analysis of openness to experience

Particulars	coeff	T	p	LLCI	ULCI
AS	0.64	2.08	0.03	1.068	2.63
ONP TO EXP	0.74	3.64	0.00	1.243	4.202
ASxOPN TO EXP	0.24	3.12	0.00	-1.271	-0.286
R ² CHANGE		0.06			

The results provided in table 5 demonstrate that the direct relations were significant. Further, the moderation analysis yielded weak moderation i.e. the value of R² change was 0.06. The coefficient of the interactive term resulted - 0.77 which shows that the value of the moderator is associated smaller effect. The moderating impact is relatively low still informative and somehow weakens the strength of the direct association between abusive supervision and knowledge hiding, thus, supported the last hypothesis.

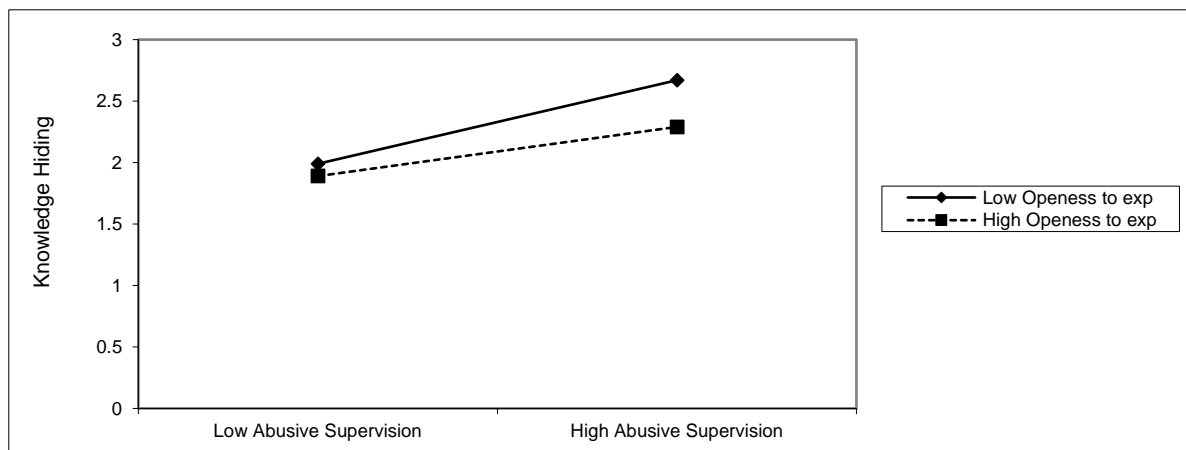


Fig. 1. Interacting effect of Abusive Supervision (AS) and openness to experience on knowledge hiding

The moderating analysis openness to experience on the abusive supervision-knowledge hiding relationship has been illustrated in Fig. 1 using a slop test by Preacher and Hayes (2008). It is clear that for relationship between abusive supervision and knowledge hiding is weaker for individuals who are higher on openness to experience.

5. DISCUSSION

The results indicated the direct relationship between abusive supervision and knowledge hiding. It indicates that under abusive supervision the employees would be engaged in deviant behavior and pay back in terms of knowledge hiding. Such behavior is not limited to any individual, group, or organization; rather, employees will retaliate or be negative whenever they encounter contemptuous behaviors, aggressive language, or disrespectful

treatment (Khalid et al., 2018). Employees value their knowledge, and mistreatment and not getting sufficient respect will lead to knowledge-hiding practices (Kim et al., 2016). This resentment is focused on employees since they have less power and authority than bosses and as a response to the negative treatment, they hide knowledge.

It was proposed that openness to experience has an indirect impact on knowledge hiding. The results supported the proposed hypothesis and provide a better understanding of openness to experience and knowledge hiding (Pan et al., 2018). Individuals who are open to experience would share new ideas, however; disrupting the workgroup's respectful relationship (Lun & Bond, 2006) as people have been described as individualistic (McCrae and Sutin, 2009) and similar has been reported previously (Wang et al., 2014).

Lastly, people even who are high on openness to experience when ill-treated do not behave negatively as a response. Knowledge hiding is a contextual aspect (Connelly et al., 2012), and depends on organizational factors and situations, for example, leadership style. This assumption is supported by our results that abusive supervision interacts with openness to experience and thus mitigates knowledge hiding. Further, this trait may be represented in more creative people who explore new alternative approaches to development and expression (Judge & Zapata, 2015). This individual innovation may be distinctive from deviant behaviors like knowledge hiding (Simha & Parboteeah, 2020), therefore minimizing or avoiding unethical and deviant behavior.

5.1. THEORETICAL CONTRIBUTION

Strategies and methods for making significant utilization of employees' knowledge are critical to every organization's knowledge management process and systems for gaining and maintaining a competitive advantage. (Ferraris et al., 2017). One of the most difficult tasks is reducing knowledge hiding behavior (Connelly et al., 2012). The current study pays to the existing literature in two ways. First, our study aims to extend the literature on knowledge hiding as recommended by Connelly et al., (2019). Previously, the majority of the studies have focused on interpersonal interaction and distrust (Zweig & Scott, 2018), or distinct perspectives like job insecurity (Feng & Wang, 2019). We claim that Knowledge hiding needs equal attention as knowledge sharing because it is most prominent feature is "purposeful hiding," implying that it needs specific triggering mechanisms. Many antecedents of Knowledge Hiding have been progressively described over the last decade (Jha & Varkkey, 2018). However, recently abusive supervision has been studied as a vital situational factor (Feng & Wang, 2019; Wang et al., 2021). Based on the COR theory, it is revealed that abused employees tend to preserve resources by deliberate knowledge concealment instead of positive behavior. Thus, our findings enrich the literature on leadership and knowledge management practices.

Second, this study offers a greater comprehension of the personality trait of openness to experience, particularly as it pertains to knowledge hiding (Pan et al., 2018). The competitive personality of several academic personnel was found to be the result of distrusted academic relationships. We established the significance of this growingly

discussed particular trait for knowledge hiding behavior, as previously proposed by Connelly et al. (2014). Although extremely open individuals have been classified as individualistic (McCrae and Sutin, 2009), they disrupt harmonious interaction in the workplace (Lun & Bond, 2006). and inversely associated with how effectively colleagues associate with one another (Stewart et al., 2005), In an educational environment, empirical and theoretical research have revealed that openness to experience is adversely associated with knowledge withholding intentions (Wang et al., 2014) and thus weaken the negative behavior.

5.2. PRACTICAL IMPLICATIONS

From the perspective of leaders in academic settings, the current study brings numerous practical implications. The leaders of academic institutions need to acknowledge that knowledge hiding cannot be denied as institutions are the places of knowledge imparting. Ignoring such practices is harmful to both individuals and institutions (Cerne et al., 2014). Knowledge is personal and organizations cannot force individuals to share if an individual does not want to do so. Such behavior may be a reaction to unfair treatment, institutions, where abusive leadership is observed, would be inclined more towards knowledge hiding. Thus, fair behavior of leaders is a must in this regard. Further, leaders must create a collaborative environment. Designing collaborative tasks motivate employees to work for shared goals and incentives. Such sharing goals may provide opportunities for personality trait expressions (Banagou et al., 2021). Individuals desire to work in cultures and environments which suit their personalities (Tett & Burnett, 2003). An environment where abusive supervision is minimal and sharing culture is higher, would help individuals enhance their openness to experience traits. Employees who are higher on openness to experience are more profound to reward, and the value achieved for exchange or hiding knowledge (Wang et al., 2014).

In every working environment, knowledge hiding is common (Peng, 2013). Consequently, sharing/hiding concerns must be treated sincerely and expanded far beyond the domain of academic knowledge as they influence nearly all facets of organizational life (Grey & Costas, 2016). Knowledge hiding has adverse consequences in an academic setting (Campbell et al., 2002), where faculty members are anticipated to share knowledge. In many cases, individuals hide their knowledge even if it is important for the institution (Hernaus et al., 2019).

Due to competition, reward, and promotion systems, individuals hide knowledge, consequently, it is critical for universities and other knowledge-intensive enterprises to identify the strategies that might potentially prevent this phenomenon. Such behavior cannot be controlled rather job design may help (Serenko & Bontis, 2016). Academics may consider potential candidates who are higher on openness to experience. During the recruitment process, such strategies may be followed which help the employer to know the personality traits of candidates. Further, clear policies may be designed regarding mistreatment and all managers and supervisors must receive a clear warning that abusive behavior will not be acceptable. The supervisors may be made clear regarding the abusive treatment and penalties should be designed to avoid such mistreatment.

5.3. LIMITATIONS AND RECOMMENDATIONS

The study bears a few limitations which may be considered in future studies. First, knowledge hiding behavior was self-rated, and cross-sectional, and is possible that the variable may be underestimated. Knowledge hiding is a negative behavior (Connelly et al. 2012), and individuals may not mark it visible involved in knowledge hiding behavior and respondents may underreport the phenomenon. It is personal and discretionary behavior that whether an individual hides knowledge or not. It has been suggested that other-reported evaluations of negative work behaviors may not acquire distinct and accurate incremental variance in addition to self-reported variance (Berry et al., 2012). Thus, other methods than self-report may be adopted. Multi-source data collection over time may provide robustness to our findings. Further, longitudinal data collection techniques or experimental research would help get a clear picture of the phenomenon (Bogilovic et al., 2017). Longitudinal studies deliver support for the prognostic validity of the current study (Weng et al., 2020).

The second limitation was the role of the global context. The external validity of every study in organizations is bounded by sample selection. Our study was limited to the Pakistani context and the sample was not heterogeneous as the study was limited to specific educational institutions. Further studies are recommended across organizations and cultures as abusive supervision varies across regions (Tepper et al., 2007). Similarly, it has been found that abusive supervision occurs more frequently in the Asian context (Mackey et al., 2017).

The third limitation was the frequency of the knowledge hidings. It was not focused on how many times an employee was involved in knowledge hiding behavior or faced with abusive supervision. However, the extent to which individuals hide their knowledge has been investigated in previous studies (Burmeister et al., 2019). The current study was based on an individual level, further studies would enrich the literature if carried out on an organizational or team level (He et al., 2021). Lastly, our study focused on only one dimension of personality traits, other personality traits may be tested for moderating (Tufail et al., 2022) and the underlying mechanism.

Author Contributions:

Muhammad Tufail conceptualized the idea of this research study and completed the introduction and discussion sections. Muhammad Kamran Khan contributed in literature review, data collection and methodology section. Further, the analysis section was completed by Shahab Jouhar and Muhammad Taimur Khan. All authors have read and agreed to the published version of the manuscript.

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The ethical committee of the institute of business studies and leadership, Abdul Wali Khan University Mardan, Pakistan reviewed and approved the questionnaires before distribution among the prospected respondents.

Informed Consent Statement:

Individuals were approached at their workplace for collection of primary data. Prior permission was obtained from higher authorities of the selected organizations.

Data Availability Statement:

Data will be available on request according to the policy of the journal.

Acknowledgments:

Not Applicable.

Conflicts of Interest:

The corresponding author states that there is no conflict of interest.

Human Ethics Declaration.

Consent from study participants were obtained before data collection.

Reference:

- Abubakar, A. M., Elrehail, H., Alatailat, M. A., & Elçi, A. (2019). Knowledge management, decision-making style and organizational performance. *Journal of Innovation & Knowledge*, 4(2), 104-114.
- Ahmed, Q., Sumbal, M. S., Akhtar, M. N. & Tariq, H. (2021). Abusive supervision and the knowledge worker productivity: the mediating role of knowledge management processes. *Journal of Knowledge Management*, 25(10), 2506-2522.
- Anand, P., & Jain, K. K. (2014). Big five personality types & knowledge hiding behaviour: A theoretical framework. *Archives of Business Research*, 2(5), 47-56.
- Annansingh, F., Howell, K.E., Liu, S. & Baptista Nunes, M. (2018). Academics' perception of knowledge sharing in higher education. *International Journal of Educational Management*, 32(6), 1001-1015. <https://doi.org/10.1108/IJEM-07-2016-0153>
- Argote, L., & Fahrenkopf, E. (2016). Knowledge transfer in organizations: The roles of members, tasks, tools, and networks. *Organizational Behavior and Human Decision Processes*, 136, 146-159.
- Amiri, M., Farhoodi, F., Abdolvand, N., & Bidakhvidi, A. R. (2011). A study of the relationship between Big-five personality traits and communication styles with marital satisfaction of married students majoring in public universities of Tehran. *Procedia-social and behavioral sciences*, 30, 685-689.
- Ashforth, B. E. (1997). Petty tyranny in organizations: A preliminary examination of antecedents and consequences. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 14(2), 126-140.
- Ayub, A., Ajmal, T., Iqbal, S., Ghazanfar, S., Anwaar, M., & Ishaq, M. (2021). Abusive supervision and knowledge hiding in service organizations: exploring the boundary conditions. *International Journal of Conflict Management*. 32(5), 725-746.

- Banagou, M., Batistič, S., Do, H., & Poell, R. F. (2021). Relational climates moderate the effect of openness to experience on knowledge hiding: A two-country multi-level study. *Journal of Knowledge Management*, 25(11), 60-87.
- Bari, M. W., Misbah, G. & Bashir, A. (2020). Knowledge-hiding behaviors and employees' silence: mediating role of psychological contract breach. *Journal of Knowledge Management*, 24(9), 2171-2194.
- Barrett, M., Davidson, E., Prabhu, J., & Vargo, S. L. (2015). Service innovation in the digital age. *MIS quarterly*, 39(1), 135-154.
- Berry, C. M., Carpenter, N. C. & Barratt, C. L. (2012). Do other-reports of counterproductive work behavior provide an incremental contribution over self-reports? A meta-analytic comparison, *Journal of Applied Psychology*, 7(3), 613-636.
- Bjorvatn, T., & Wald, A. (2020). The impact of time pressure on knowledge transfer effectiveness in teams: trust as a critical but fragile mediator. *Journal of Knowledge Management*. 24(10), 2357-2372.
- Blau, P. (1964). *Power and Exchange in Social Life*; John Wiley & Sons: New York, NY, USA.
- Bogilovic S., Cerne M. & Škerlavaj M. (2017). Hiding behind a mask? Cultural intelligence, knowledge hiding, and individual and team creativity. *European Journal Work of Organizational Psychology*. 26, 710–723.
- Burmeister, A., Fasbender, U., & Gerpott, F. H. (2019). Consequences of knowledge hiding: The differential compensatory effects of guilt and shame. *Journal of occupational and organizational psychology*, 92(2), 281-304.
- Butt, A. S. (2020). Mitigating knowledge hiding in firms: an exploratory study. *Baltic Journal of Management*, 15(4), 631-645.
- Butt, M. A., Nawaz, F., Hussain, S., Sousa, M. J., Wang, M., Sumbal, M. S., & Shujahat, M. (2019). Individual knowledge management engagement, knowledge-worker productivity, and innovation performance in knowledge-based organizations: the implications for knowledge processes and knowledge-based systems. *Computational and Mathematical Organization Theory*, 25(3), 336-356.
- Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, 17(2), 245-264.
- Campbell, E. G., Clarridge, B. R., Gokhale, M., Birenbaum, L., Hilgartner, S., Holtzman, N. A. & Blumenthal, D. (2002). Data withholding in academic genetics: evidence from a national survey. *(JAMA)*, 287(4), 473-480.
- Cappa, F., Pinelli, M., Maiolini, R. & Leone, M. I. (2020). Pledge me your ears! the role of narratives and narrator experience in explaining crowdfunding success. *Small Bus. Econ*, pp. 1-21.
- Cerne, M., Nerstad, C. G. L., Dysvik, A. & Skerlavaj, M. (2014). What goes around comes around: knowledge hiding, perceived motivational climate, and creativity. *Academy of Management Journal*, 57(1), 172-192.
- Chaudhry, A. B. (2005). Knowledge sharing practices in Asian institutions: a multi-cultural perspective from Singapore. *Libraries – A voyage of discovery proceedings of the 71th IFLA General Conference and Council in Oslo, Norway*.
- Connelly, C. E., & Zweig, D. (2015). How perpetrators and targets construe knowledge hiding in organizations. *European Journal of Work and Organizational Psychology*, 24(3), 479-489.
- Connelly, C. E., Cerne, M., Dysvik, A. & Škerlavaj, M. (2019). Understanding knowledge hiding in organizations. *Journal of Organizational Behavior*, 40(7), 779-782.

- Connelly, C. E., Ford, D.P., Turel, O., Gallupe, B. & Zweig, D. (2014). "'I'm busy (and competitive)!' Antecedents of knowledge sharing under pressure, *Knowledge Management Research and Practice*, 12(1), 74-85.
- Connelly, C. E., Zweig, D., Webster, J. & Trougakos, J. P. (2012). Knowledge hiding in organizations. *Journal of Organizational Behavior*, 33(1), 64-88.
- Corr, P. J., & Matthews, G. E. (2020). *The Cambridge handbook of personality psychology*. Cambridge University Press.
- Demirkasimoglu, N. (2016). Knowledge Hiding in Academia: Is Personality a Key Factor?. *International Journal of Higher Education*, 5(1), 128-140.
- Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.
- Donia, M. B., Raja, U., Panaccio, A. & Wang, Z. (2016). Servant leadership and employee outcomes: the moderating role of subordinates' motives. *European Journal of Work and Organizational Psychology*, 25(5), 722-734.
- 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.
- Ferraris, A., Santoro, G. & Dezi, L. (2017). How MNC's subsidiaries may improve their innovative performance? The role of external sources and knowledge management capabilities. *Journal of Knowledge Management*, 21(3), 540-552.
- Fong, P. S., Men, C., Luo, J., & Jia, R. (2018). Knowledge hiding and team creativity: the contingent role of task interdependence. *Management Decision*, 56(2), 329-343.
- Garg, N., & Anand, P. (2020). Knowledge hiding, conscientiousness, loneliness and affective commitment: A moderated mediation model. *International Journal of Educational Management*. 34(9), 1417-1437.
- Ghani, U., Zhai, X., Spector, J. M., Chen, N. S., Lin, L., Ding, D. & Usman, M. (2020). Knowledge hiding in higher education: role of interactional justice and professional commitment. *Higher Education*. 79(2), 325-344.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American sociological review*, 161-178.
- Grey, C., & Costas, J. (2016). Invisible organizations—a research agenda. *A Research Agenda for Management and Organization Studies*. 136-146.
- Guadagno, R. E., Okdie, B. M. & Eno, C. A. (2008). Who blogs? Personality predictors of blogging. *Computers in Human Behavior*, 24(5), 1993-2004.
- Gul, R. F., Dunnan, L., Jamil, K., Awan, F. H., Ali, B., Qaiser, A., & Aobin, Q. (2021). Abusive supervision and its impact on knowledge hiding behavior among sales force. *Frontiers in Psychology*, 12, 800778.
- Cupta, B. (2008). Role of personality in knowledge sharing and knowledge acquisition behavior. *Journal of the Indian Academy of Applied Psychology*, 34(1), 143-149.
- Harvey, P., Stoner, J., Hochwarter, W. & Kacmar, C. (2007). Coping with abusive supervision: the neutralizing effects of ingratiation and positive affect on negative employee outcomes. *The Leadership Quarterly*, 18(3), 264-280.
- He, P., Jiang, C., Xu, Z., & Shen, C. (2021). Knowledge hiding: current research status and future research directions. *Frontiers in Psychology*, 12.
- Hernaus, T., Cerne, M., Connelly, C., Vokic, N. P., & Škerlavaj, M. (2019). Evasive knowledge hiding in academia: when competitive individuals are asked to collaborate. *Journal of Knowledge Management*. 23(4), 597-618.

- Hobfoll, S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. New York: Plenum Press.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied psychology, 50*(3), 337-421.
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of general psychology, 6*(4), 307-324.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal, 6*(1), 1-55.
- Jha, J. K., & 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.
- John, O. P. & Srivastava, S. (1999). The big five trait taxonomy: history, measurement, and theoretical perspectives. *Handbook of Personality: Theory and Research, 2*, 102-138.
- Judge, T. A., & Zapata, C. P. (2015). The person–situation debate revisited: Effect of situation strength and trait activation on the validity of the Big Five personality traits in predicting job performance. *Academy of Management Journal, 58*(4), 1149-1179.
- 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 & Organization Development Journal, 39*(6), 794-806.
- Kianto, A., M. Shujahat, S. Hussain, F. Nawaz, & M. Ali. (2019). The Impact of Knowledge Management on Knowledge Worker Productivity. *Baltic Journal of Management, 14*(2), 178–97.
- Kim, S. L., Lee, S. & Yun, S. (2016). Abusive supervision, knowledge sharing, and individual factors: a conservation-of-resources perspective. *Journal of Managerial Psychology, 31*(6), 1106-1120.
- Lee, J. Y., Lee, Y. & Wadhwa, P. (2010). Conference paper sharing among academicians: calculative and normative aspects of rational choice. *Academy of Management Learning & Education, 9*(2), 204-224.
- Lee, S., Kim, S. L. & Yun, S. (2018). A moderated mediation model of the relationship between abusive supervision and knowledge sharing. *The Leadership Quarterly, 29*(3), 403-413.
- Lun, V. M. C., & Bond, M. H. (2006). Achieving relationship harmony in groups and its consequence for group performance. *Asian Journal of Social Psychology, 9*(3), 195-202.
- Mackey, J. D., Frieder, R. E., Brees, J. R., & Martinko, M. J. (2017). Abusive supervision: A meta-analysis and empirical review. *Journal of management, 43*(6), 1940-1965.
- Major, D. A., Turner, J. E. & Fletcher, T. D. (2006). Linking proactive personality and the big five to motivation to learn and development activity. *Journal of Applied Psychology, 91*(4), 927-935.
- Malik, O. F., Shahzad, A., Raziq, M. M., Khan, M. M., Yusuf, S., & Khan, A. (2019). Perceptions of organizational politics, knowledge hiding, and employee creativity: The moderating role of professional commitment. *Personality and Individual Differences, 142*, 232-237.
- Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing—Examining the influence of learning and performance orientation. *Journal of Economic Psychology, 32*(3), 317-329.
- McAdams, D. P. (2009). The moral personality. *Personality, identity, and character: Explorations in moral psychology, 11-29*.
- McCrae, R. R. & Sutin, A. R. (2009). *Openness to experience*. *Handbook of Individual Differences in Social Behavior, 15*, 257-273.

- Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of applied psychology*, 92(4), 1159-1168.
- Ng, T. (2015). Conservation of resources theory. *Wiley Encyclopedia of Management*, 1-1.
- Nguyen, N. T., & Biderman, M. (2013). Predicting counterproductive work behavior from a bi-factor model of Big Five personality. In *Academy of Management Annual Meeting Proceedings*. 2013, 13719-13719).
- Pan, W., Zhang, Q., Teo, T.S. & Lim, V.K. (2018). The dark triad and knowledge hiding. *International Journal of Information Management*, 42, 36-48.
- Peng, H. (2013). Why and when do people hide knowledge?. *Journal of knowledge management*. 17(3), 398-415.
- Penney, L. M., David, E. & Witt, L. (2011). A review of personality and performance: identifying boundaries, contingencies, and future research directions. *Human Resource Management Review*, 21(4), 297-310.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Restubog, S. L. D., Scott, K. L. & Zagenczyk, T. J. (2011). When distress hits home: the role of contextual factors and psychological distress in predicting employees' responses to abusive supervision. *Journal of Applied Psychology*, 96(4), 713-729.
- Samdani, H., Ali, B. & Kamal, N. (2019). Knowledge hiding and creativity in higher education institutes: understanding the contingent role of perceived supervisory support. *Global Social Sciences Review*, 4(4), 341-349.
- 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
- Shujahat, M., Akhtar, A., Nawaz, F., Wang, M. & Sumbal, M. S. (2020). Knowledge risk management in two-tier HRM structures in Durst, S. and Henschel, T. (Eds), *Knowledge Risk Management: From Theory to Praxis*, Springer International Publishing, Cham, pp. 49-68.
- Simha, A., & Parboteeah, K. P. (2020). The big 5 personality traits and willingness to justify unethical behavior a cross-national examination. *Journal of Business Ethics*, 167(3), 451-471.
- Srivastava, A., Bartol, K. M. & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. *Academy of Management Journal*, 49 (6), 1239-1251.
- Staw, B. M., Bell, N. E. & Clausen, J. A. (1986). The dispositional approach to job attitudes: a lifetime longitudinal test. *Administrative Science Quarterly*, 31(1), 56-77.
- Stewart, G. L., Fulmer, I. S., & Barrick, M. R. (2005). An exploration of member roles as a multilevel linking mechanism for individual traits and team outcomes. *Personnel Psychology*, 58(2), 343-365.
- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of management journal*, 43(2), 178-190.

- Tepper, B. J., Moss, S. E., Lockhart, D. E., & Carr, J. C. (2007). Abusive supervision, upward maintenance communication, and subordinates' psychological distress. *Academy of Management Journal*, 50(5), 1169-1180.
- Tepper, B.J., Carr, J. C., Breaux, D. M., Geider, S., Hu, C. & Hua, W. (2009). Abusive supervision, intentions to quit, and employees' workplace deviance: a power/dependence analysis. *Organizational Behavior and Human Decision Processes*, 109(2), 156-167.
- Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied psychology*, 88(3), 500-517.
- Tufail, M., Khan, S., Gul, R., & Rashid, M, H (2022). Servant Leadership and Knowledge Hiding: the Moderating Role of Personality Traits in Academic Settings. *International Review of Basic and Applied Sciences*. 10(2), 225-236.
- Wang, C., Wei, Y., Zhao, X., Zhang, X., & Peng, Y. (2021). Abusive supervision and creativity: Investigating the moderating role of performance improvement attribution and the mediating role of psychological availability. *Frontiers in Psychology*, 12, 2222.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human resource management review*, 20(2), 115-131.
- Wang, Y. S., Lin, H.-H., Li, C. R. & Lin, S. J. (2014). What drives students' knowledge-withholding intention in management education? An empirical study in Taiwan. *Academy of Management Learning & Education*, 13(4), 547-568.
- Webster, J., Brown, G., Zweig, D., Connelly, C., Brodt, S., & Sitkin, s. (2008). Beyond Knowledge Sharing: Knowledge Hiding and Hoarding at Work. *Research in personnel and human resources management*, 27, 1-37.
- Weng, Q., Latif, K., Khan, A. K., Tariq, H., Butt, H. P., Obaid, A., & Sarwar, N. (2020). Loaded with knowledge, yet green with envy: leader-member exchange comparison and coworkers-directed knowledge hiding behavior. *Journal of Knowledge Management*. 24 (7), 1653-1680.
- Wu, W. L., & Lee, Y. C. (2016). Do employees share knowledge when encountering abusive supervision?. *Journal of Managerial Psychology*. 31(1), 154-168.
- Zellars, K. L., Tepper, B. J. & Duffy, M.K. (2002). Abusive supervision and subordinates' organizational citizenship behavior. *Journal of Applied Psychology*, 87(6), 1068-1076.
- Zhang, Y., Liu, X., Xu, S., Yang, L. Q., & Bednall, T. C. (2019). Why abusive supervision impacts employee OCB and CWB: A meta-analytic review of competing mediating mechanisms. *Journal of Management*, 45(6), 2474-2497.
- Zhao, H., Xia, Q., He, P., Sheard, G., & Wan, P. (2016). Workplace ostracism and knowledge hiding in service organizations. *International Journal of Hospitality Management*, 59, 84-94.
- Zhou, G., Gul, R., & Tufail, M. (2022). Does Servant Leadership Stimulate Work Engagement? The Moderating Role of Trust in the Leader. *Frontiers in Psychology*, 13:925732, 1-9.
- Zweig, D., & Scott, K. A. (2018, July). Exploring distrust, paranoia, knowledge hiding and abusive supervision over time. In *Academy of Management Proceedings*. No. 1, p. 10312). Briarcliff Manor, NY 10510: Academy of Management.