



Abusive Supervision Effects on Employee Knowledge Hiding Behavior in Academia

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Abstract

Despite the prevalence of research on abusive supervision in the workplace, little is known about its influence on employee knowledge hiding behaviors in the context of academia. Thus, this paper aims to investigate the abusive supervision influence on employee knowledge hiding behaviors in an academic context. To investigate the purpose of our study, data were collected from 179 respondents working in private universities located in the southern region of India and were analyzed using the partial least square (PLS) method where variance-based structural equation modeling (SEM) was adopted. The study reveals a negative relationship between abusive supervision and employees' inclination to hide knowledge from co-workers and supervisors. Subsequently, co-worker support acts as a complementary mediator in this relationship and organizational support does not act as a suppressor variable. The study enriches leadership and knowledge management literature, and supplements prior studies on positive knowledge-related behaviors, like those on knowledge sharing, by furthering our understanding of the nature of knowledge hiding.

Keywords Abusive supervision · Academic supervisor · Abusive leadership · Co-worker support · Knowledge hiding · Knowledge sharing · India · Organizational support

Introduction

Knowledge is a strategic asset and a valuable organizational resource that plays a pivotal role in achieving long-term performance (Muqadas et al., 2017). For decades, scholars and practitioners have explored the issues connected to the effective

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management and efficient transfer of knowledge, focusing on the topic of intra-firm knowledge exchange in different settings and contexts (Castellani et al., 2019). In this vein, the sharing of knowledge within organizations has been the topic of attention (Bhattacharya, 2019) as it helps foster knowledge creation, organizational learning, innovation, and increased employee and organizational performance (Wang & Noe, 2010; Wang & Wang, 2012). Similarly, for academic institutions, knowledge is one of the primary driving forces (Cheng et al., 2009), and knowledge sharing among academic staff has also become a critical success factor for the institution to remain competitive (Demirkasimoglu, 2016).

The sharing of knowledge is indeed vital, but it cannot be claimed that people would willingly or efficiently offer it to their colleagues when requested (Anand et al., 2019; Mergel et al., 2008). Similarly, in an academic setting, scholars frequently enlist the help of other co-workers if they do not possess all the necessary knowledge and as a result, some of their co-workers share knowledge, while others do not due to different dispositional values or situational constraints (Anand et al. 2020). It has been demonstrated that academics are not always willing to share their knowledge with their peers, and they are even less willing to protect their co-workers when publishing research and/or patents that have an impact on tenure promotion (Nelson, 2016; Walsh & Anand, 2018). Consequently, this has prompted the conceptualization of a distinct construct named “knowledge hiding” (Cerne et al., 2014; Connelly et al., 2012).

Knowledge hiding is “an intentional attempt by an individual to withhold or conceal task information, ideas, and know-how that has been requested by another person” (Connelly et al., 2012, p. 65). Intra-firm knowledge hiding in organizations can significantly damage relationships at work, create distrust among co-workers, result in knowledge gaps, and lead to lower individual and organizational performance (Hernaus et al., 2018). Although knowledge hiding behaviors are influenced by many factors such as organizational culture, transformational leadership, personality characteristics, and lack of recognition (Pan et al., 2018; Jha & Varkkey, 2018; Lanke, 2018; Anand & Hassan, 2014), more recently, the role played by interpersonal relationships between employees and managers in knowledge hiding has sparked growing interest (Pradhan et al., 2018; Xia et al., 2019). Consequently, one of the contextual factors that have emerged in recent years influencing knowledge hiding among employees is the way they are treated by their supervisors (Feng & Wang, 2019; Khalid et al., 2018). Supervisors act as organizational agents and their support and motivation encourage employees’ willingness to share their knowledge (Kim et al., 2016). Consequently, their destructive or negative behaviors affect an employee’s motivation toward knowledge sharing (Lee et al., 2018; Srivastava et al., 2006) and increase knowledge hiding behaviors (Peng et al. 2019; Lanke, 2018; Ladan et al., 2017). This behavior is termed “abusive supervision” and is defined as the “subordinates’ perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact” (Tepper, 2000. p.178).

In an academic context, education institutions have a leader, manager, or supervisor, to whom the teaching and administrative staff report (Meng et al., 2017). Supervisors have higher organizational positions and stronger decisional power (Tepper

et al., 2009) and play critical roles in organizational efficiency, goal achievement, and employee engagement (Feng & Wang, 2019). Although numerous scholars have investigated how to alleviate the effect of abusive supervision on employees' knowledge hiding behaviors in different organizational settings (e.g., Cerne et al. 2017; Peng et al. 2013; Babič et al. 2018; Xiao & Cooke, 2018), the topic of knowledge hiding in academic institutions has started to appear in the literature only recently with just three papers published (e.g., Demirkasimoglu, 2016; Muqadas et al., 2017; Hernaus et al. 2019) and more so, even less in public institutions.

In this context, we aim to investigate the relationship between abusive supervision and knowledge hiding in the public academic workplace. Studies in the workplace setting have shown that notwithstanding an abusive situation, co-worker, and organizational support may be seen as moderating and/or mediating factors that offset the effect of abusive supervision and provide positive effects on knowledge-sharing behavior (e.g., Anand & Dalmasso, 2019; Kim et al., 2015, 2016; Lee et al., 2018). Hence, we set out to investigate the following two research questions (RQs):

RQ1: Does abusive supervision encourage employees to hide knowledge from their supervisors and co-workers in an academic setting?

RQ2: Does organizational and co-worker support reduce employees' intentions to hide knowledge from their supervisors and co-workers?

Background and Hypothesis Development

Academic institutions are recognized to be vastly different from other working environments (Fullwood et al. 2019) yet studies on knowledge sharing and hiding in an academic environment remain sparse (Demirkasimoglu, 2016; Hernaus et al. 2019). In recent years, the growing pressure to publish in top-tier journals, institutional accreditation, and rankings has resulted in academics (and their peers) being unwilling to share tacit knowledge about research, previous experiences, and so on (Walsh & Anand, 2018; Walsh & Hong, 2003). The role of context in knowledge sharing (Sergeeva & Andreeva, 2016), knowledge hiding (de Geofroy & Evans, 2017; Husted et al., 2012; Zhao et al., 2016), and the shortcomings of the "knowledge hiding" dimension concerning different work settings (e.g., Connelly et al., 2012; Webster et al., 2008) remain a challenge for managers, as employees resist sharing of knowledge due to motives, cultures, and norms (Anand & Dalmasso, 2019; Anand et al. 2021). Educational institutions are known as repositories of knowledge, yet, in the context of academics from non-Western countries to transforming economies a gap in knowledge sharing still exists, specifically among employees in the university system (Kumar, 2017; Nazim & Mukherjee, 2011). Demirkasimoglu (2016) asserted that since academics are the main knowledge creators, it is critical to examine how they tend to behave when their co-workers and superiors request necessary or valuable information from them. The purpose of this study is to determine whether academics, when subjected to supervisor abuse, such as public condemnation, loud and angry tantrums, discourtesy, disrespecting comments, inconsiderate actions, and breaking someone's confidence (Meng et al., 2017), would be willing to hide

knowledge from their supervisors and co-workers. At the same time, knowledge hiding difficulties should be explored in the context of a given country, as the traditions, conventions, values, and actions of people of different nations and locations might vary considerably. In collectivist, traditional, hierarchical cultures, such as India, China, and Russia, the impacts of abusive supervision on knowledge-hiding practices, as well as the primary drivers and influencing factors, in the country context remain restricted and require further study (Pradhan & Jena, 2017, 2018).

Abusive Supervision and Knowledge Hiding

Researchers have addressed abusive supervision (Wang et al., 2015) as a behavior that involves undermining the reputation of the targeted individual and negatively affecting an individual's ability to create and maintain relationships with others (Zhu & Zhang, 2019). Abusive supervision has always been related to negative workplace outcomes, deviant behaviors of victims, and reducing employee commitment and citizenship behavior (Eschleman et al., 2014; Kim et al., 2015; Liu & Wang, 2013; Liu et al., 2018; Meglich & Eesley, 2011). Abusive supervision can result in favoritism (Murari, 2013), reduced organizational citizenship behaviors (Zellers et al., 2002), and affects employee knowledge hiding behavior. For instance, Khalid et al. (2018) asserted that abusive supervision is positively related to employee knowledge hiding behaviors. They found that when employees are abused, they engage in retaliatory behaviors such as knowledge hiding. Similarly, employees perceive their knowledge base to be valuable and the feeling of being “mistreated or not given due respect” will incline them toward knowledge-hiding behaviors (Kim et al., 2016: 802). Lanke (2018) found that when an employee is “mistreated” (i.e., experiences an interpersonal interaction involving a lack of dignity and respect) their knowledge hiding behaviors intensify.

Only a few academic studies have been conducted to better understand knowledge hiding behavior. Muqadas et al. (2016) discovered that people hoard knowledge in exchange for power over their peers to influence, and progress opportunities. In public universities and developing countries, hoarding is more common (Muhenda & Lwanga, 2014). Similarly, Hernaus et al. (2019) found that competitive individuals in both private and public universities hide tacit knowledge more than explicit knowledge. However, knowledge hiding is not simply a lack of knowledge sharing (Connelly et al., 2012; Peng, 2013). Knowledge hiding behavior tends to involve more complex psychological motivations and organizational variations than one find in knowledge-sharing behaviors (Connelly and Zweig, 2015), and when employees are abused it affects their psychological capital (employees' internal resources), thus preventing them from sharing knowledge other colleagues (Kim et al., 2016). Therefore, it is important to investigate the driving mechanisms of hiding behavior when abused. In this context, we propose the following hypotheses.

Hypothesis 1A: Abusive supervision has a direct impact on knowledge hiding from co-workers in an academic setting.

Hypothesis 1B: Abusive supervision has a direct impact on knowledge hiding from supervisors in an academic setting.

Co-worker Support as a Mediator Between Abusive Supervision and Knowledge Hiding

Co-workers are the major collaborators for employees and a source of social support at the workplace in the case of abuse from their supervisors (Kim et al., 2015; Lee et al. 2018; Shoss et al., 2013). An employee's positive perception of their organization or their co-worker may help reduce the effects of a supervisor's negative behavior (Kim et al., 2015). Co-worker support is a form of social support that is given by collaborators (Woo & Chelladurai, 2012) and is the most relevant form of social support for employees in the organization (Kossek et al., 2011). Social support helps to explain the relationship between work, co-workers, and well-being in a workplace (Ducharme & Martin, 2000). Individuals receiving unfair treatment from their supervisors could get help from their co-workers, family, and organization (Shoss et al., 2013). If the supervisor is abusive, the intervention of co-workers becomes a more significant and substantial source of social support (Anand & Dalmasso, 2019). Co-worker support not only mitigates the negative effects of abusive supervision but is also known to help employees avoid hiding their knowledge from supervisors and other co-workers (Kim et al., 2016). We, therefore, propose that individuals who are supported by their workers are less likely to hide knowledge from supervisors and co-workers. Hence, the following hypotheses are framed.

Hypothesis 2A: Co-worker support mediates the relationship between abusive supervision and employees' inclination to hide knowledge from their co-workers in an academic setting.

Hypothesis 2B: Co-worker support mediates the relationship between abusive supervision and employees' inclination to hide knowledge from their supervisors in an academic setting.

Organizational Support as a Mediator Between Abusive Supervision and Knowledge Hiding

Employees' general beliefs about how much the organization values their contribution and cares about their well-being are referred to as perceived organizational support (Eisenberger et al. 2001; Eser & Ensari, 2016). Employees develop a strong sense of commitment to their organization when they feel supported by this (Woo & Chelladurai, 2012). Perceived support also reinforces an employee's belief that the company values and rewards superior performance (Eser & Ensari, 2016). Organizational support can reduce absenteeism and improve employee productivity by meeting employees' socio-emotional needs, increasing organizational membership, and boosting employees' positive mood at work, which can lead to improved emotional associations with the organization and expanding affective commitment (Kurtessis et al., 2017; Maertz et al., 2007). Furthermore, perceived organizational

support reduces organizationally relevant deviant behavior (Tuzun et al. 2017), and it has been demonstrated that organizational support can reduce the impact of knowledge non-sharing (Anand & Dalmasso, 2019; Kim et al., 2016). As a result, it is a situational factor that can affect employees' attitudes toward knowledge concealment and other work outcomes (Alnaimi & Rjoub, 2019). Knowledge sharing is also positively related to organizational support in the workplace, according to research (Yang et al., 2018). As a result, the following hypotheses emerge.

Hypothesis 3A: Organizational support mediates the relationship between abusive supervision and employees' inclination to hide knowledge from their co-workers in an academic setting.

Hypothesis 3B: Organizational support mediates the relationship between abusive supervision and employees' inclination to hide knowledge from their supervisors in an academic setting.

The hypotheses are summarized in the research model reported in Fig. 1. In this study, we conduct a multiple mediation analysis.

Methodology

Data Collection

Data collection was conducted following the guidelines of Hernaus et al. (2019). The data involved a sample of faculty members who teach business, management, accounting, and economics courses. The departments approached include business, management, business administration, economics, and humanities. Among these departments, some have designated names such as "institute of management" and "school of business," which are referred to as knowledge-intensive organizations (Hernaus et al. 2019). For the present study, data were collected through convenient sampling techniques from the public universities and affiliated institutes located in the southern region of India, which involved two authors approaching five states in

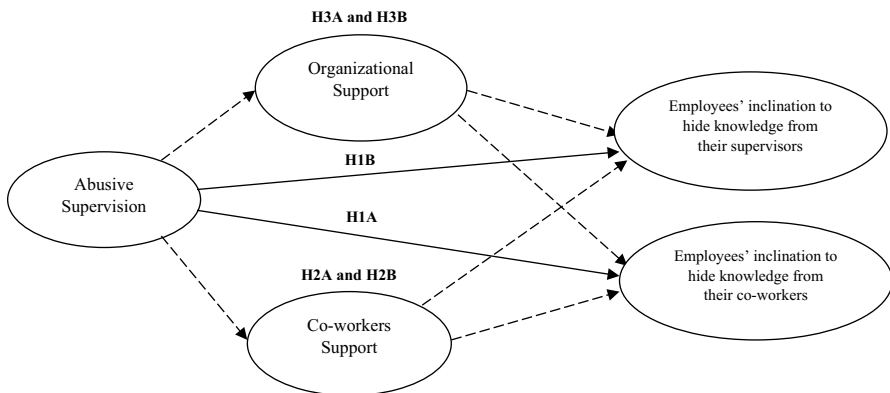


Fig. 1 Hypothesized model

the southern regions of India (i.e., Andhra Pradesh, Karnataka, Telangana, Kerala, Tamil Nadu).

Before collecting the data, the authors had a conversation with the heads of the university/institutes to understand the frequency of interaction between supervisors (e.g., head of the department, directors, associate deans, principal) and other faculty members. We found that they worked in proximity and there was almost a daily interaction, face-to-face meetings, monitoring progress in research, teaching, reporting, and sharing of work-related information and knowledge. We then conveyed the purpose of the data collection and objectives of the study to the heads of the institutes (vice rectors, registrar, deans, directors, etc.). Successively, the data collection was performed online, designing the questionnaire using an open-source platform (www.getfoureyes.com). The link to the questionnaire was then shared with the heads of the institutes through an email to communicate to the respective staff members. The questionnaire was in English as the official communication and working language in these institutions is English.

Since the topic of abusive supervision is sensitive (Walsh et al., 2020), as expressed by the heads of the institutes, all the respondents in this study participated voluntarily with a guarantee of anonymity, keeping the data confidential and strictly used for academic purposes. They were also informed about their right to withdraw from the survey at any stage if they wished to do so. Two hundred eighty-five participants were initially contacted to take part in the survey and 192 responses were obtained, achieving a response rate of 67.4%. After carefully analyzing the sample, only 179 responses were eligible for analysis, as some survey questions were incomplete and were omitted, resulting in a final response rate of 62.8%. The participants comprised 151 professors/lecturers (84.4%), 28 heads of department, academic/administrative deans, and program directors (15.6%). All the participants of our study were working as either permanent, contractual, or tenure-track staff. Table 1 reports the characteristics of the respondents.

Table 1 Sample characteristics ($N=179$)

	Characteristics	Frequency	Percentage (%)
Gender	Male	121	67.6
	Female	58	32.4
Employment setting	Faculty/professor/lecturer/tutor	151	84.4
	Director/dean/head	28	15.6
Age	21–30	30	16.8
	31–40	109	60.9
	41–50	30	16.8
	51–60	8	4.5
	60+	2	1.1

Measurement Scales and Validity

All the scale items used in this study were measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The model for this analysis included reflective measurements only. These items are presented in Table 11 of the Appendix. To measure abusive supervision, we adapted the scale developed by Tepper (2000) and Peng et al. (2014). Specifically, we selected the measures the respondents used to assess their own abusive supervision (ABUS_SUP: we reverse-coded respondents' answers to obtain a score for non-abusive supervision¹). We adapted Connelly et al.'s (2012) knowledge hiding (KH) scales as they provide a comprehensive, three-dimensional measure (i.e., playing dumb, evasive hiding, and rationalized hiding) that considers the different facets of this construct. Each reflective dimension was assessed through three items (see Appendix) and we assessed separately employees' knowledge hiding from their supervisor (KH_SUP) and co-workers (KH_CW). For organizational support, we adopted scales from Woo and Chelladurai (2012), Eisenberger et al. (1986, 1997), and Ducharme and Martin (2000) for co-worker support. Organizational support was modeled with two dimensions: valuation of contribution (OS_VC) and well-being (OS_WB), each assessed with five items. Co-worker support was modeled with two dimensions: affective (COWS_AFF) and instrumental COWS_IS), each assessed with four items. Full details of the items and scales used are provided in Appendix.

Procedure

The technique used in this paper is partial least squares structural equation modeling (PLS-SEM) implemented with Smart PLS-v-3.2.6 (Ringle et al., 2015; Ringle & Sarstedt, 2016; Hair et al., 2019a, b) provide a list containing the main reasons to implement PLS-SEM (variance-based SEM) instead of CB-SEM (covariance-based SEM) as our study is relevant to these conditions. PLS-SEM models allow us to overcome small population constraints with models that include a large number of items and constructs (Willaby et al., 2015). The sample size ($N=179$) fulfills the requirement that the data sample should be ten times the largest number of independent variables (Chin & Newsted, 1999, Wang et al. 2018). The PLS-SEM model permits to use of non-normal data (Fornell & Cha, 1994; Nitzl et al., 2016), which is one of the best advantages of PLS-SEM over the CB-model. PLS-SEM is a robust modeling method.

As part of the PLS-SEM method, there are two sub-models to evaluate: a measurement (outer) model and a structural (inner) model. The first one specifies how the latent variables are constructed, based on the observed data. The second one specifies the relationship between the constructs. The constructs of abusive supervision, knowledge hiding from co-workers, knowledge hiding from supervisors, organization support, and co-worker support, are all reflective measures. We performed a

¹ If a respondent answered 1 (never), the score entered was 5 and if a respondent answered 4 (often), the score entered was 2 ($5-4+1$).

Table 2 Construct validity and discriminant validity—results of the reflective construct assessments

Construct	Item	AVE	Composite reliability	Cronbach's alpha
Abusive supervision	5	0.651	0.903	0.864
Co-worker support	8	0.587	0.919	0.899
Knowledge hiding from co-workers	11	0.485	0.911	0.892
Knowledge hiding from supervisors	11	0.508	0.919	0.902
Organizational support	11	0.548	0.930	0.916

PLS algorithm and bootstrapping; the setting was tuned to 500 samples using bias-corrected and accelerated bootstrap with no significant changes and a two-tailed method (Ringle, et al., 2012).

Results

Measurement Model

Reliability analysis was assessed using Cronbach's alpha and confirmatory composite reliability analysis. Cronbach's alphas are greater than 0.7, and composite reliability is above the minimum requirement of 0.7 in all cases (see Table 2). The internal reliability of the measurement items is acceptable for all constructs but knowledge hiding from co-workers (KHC) is below 0.5. We nevertheless kept the construct KHC, based on p_n (composite reliability) alone (see Table 2). Hence the research may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error (Fornell & Larcker, 1981). The descriptive statistics of latent scores are given below (Tables 3 and 4).

Table 5 shows that most of the loadings are above 0.7 for items representing the same latent variable, as expected. However, some items have loadings that lie between 0.4 and 0.7. We decided to keep these items because removing them would lead to a decrease in internal consistency reliability (). Furthermore, more than half of the variance is captured by the constructs, and hence, no collinearity issues and VIF values fall below the threshold value equal to 5 (Table 6). Note that we also performed a full collinearity test (Knock, 2015) to discard any doubts on common method bias. The factor-level variance inflation factors are lower than the threshold

Table 3 Descriptive statistics of latent scores

	Abusive supervision	Co-worker support	KH from co-workers	KH from supervisors	Organizational support
Mean	0.0000	0.0000	0.0000	0.0000	0.0000
SD	1.0028	1.0028	1.0028	1.0028	1.0028
Min	-3.7768	-2.9962	-0.9783	-0.8665	-2.6192
Max	1.0064	2.0564	2.9557	2.8593	2.1792

Table 4 Latent variable correlations

	Abusive supervision	Co-worker support	KH from co-workers	KH from supervisors	Organizational support
Abusive supervision	1.000				
Co-worker support	0.216	1.000			
KH to co-workers	−0.269	−0.370	1.000		
KH to supervisors	−0.463	−0.323	0.744	1.000	
Organizational support	0.447	0.332	−0.131	−0.202	1.000

value of 3.3 as recommended by Knock (2015), and Pradhan et al. (2019). Those results confirm that there is no “pathological collinearity” and our model is not affected by common method bias.

Hypothesis Testing, Structural Model, Path Estimates

PLS results are summarized in Fig. 2 and related statistics are reported in Table 7 and Table 8. The coefficients of only two paths are not significant (organizational support to KH from supervisors and KH from co-workers).

Hypothesis 1A is valid. The results, displayed in Tables 6 and 7, suggest that there is a negative and significant relationship between abusive supervision and knowledge hiding from co-workers (−0.234). The associated f^2 is 0.053. Thus, this relationship exists but abusive supervision has a small effect size on knowledge hiding from co-workers. The more abusive the supervisor is, the fewer employees will be inclined to hide their knowledge from their co-workers.

Hypothesis 1B is supported. The results, displayed in Tables 6 and 7, suggest that there is a negative and significant relationship between abusive supervision and knowledge hiding from supervisors (−0.444). The associated f^2 is 0.216: Abusive supervision has a medium effect size on knowledge hiding from supervisors, according to Cohen’s (1992) classification. The more abusive the supervisor is, the fewer employees will be inclined to hide their knowledge from their supervisors.

Multiple Mediation Analysis

Hair et al. (2017, p.236) define simple mediation as follows: “a single mediator variable, which accounts for the relationship between an exogenous and an endogenous construct.” However, when “exogenous constructs exert their influence through more than one mediating variable,” we may conduct a multiple mediation analysis.

In this paper, the multiple mediation analysis aims to define whether co-worker support or organizational support may act as potential mediators that influence the causal relationship between abusive supervision and knowledge hiding from co-workers/supervisors (Fig. 3).

To analyze the mediating effects, we followed the procedure as suggested by Zaho et al. (2010), Nitzl et al. (2016), and Hair et al. (2017), and as applied in

Table 5 Loadings, cross-loadings, and square root of AVE

	Abusive supervision	Co-worker support	KH from co-workers	KH from supervisors	Org/support	Sq. root of AVE	
Abusive supervision	ABUS_SUP_1	0.694	0.123	-0.223	-0.403	0.259	0.807
	ABUS_SUP_2	0.855	0.199	-0.228	-0.371	0.402	
	ABUS_SUP_3	0.863	0.224	-0.285	-0.417	0.381	
	ABUS_SUP_4	0.780	0.145	-0.104	-0.270	0.393	
	ABUS_SUP_5	0.830	0.166	-0.223	-0.394	0.364	
Co-worker support	COWS_1_AF	0.166	0.773	-0.290	-0.238	0.370	0.767
	COWS_2_AF	0.139	0.827	-0.334	-0.284	0.230	
	COWS_3_AF	0.165	0.653	-0.144	-0.159	0.309	
	COWS_4_AF	0.115	0.809	-0.344	-0.263	0.190	
	COWS_5_AF	0.198	0.685	-0.285	-0.258	0.119	
	COWS_6_AF	0.190	0.759	-0.291	-0.272	0.296	
	COWS_7_AF	0.199	0.814	-0.283	-0.282	0.306	
	COWS_8_AF	0.157	0.789	-0.283	-0.181	0.249	
Knowledge hiding to co-workers	EVHID_1_CW	-0.168	-0.176	0.686	0.484	-0.166	0.697
	EVHID_2_CW	-0.158	-0.125	0.585	0.525	-0.068	
	EVHID_3_CW	-0.151	-0.264	0.667	0.536	-0.117	
	EVHID_4_CW	-0.174	-0.186	0.693	0.528	-0.034	
	PLAYD_1_CW	-0.196	-0.245	0.783	0.582	-0.051	
	PLAYD_2_CW	-0.231	-0.278	0.720	0.454	-0.146	
	PLAYD_3_CW	-0.171	-0.356	0.818	0.537	-0.122	
	PLAYD_4_CW	-0.188	-0.287	0.740	0.560	-0.088	
	RATHID_1_CW	-0.999	-0.147	0.494	0.340	0.086	
	RATHID_2_CW	-0.258	-0.263	0.693	0.557	-0.080	
	RATHID_3_CW	-0.223	-0.360	0.735	0.580	-0.146	

Table 5 (continued)

	Abusive supervision	Co-worker support	KH from co-workers	KH from supervisors	Org/support	Sq. root of AVE
Knowledge hiding to supervisors						
EVHID_1_S	-0.327	-0.183	0.537	0.649	-0.215	0.713
EVHID_2_S	-0.225	-0.166	0.448	0.649	-0.042	
EVHID_3_S	-0.333	-0.299	0.535	0.744	-0.239	
EVHID_4_S	-0.252	-0.191	0.534	0.704	-0.074	
PLAYD_1_S	-0.371	-0.213	0.596	0.767	-0.136	
PLAYD_2_S	-0.329	-0.200	0.518	0.735	-0.154	
PLAYD_3_S	-0.389	-0.276	0.570	0.789	-0.160	
PLAYD_4_S	-0.329	-0.240	0.508	0.710	-0.171	
RATHID_1_S	-0.359	-0.296	0.592	0.770	-0.119	
RATHID_2_S	-0.422	-0.183	0.541	0.701	-0.113	
RATHID_3_S	-0.215	-0.266	0.423	0.598	-0.140	

Table 5 (continued)

	Abusive supervision	Co-worker support	KH from co-workers	KH from supervisors	Org/support	Sq. root of AVE
Organizational support						
OS_1_VC	0.298	0.369	-0.126	-0.110	0.699	0.740
OS_2_VC	0.303	0.277	-0.058	-0.080	0.789	
OS_3_VC	0.182	0.225	-0.047	-0.088	0.552	
OS_4_VC	0.337	0.266	-0.064	-0.127	0.764	
OS_6_VC	0.289	0.286	-0.044	-0.090	0.824	
OS_7_WB	0.330	0.313	-0.092	-0.135	0.749	
OS_8_WB	0.391	0.150	-0.180	-0.223	0.712	
OS_9_WB	0.307	0.230	-0.072	-0.120	0.784	
OS_10_WB	0.336	0.264	-0.095	-0.190	0.843	
OS_11_WB	0.391	0.213	-0.177	-0.262	0.701	
OS_12_WB	0.357	0.157	-0.018	-0.102	0.682	

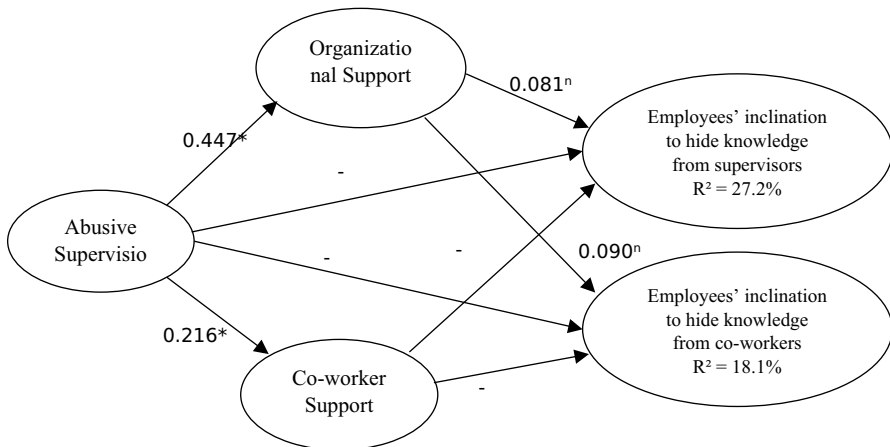
Table 6 Multicollinearity–inner model

	VIF
Abusive supervision → co-worker support	1.000
Abusive supervision → organizational support	1.000
Abusive supervision → knowledge hiding from co-workers	1.258
Abusive supervision → knowledge hiding from supervisors	1.258
Co-worker support → knowledge hiding from co-workers	1.131
Co-worker support → knowledge hiding from supervisors	1.131
Organizational support → knowledge hiding from co-workers	1.347
Organizational support → knowledge hiding from supervisors	1.347

Anand & Dalmasso (2019). Based on those articles, we computed the indirect specific effects (i.e., indirect effects related to one potential mediator) and direct effects to distinguish different kinds of mediations. Indeed, mediation will not be studied as a simple phenomenon (partial mediation versus full mediation) but as a more complete analysis. We make a distinction between competitive mediation, complementary mediation, and indirect-only mediation (also known as full mediation). Table 9 depicts the methodology used to define the different categories of multiple mediations or the absence of mediation.

Based on the results reported in Table 10, the direct effect between abusive supervision and knowledge hiding from co-workers is negative and significant at 1% while the specific indirect effect is negative and significant at 5% (−0.076). H2A has validated: co-worker support is a mediator with complementary mediation.

H2B is supported. As shown in Table 10, the direct effect between abusive supervision and knowledge hiding from supervisors is negative and significant at 0.1% while



*** significant at $p \leq 0.001$ ** significant at $p \leq 0.01$ * Significant at $p \leq 0.05$ ns Not

Fig. 2 Bootstrapping results using the PLS-SEM method

Table 7 Path estimates—measurement models—explanatory variables

Paths	Coefficient	T statistics	p values
Abusive supervision → co-worker support	0.216**	2.942	0.003
Abusive supervision → knowledge hiding from co-workers	−0.234**	2.654	0.008
Abusive supervision → knowledge hiding from supervisors	−0.444***	5.364	0.000
Abusive supervision → organizational support	0.447***	6.695	0.000
Co-worker support → knowledge hiding from co-workers	−0.349***	5.460	0.000
Co-worker support → knowledge hiding from supervisors	−0.254***	3.764	0.000
Organizational support → knowledge hiding from co-workers	0.090 ^{ns}	1.072	0.284
Organizational support → knowledge hiding from supervisors	0.081 ^{ns}	1.097	0.273

ns not significant

*significant at $p \leq 0.05$, *ns* not significant; **significant at $p \leq 0.01$; *** Significant at $p \leq 0.001$

the specific indirect effect is negative and significant at 5% (−0.055). Co-worker support is once again shown to be a mediator with complementary mediation. According to Latan and Noonan (2017, p.178), this finding suggests that co-worker support “explains, possibly confounds, or falsifies the relationship between the independent variable” (here, abusive supervision) and the dependent variables (knowledge hiding from co-workers and knowledge hiding from supervisors).

As shown in Table 10, the direct effect between abusive supervision and knowledge hiding from co-workers is negative and significant at 1% but the specific indirect effect we computed is not significant (0.040^{ns}). Thus, our result falls into the category of “direct-only non-mediation.” Hypothesis H3A is not supported. Organization support is not a mediator.

We draw the same conclusion with knowledge hiding from supervisors. While the direct path between abusive supervision and knowledge hiding from supervisors is significant at 0.1%, the specific indirect path is not significant (0.036^{ns} in Table 9). Organization support is not a mediator; thus, H3B is not supported. In the relationship between abusive supervision and knowledge hiding from co-workers/supervisors, the factor of organization support does not intervene. Thus, organizational support does not act as a suppressor variable, which could decrease the magnitude of the total negative effect of the independent variable (abusive supervision) on the dependent variables (knowledge hiding to co-workers/supervisors).

Table 8 Direct paths and hypothesis testing

Paths	Coefficient	T statistics	p values	Effect size f^2	Results
Abusive supervision → KH from co-workers	−0.234**	2.654	0.008	0.053	H1A supported
Abusive supervision → KH from supervisors	−0.444***	5.364	0.000	0.216	H1B supported

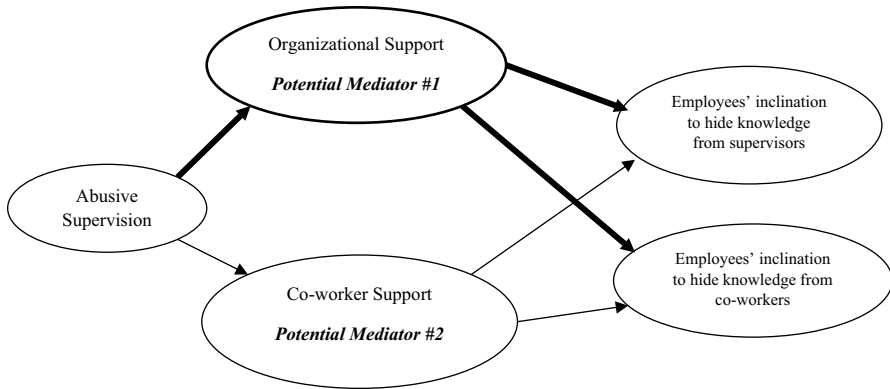


Fig. 3 Mediation with two potential mediators

Discussion and Implication

According to the findings of our study, while it has been established that abusive behaviors have a negative impact on knowledge hiding and that co-worker and organizational support are essential (Anand & Dalmasso, 2019), this study has shown that from an academic standpoint, co-worker support is a complementary mediator: the direct and indirect effects are both significant and point in the same direction. Ironically, organizational support, in the form of psychological support, is not sufficient to offset the detrimental effects of abusive supervision on workers’ propensity to conceal their knowledge. We have demonstrated in this study that it is not a mediator. Interestingly, results from our research contradict previous studies conducted on abusive supervision and knowledge hiding (e.g., Khalid et al., 2018) in an organizational context.

Our research contributes to the existing research literature in the following ways: first, our research reveals the previously overlooked impact of abusive supervision and knowledge hiding in academic environments. This study complements the few academic studies that have examined this phenomenon from the lens of a contextual (e.g., Demirkasimoglu, 2016; Hernaus et al. 2019). Second, our data demonstrate that supervisors’ abusive behavior does not inevitably lead to an increase in

Table 9 Classification of mediation

	Specific indirect effect is significant	Specific indirect effect is significant
Direct effect is significant	Mediation Same direction: complementary mediation Opposite direction: competitive mediation	Direct-only non-mediation
Direct effect is not significant	Indirect-only mediation (= full mediation)	No-effect non-mediation

Table 10 Results—direct effects and specific indirect effects—hypothesis testing

Effects	Paths	Original sample	Tstatistics	p values	Mediation	Hypothesis
Direct effect	Abusive supervision → knowledge hiding from co-workers	-0.234**	2.654	0.008		H1A is supported
Specific indirect effect	Abusive supervision → knowledge hiding from co-workers through co-worker support	-0.076*	2.451	0.015	Complementary Mediation Co-worker support is a mediator	H2A is supported
Specific indirect effect	Abusive supervision → knowledge hiding from co-workers through Org. support	0.040 ^{ns}	0.984	0.325	Direct-only non-mediation Organizational support is not a mediator	H3A is not supported
Direct effect	Abusive supervision → knowledge hiding from supervisors	-0.444***	5.364	0.000		H1B is supported
Specific indirect effect	Abusive supervision → knowledge hiding from supervisors through co-worker support	-0.055*	2.261	0.024	Complementary Mediation Co-worker support is a mediator	H2B is supported
Specific indirect effect	Abusive supervision → knowledge hiding from supervisors through Org. support	0.036 ^{ns}	0.980	0.327	Direct-only non-mediation Organizational support is not a mediator	H3B is not supported

ns not significant

*significant at $p \leq 0.05$; **significant at $p \leq 0.01$; *** Significant at $p \leq 0.001$

employee hiding practices. Rather, in some cultures, the more abusive, dominating, and powerful the supervisor, the more likely the employees are to offer knowledge (Anand & Dalmasso, 2019; Walsh et al., 2020). We hypothesize that this may motivate individuals to reveal knowledge to avoid future consequences, out of concern for job insecurity or continuous mistreatment, or to compensate for supervisors. Due to India's high-power culture, Indian companies are better positioned than those in other nations to research abusive supervision. This power-distance score for India demonstrates a significant degree of power imbalance that is not innately imposed on the populace but is a cultural norm (Juhász, 2014). In such settings, the bond with an authority figure may result in knowledge sharing even when the employees are abused.

This study contributes to the growing literature on different workplace settings and contexts. For instance, in the Indian context, if employees are abused by their supervisors then the employees tend to have deviant behavior toward co-workers (Anand & Dalmasso, 2019) and while the male employees may stay while abused, women tend to leave the organization (Pradhan et al., 2018). We argue that context may differ according to the abused recipient of knowledge hiding, the size of the academic institution, the demography, and the cultural characteristics. Thus, the academic environment in India needs to be explored further with different contextual factors such as gender, social capital, and interpersonal relations, and needs more attention in future knowledge management research studies.

In this research, the highest number of respondents belong to the age group of 31–40. Therefore, the findings of this study might be affected by the job insecurity and contractual nature of the job of young Indian professors or scholars. For instance, Hernaus et al. (2019) suggested that the competitive pressure is likely to be particularly present in early- and mid-career researchers, who are working on their reputation and are striving for recognition (p. 614). It could also be argued that, as early-stage professors, having less bargaining power, may have to depend on the knowledge of co-workers and supervisors, they are less inclined to hide knowledge even while abused.

Our research offers several practical implications for education and academic leaders and specifically for management institutes and business schools that are part of the university system. While being abused, employees may still share knowledge, but this abuse may also reduce their organizational citizenship behavior or have an effect on their creativity and emotional exhaustion. For instance, employees when abused feel embarrassed and, to overcome this, they tend to share knowledge with co-workers. Furthermore, it depends on the context as to why a supervisor abuses an employee (e.g., publish or perish, probationary period, social status of employees) or the frequency of abusiveness. The question remains, although abusive behavior can have a retaliatory effect, it is important for education leaders to understand the post-abusive behaviors not just with knowledge sharing or hiding but also in work performance.

The results suggest that public academic institutions should take preventive measures to reduce abusive supervision at work. As Lodge (1989, p. 76) writes, the way to survive in the academic world is to “Publish! Publish or Perish!” and some supervisors might take advantage of this pressure on colleagues and mistreat them.

Supervisor support often leads to a positive outcome from employees such as developing trust and maintaining favorable relationships, which in turn may lead to sharing of knowledge. Abusive behaviors, on the other hand, may cause skilled employees to temporarily share knowledge but may also increase employees' intentions to quit their job in India (Agarwal, 2019).

Often, knowledge acquisition can be a challenging task. It can direct conformity since individuals in specific roles increase others' reliance on them (Pfeffer, 1981), and employees who are facing job instability may not disclose knowledge (Webster et al., 2008). Given the impact of abusive supervision on knowledge hiding in academia, academic institutions must make greater efforts to develop an open and collaborative culture as opposed to a bureaucratic culture, and implement policies that encourage humble interactions among researchers, which may help to establish personal trusting relationships (Nelson, 2016). We propose that academics provide training in interpersonal relationship skills to supervisors to instill a sense of altruism in them, which may result in a strong reciprocal relationship (e.g., humility and generosity behaviors) between supervisors and subordinates, as reciprocal benefits play an important role in both the quantity and quality of knowledge sharing (Anand et al., 2019; Sedighi et al., 2016).

Conclusion and Limitations

In today's competitive environment, academic institutions are at the forefront of knowledge creation. As a major source of influence in the workplace, supervisors can determine the work output of their subordinates and can play a significant role in the sharing or hiding of knowledge among employees. Although many studies have focused on knowledge hiding in different work settings, the role of knowledge hiding in knowledge-intensive institutes such as public universities/higher education remains underrepresented. The present study is the first to explore empirically the relationship between abusive supervision and knowledge hiding in a public academic institution from the context of India. Given the results, there is a need for a more in-depth investigation to explore this phenomenon from different geographical work settings and contexts.

Despite the contributions, this study has two limitations to acknowledge. First, the generalization of the samples adopted in the study may be limited as we focused on private universities/institutes involving only business, economics, management, and accounting faculty members from India. Future research may explore how results may differ across different disciplines such as engineering sciences and life sciences both in private and public higher education institutions. The finding that knowledge hiding may not continue despite supervisor abuse may also call researchers in the future to measure differences in the quality or quantity of knowledge being hidden among co-workers and supervisors (e.g., Anand & Dalmasso, 2019).

Second, there is uncertainty about the extent to which our findings may differ from other cultural contexts such as Western societies. Future research replicating this study in a cross-cultural context, preferably using data from cross-country public academic institutions with various job types and other contextual variables, would enhance the generalizability of our findings. Although abusive supervision

exists in the academic world, it would be useful to investigate whether supervisors engage in hostile behavior because of their character or because the situation demands that they behave abusively. Future research may benefit from qualitative exploratory methods to establish the causality of the relationships examined in this study from different contexts (Table 11).

Appendix

Table 11 All the scale items used in this study were measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree)

Abusive Supervision Scale: Peng et al. (2014)

ABUS_SUP_1	My supervisor tells me my thoughts and feelings are stupid ®
ABUS_SUP_2	My supervisor puts me down in front of others ®
ABUS_SUP_3	My supervisor makes negative comments about me to others ®
ABUS_SUP_4	My supervisor doesn't give me credit for jobs requiring a lot of effort ®
ABUS_SUP_5	My supervisor blames me to save himself/herself embarrassment ®

Co-worker Support: Ducharme and Martin (2000) Woo and Chelladurai (2012)

COWS_1_AF	My coworkers care about me
COWS_2_AF	I feel close to my coworkers
COWS_3_AF	My coworkers take a personal interest in me
COWS_4_AF	My coworkers are friendly with me
COWS_5_IS	My coworkers would fill in if needed when I am absent
COWS_6_IS	My coworkers are helpful in getting job done
COWS_7_IS	My coworkers give me useful advice on job problems, when needed
COWS_8_IS	My coworkers will pitch in and help if needed

Organizational Support: Eisenberg (1986, 1997) Woo and Chelladurai (2012)

OS_1_VC	The organization values my contribution to its well-being
OS_2_VC	The organization strongly considers my goals and values
OS_3_VC	If I decided to quit, the organization would try to persuade me to stay
OS_4_VC	The organization cares about my opinions
OS_5_VC	The organization feels that hiring me was a definite mistake ®
OS_6_WB	The organization really cares about my well-being
OS_7_WB	Help is available from the organization when I have a problem
OS_8_WB	The organization would ignore any complaint from me ®
OS_9_WB	The organization is willing to extend itself in order to help me perform my job to the best of my ability
OS_10_WB	The organization cares about my general satisfaction at work
OS_11_WB	The organization shows very little concern for me ®
OS_12_WB	The organization cares more about making a profit than about me ®
EVHID_1_S	When my supervisor asks for my help, I agree to help him/her but don't really intend to

Table 11 (continued)**Hiding knowledge from supervisors (Evasive hiding, playing dumb, rationalized hiding): Connelly et al. (2012)**

EVHID_2_S	When my supervisor asks for my help, I agree to help him/her but instead I give him/her information different from what s/he wants
EVHID_3_S	When my supervisor asks for my help, I tell him/her that I will help him/her out later but stall as much as possible
EVHID_4_S	When my supervisor asks for some information, I offer him/her some other information instead of what he/she really wants
PLAYD_1_S	When my supervisor asks for some information, I pretend that I do not have the information s/he needs
PLAYD_2_S	When my supervisor asks for some information, I say that I do not know, even though I do
PLAYD_3_S	When my supervisor asks for some information, I pretend I do not know what s/he is talking about
PLAYD_4_S	When my supervisor asks for some help on a topic, I pretend that I am not very knowledgeable about this topic
RATHID_1_S	When my supervisor asks for some specific information that she knows I have, I pretend that this information is confidential and only available to people on a particular project
RATHID_2_S	When my supervisor asks for some knowledge that s/he knows I have, I tell him/her that our boss would not let anyone share this knowledge
RATHID_3_S	When my supervisor asks for some knowledge that I have, I say that I will not answer his/her questions

Hiding knowledge from co-worker (Evasive hiding, playing dumb, rationalized hiding): Connelly et al. (2012)

EVHID_1_CW	When my coworkers ask for help I agree to help them but never really intend to
EVHID_2_CW	When a coworker asks for help, I agreed to help him/her but instead give him/her information different from what s/he wanted
EVHID_3_CW	When a coworker asks for help, I tell him/her that I would help him/her out later but stall as much as possible
EVHID_4_CW	When a coworker asks for help, I offer him/her some other information instead of what he/she really wants
PLAYD_1_CW	When a coworker asks for some information, I pretend that I do not have the information s/he needs
PLAYD_2_CW	When my coworkers ask for some information, I say that I do not know, even though I do
PLAYD_3_CW	When a coworker asks for some information, I pretend I do not know what s/he is talking about
PLAYD_4_CW	When a coworker asks for help on a topic, I pretend that I am not very knowledgeable about the topic
RATHID_1_CW	When a coworker asks for some specific information that s/he knows I have, I explain that the information is confidential and only available to people on a particular project
RATHID_2_CW	When a coworker asks for some knowledge that s/he knows I have, I tell him/her that our boss would not let anyone share this knowledge
RATHID_3_CW	When a coworker asks for knowledge that I have, I say that I would not answer his/her questions

Completely true=5 and all the time=5; rarely=2 and somewhat false=2; completely false=1 and never=1; somewhat false=3 and sometimes=3; true=4 and often=4; ®: reverse coded

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