The Moderating Effect of Ethical Leadership between Psychological Ownership of Knowledge and Knowledge Hiding: An Empirical Study on the Public Universities in Northern Iraq

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Abstract

The intention of this study is to examine the relationship between psychological ownership of knowledge and knowledge hiding and how this relationship is moderated by ethical leadership. To check the hypotheses, field data were gathered from a sample of 178 employees in four public universities in Kurdistan Region of Iraq. The outcomes show there is a positive relationship between psychological ownership of knowledge and knowledge hiding and this connection is moderated by ethical leadership. This is the first attempt to investigate the moderating role of ethical leadership on the connection between psychological ownership of knowledge and knowledge hiding in a largely overlooked context of Iraqi Kurdistan.

Key words: knowledge management, ethical leadership, psychological ownership of knowledge, knowledge hiding, public organizations.

Introduction

In recent decades, knowledge management scholarship has obtained significant attention because of the employees' behavior in knowledge-sharing in helping organizations to stand their competitive advantage (Butt & Ahmad, 2019. Sağsan (2006) defined knowledge management as knowledge creation, sharing, structuring, using, and knowledge auditing. The real impact of knowledge manifests itself when it is shared among different employees working in various organizations. Apparently, organizations that share knowledge among employees are more productive, innovative, collaborative, efficient, and satisfactory (Aparicio, Bacao, & Oliveira, 2016; Eid & Al-Jabri, 2016; Tan, 2016; Zhang & Cheng, 2015). Organizations do not possess the intellectual advantages of workers and, therefore, cannot force workforces to share personal knowledge with other work colleagues (Barling, Slater, & Kelloway, 2000). As a requirement of enabling knowledge transfer in

organizations, academic staff and professionals need to comprehend why people hide knowledge and how to mitigate its consequences (Connelly, Zweig, Webster, & Trougakos, 2012; Davenport, De Long, & Beers, 1998; Fahey & Prusak, 1998; Hinds, Patterson, & Pfeffer, 2001). The main reason for this action is that knowledge hiding can harm individual innovative work behavior, harm personal relationships, and challenge organizational and personal performance(Černe, Hernaus, Dysvik, & Škerlavaj, 2017).

To date, several factors have been articulated to understand why some employees involve in hiding knowledge and also how to mitigate such behavior (A. B. Ahmad, Straatmann, Mueller, & Liu, 2020). Furthermore, scholars have classified these factors into four main categories. These main categories include: individual-related, job-related, organization-related and coworkers related factors (Černe, Nerstad, Dysvik, & Škerlavaj, 2014; Demirkasimoglu, 2016; Peng, 2013).

First, the central explanation and interest of testing ethical leadership in association with psychological ownership of knowledge and knowledge hiding is stimulated predominantly by the fact that the central focus of this leadership style is on "ethics", as ethics play a strong role in shaping human behavior, including knowledge

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hiding behavior (Tang, Bavik, CHEN, & Tjosvold, 2015). On the other hand, psychological ownership of knowledge is characterized with three human needs which are efficacy and effectiveness, home, and self-identity (Pierce, Kostova, & Dirks, 2001). These three factors contribute to establishing an inner feeling of distrust and loss of control that might push employees to hide knowledge. Moreover, the connection between psychological ownership of knowledge and knowledge hiding is multifaceted, and one of its dimensions might be moderated by ethical leadership. Ethical leaders construct a supportive relationship with group members that stimulate employees to be willing to involve in positive behaviors (Walumbwa, Hartnell, & Misati, 2017). According to the researchers' knowledge, ethical leadership is not employed to moderate the relationship between psychological ownership of knowledge and knowledge hiding in public universities. Second, most research papers in the discipline of knowledge management are piloted in the west, which is not clear if they are valid and applicable in non-western, Islamic backgrounds such as Iraqi Kurdistan. Previous research indicates that organization behavior is situational; for example what functions in one culture and organization perhaps creates disappointment in an alternative location (A. B. Ahmad & Cheng, 2018; B. A. Ahmad, Liu, & Butt, 2020). This study attempts to test ethical leadership to understand its impact on the connection between psychological ownership of knowledge and knowledge hiding. Third, most of the available literature on knowledge hiding is private-sector oriented whereas public and private sectors are different in several dimensions.

In an attempt to contribute to studies on the behavior of knowledge hiding, this paper focuses on instrumental thinking and the theory of social learning by Bandura (1986) to propose a model that integrates psychological ownership of knowledge, ethical leadership and knowledge hiding. The paper intends to extend the available literature by; first, the study subsidizes to the knowledge management literature by examining the effect of ethical leadership in mitigating knowledge hiding. The study is a response to the call by (Ladan, Nordin, & Belal, 2017) to consider ethical leadership as a moderator between an individual-related factor (POK) and knowledge hiding. To the best of our knowledge, there is an absence of empirical evidence examining the moderating influence of ethical leadership in public universities. Most of the studies in the field of knowledge management are carried out in private sector; this

empirical study is conducted in public organizations. Second, to account for the particular context of public organizations in Iraqi Kurdistan, where it is empirically unexplored context, this paper will provide an original contribution in confirming the validity of previous studies. The paper contributes to the emergent line of research about knowledge management in a non-Western, Islamic setting. Therefore, the theoretical and empirical outcomes of this study are predicted to contribute to the available literature and to the broader context of Iraqi Kurdistan.

Literature Review
Knowledge Hiding

Knowledge hiding can be defined as "an intended attempt by an employee to withhold or conceal knowledge that has been demanded by another employee" (Connelly et al., 2012). There is reportedly some resemblance or intersection as well as differences between knowledge hiding and other comparable concepts for instance knowledge sharing and hoarding. Hiding knowledge is rather a deliberate and purposeful process which is related to the "One's willingness and intention" to hide the knowledge, while in knowledge hoarding the knowledgeable individual is not initially requested for the knowledge. Second, knowledge hiding is a multidimensional behavior which are three types (Atif Saleem Butt & Ahmad, 2020; Connelly et al., 2012). First, evasive hiding, the knowledge holder purposefully tries to provide inaccurate information and knowledge, or he/she promises to give more knowledge in future even though there is no intention to do that. Second, playing dump occurs when the knowledge hider plays that he/she does not have the knowledge and even he is unaware about it. Finally, in rationalized hiding, the knowledge hider justify his hiding behavior by explaining the reasons for not sharing the requested knowledge due to confidentially and specificity (Connelly et al., 2012).Knowledge hiding as an individual behavior has negative impacts on organizational performance and productivity. In most cases, knowledge hiding harms organizations and their employees' performance. First of all, Men et al. (2018) argues that knowledge hiding in organizations can essentially produce more turnover intentions amongst knowledge searchers. Secondly, individual performance will be affected due to the fact that an individual will give less than the complete determination to subsidizing to formulating the institutional knowledge (Atif S Butt, Ahmad, & Shah, 2020; Atif Saleem Butt, Shah, & Ahmad, 2021; Lin & Huang, 2010). Connelly and

Zweig (2015) stated that knowledge hiding between two employees harmfully shakes knowledge searchers' capability to be innovative as well as creative.

Psychological Ownership of Knowledge

Psychological ownership of knowledge might provide a possible clarification as to why people are hiding knowledge (Demir, Budur, Omer, & Heshmati, 2021; Peng, 2013).In organizational life, employees attempt to develop the feeling of ownership over both tangible and intangible objects such as ideas, information and plans. Pierce et al. (2001) suggests three main directions in which individuals build this psychological connection to an assured target (control of target, capitalizing of the self into the target, intimately knowing the target). The first route is controlling; which is an essential property of ownership as it stimulates the feeling of possession to an object. The control on knowledge gives the bargaining power to the employee over his own organization and the controlled knowledge in the hands will guarantee his power and position in the organization. The second direction denotes to relations with an object that allow persons to closely know the target (Pierce et al., 2001; Torlak, Kuzey, Sait Dinç, & Budur, 2020). By this understanding a strong connection will be developed which is consequently feeding the feeling of possession. Lastly, the investment of employees themselves into the target is another way of psychological ownership in which the knowledge holder is the one who creates and develops the knowledge. As a result, there is a strong feeling of possession. Each of these three routes has its own impact on knowledge hiding behavior; however, the impact level of each differs from a context to another.

The mechanisms of these three ways to psychological ownership of knowledge are characterized with three humankind requests; efficacy need and effectance, home, and self-identity (Pierce et al., 2001). The first two needs are dealing with individual's' wish to act effectively and play his own role in organization. It suggests an ability to be in control over a untouchable or noticeable object (Pierce, Kostova, & Dirks, 2003). Employees try to satisfy their efficacy needs through psychological ownership of knowledge. Consequently, their psychology pushes them to work dysfunctional actions to keep their control over the knowledge they hold and not let other employees to take the control. In addition, researches have also revealed that persons may practice personal loss, anger, and pressure when

their practiced control is hurt or conveyed (Bartunek, 1993; Pierce et al., 2003). When an employee shares what he/she knows, it is an indication that his control over a target is transferred too. The second need is the sense of referring to a destination which reflects as a home for that employee. The need of "Home" belongs to the wish to have a residence, a feeling of belonging to a positive destiny "in which to dwell" (Pierce et al., 2001).The final need is self-identity in which employees try to have the ability over an object to assimilate into self and that integration reflects in his expressions and extensions within the organization. As a result of the above three routes, this study hypothesizes that:

H1: Psychological ownership of knowledge is positively connected to knowledge hiding.

The moderation effect of ethical Leadership

Ethical leadership is described as "the demonstration of normatively suitable behavior through individual actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown, Treviño, & Harrison, 2005; Zaim, Demir, & Budur, 2021). The viewpoints about connotation of ethical leadership have highlighted the leader's personality, honesty, ethical consciousness, shared direction which inspires group or organizational benefits over personal interests, demonstration of respect and attention for the rights and desires of others, and accountability management (Brown et al., 2005; Budur & Poturak, 2021; Gini, 1997). There are two faces in ethical leadership: moral person and moral manager (Trevino, Weaver, Gibson, & Toffler, 1999). In the ethical person factor, ethical leaders have personal behaviors and appropriate features such as truthfulness, morality, and reliability (Men et al., 2018).

Ethical leadership has a potential impact to be linked with social learning theory of Bandura (1986) which is a novel and major theoretical basis that clarifies the impression of ethical leadership style. Furthermore, It offers a hypothetical foundation to express the view that leader who have ethics could successfully encourage supporter pro-social behavior, for example knowledge sharing manners (Brown et al., 2005). Ethical leaders have the right to reward and punish their followers based on the shared common goals and ethics. Linking to that principle of ethical leadership and based on social learning theory, people acquire the suitability of a behavior from their surroundings and they select to continue of rewarded behaviors and refrain from

unfavorable manners. On the other hand, according to ethical leadership theory, leaders can decide on reward and punishment that leads to joining the leader's behavior from employees. The above attributes regulate on the legality and salience of the leader's character modeling in directing the employees. In last two decades, several studies have explored that ethical leadership has positive impacts in the realm of knowledge management. For instance, ethical leadership has been reported to be linked to employees' readiness to report problems (Brown et al., 2005), employee commitment, trust and confidence (De Ho gh & Den Hartog, 2008; Tümkan, 2021) , higher stages of citizenship and lower levels of work piece deviation (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). In addition, high level of ethical leadership is also related with voice behavior and psychological safety (Walumbwa et al., 2017). This study argues that ethical leaders are capable to alleviate knowledge hiding as a negative organizational behavior. Moreover, ethical leadership embraces the wish of creating fair and secure environment which will eventually lead to build trust in employees with regards to provide the requested knowledge and not to hide it. As such, employees feel more attached to their organizations and they perceive less to the threat of losing control over their knowledge (Budur, 2018). On the other hand, ethical leaders try to mitigate negative organizational behaviors through shared vision, honesty and fairness that might put a positive influence on employees to a more effective cooperation with other co-workers (Torlak et al., 2021.

Psychological ownership of knowledge is distinctively human (Pierce et al., 2001). Since knowledge is a crucial competitive advantage source, employees try to keep it for themselves as a form of preserving the control over their knowledge. Employees regularly start knowledge ownership which they assume as "mine", thus consequential of controlling the knowledge (Atif Saleem Butt & Ahmad, 2019). Also, it threatens their career development (Zhang & Cheng, 2015). One of the routes of psychological ownership of knowledge is investing in self; however ethical leadership may help employees to feel less concerned in this feeling. As a result, ethical leaders are reported to support workers to decrease the damaging impact regarding self-interest. Controlling of knowledge and possession feeling are two other attributes of psychological ownership of knowledge. Due to the robust controlling

intelligence of knowledge, employers are thoughtful about donating good possessions, thus encouraging them unwilling to accept works to understand and adopt knowledge of their leaders (Sun, Zhang, & Meng, 2019). Ethical leaders are responsible for creating an organizational climate that can combat these courses. The central purpose of ethical leadership is to nurture ethical organizational culture (Avey, Hughes, Norman, & Luthans, 2008). Through building some ethics and organizational values, leaders can alter employees' attitudes, more specifically the psychological-related behaviors because ethical leaders work on the individual's feelings. For example, employees in public organizations will be more responsive to cooperate with an ethical leader who is committed to some organizational values and at the same time appreciates his followers' contribution (ALPAY, 2020; Pa'wan & Said, 2020). Moreover, ethical leadership aids to raise standards that supports a the feeling of being a part among the organizational (Avey et al., 2008). Ethical leaders lead their organizations ethically, and consequently, employees would have no excuse to hide knowledge because they have the feeling of belongingness. For instance, Employees, who are listened to and appreciated for their achievements, are probably sense that they refer to the group (Ali & Sagsan, 2020). On the contrary, workers who are disregarded and put aside are psychologically separated from their association and thus lack a feeling of belongingness (Avey et al., 2008). Lastly, Studies built on neurological and psychological have revealed that feeling regulation strategies meaningfully touch the process, internalization, and utilizing of information, though concurrently causing invaluable effects such as sharing knowledge with coworkers (Kuonath, Specht, Kühnel, Pachler, & Frey, 2017). Ethical leaders utilize emotion regulation as a trend of social theory exchange to influence employee's behavior. Emotions are related to cognitive process which eventually influences the psychological feelings of individuals (including the knowledge possession feeling) (ALPAY, 2020; Pa'wan & Said, 2020; Tümkan, 2021). Based on this notion, it can be concluded that the effect of ethical leaders on supporters is a feeling management practice. As emotions are more linked with cognitive system, they work as a stimulating backup to create feelings. Ethical leaders cultivate positive emotions and as a result, employees feel positively. Built on the above discussion, we propose that:

H2: Ethical leadership (a) is negatively linked to knowledge hiding, and (b) moderates the

relationship between psychological ownership of knowledge and knowledge hiding such that ethical

leadership lessens the relationship between psychological ownership of knowledge and knowledge hiding.
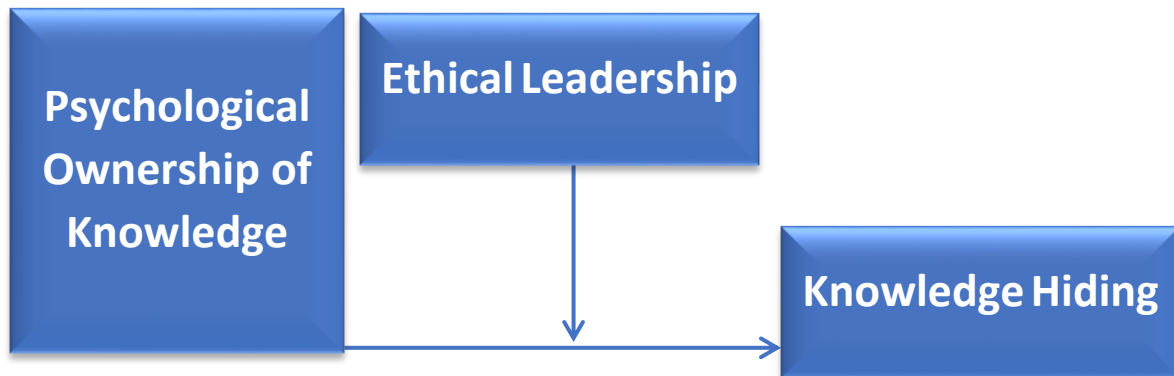

Figure 1. Research Model

Research Method
Sample and Procedures

Data for this study were collected form four public universities in Iraqi Kurdistan which is a semi-autonomous region in the north of Iraq (A. B. Ahmad, Butt, Chen, & Liu, 2020; H. A. Hassan, Zhang, & Ahmad, 2020). A total of 220 questionnaires were distributed through convenience sampling method to collect data among the participating universities in October 2020, a sum of 181 questionnaires were collected. The convenience sampling method was selected due to the fact that the research data collection was quicker, easier, more available and less costly. After clearing 3 respondents due to missing responses and repetitive answers, 178 usable responses were retained (81% of response rate). The mean age was 36.3 years age (SD= 6.9 years). In terms of educational level, the majority of participants hold bachelor degree (47%), diploma (21%), master degree (18%) and PhD (14%). As for the work experience, the average was =12.0 (SD= 6.5 years). The majority of respondents (78%) were male.

Measures

Unless noted otherwise, all measures were based on a 5-Likert type scale as (1= strongly disagree to 5 =strongly agree). To guarantee a satisfactory measurement of each variable, previously validated scales were used. All the items were initially in English but the questionnaires were administrated in the employees' native language (Kurdish language). Following A. B. Ahmad, T. Straatmann, et al. (2020) and H. A. Hassan, Zhang, Ahmad, and Liu (2020), the questionnaire was translated to Kurdish.

Psychological Ownership of Knowledge

Three items were used to measure this variable which are established by (Van Dyne & Pierce, 2004). The participants were questioned how they feel with the knowledge they have. An example item was ''this is my knowledge''. The Cronbach alpha is (0.77).

Knowledge Hiding

The variable was measured with 12 items of (Connelly et al., 2012). The participants were questioned as they were in a condition and asked a question by another employee, how did they answer? A sample item was "I pretended I did not know what s/he was talking about" the Cronbach's alpha is (0.78)

Ethical Leadership

The variable was measured with 10 items of (Brown et al., 2005). The employees were questioned to understand5 how their leaders are ethical. A sample item is "My supervisor has the best interest of employees in mind. The Cronbach's alpha is (0.79)

Control Variables

This study has used some control variables such as employee's age, gender, education level and managerial position. These variables were related to knowledge hiding in previous studies e.g., (Černe et al., 2017; Connelly et al., 2012; Xiao & Cooke, 2019).

Results
Validity

Following H. A. Hassan, Zhang, Ahmad, et al. (2020), a series of confirmatory factor analyses have been carried out to calculate the uniqueness

of our central study variables. Table 1 shows that the hypothesized three-factor model (model 1) has a decent fit to our data ($\chi 2$ = 626.130; df = 286; $\chi2$/df = 2.189; IFI = .932; CFI = .958; TLI = .912; RMSEA = .099), while all other opposite models

offer lower fit. Given these results and the Cronbach's alpha scores crosswise all dimension scales (reported in parentheses in Table 2), the measures appear to be different and reliable enough to confidently proceed with the analyses.

Table 2. **Fit statistics from measurement model comparison**

Models	Factors	χ^2(df)	χ^2/df	CFI	IFI	TLI	RMSEA
Model 1	3 factors: EL, POK, KH	626.130(286)	2.189	.758	.932	.912	.099
Model 2	2 factors: EL+ POK, KH	808.878(188)	4.302	.658	.762	.718	.137
Model 3	1 Factor: EL+POK+KH	1216.842(189)	6.438	.434	440	.471	.175

Notes. + represents two factors merge into one. All models are compared to the full measurement model (Model 1). χ^2: chi-square discrepancy; df: degrees of freedom; CFI: comparative fit index; IFI: Incremental fit index; TLI: Tucker–Lewis Index; RMSEA: Root mean square error of approximation; $\chi2$diff: difference in chi-square; EL: Ethical leadership; POK: Psychological ownership of

knowledge; KH: Knowledge hiding.

Descriptive statistics

Means, standard deviations and correlations are shown in Table 2. As can be seen, all correlations among the main variables are significant and in the expected trend.

	M	SD	1	2	3	4	5	6	7
1.KH	4.72	.70	1						
2.POK	3.95	1.29	.319**	1					
3.EL	3.29	1.38	-.346**	-.437**	1				
4.GENDER	0.32	0.46	-.051	-.069	-.026	1			
5.Age	36.35	6.90	.064	.069	.021	.008	1		
6.YS	12.02	6.56	.064	.187*	.135	.087	.189*	1	
7.Degree	1.96	.63	.008	-.064	-.161*	.100	.148*	-.042	1

Note: **Correlation significant at 0.01 level (two-tailed). * Correlation significant at 0.05 level (two-tailed)

Note: Coefficients are presented on the diagonal in the parentheses: Gender (0=female, 1=Male), KH= knowledge hiding, POK=Psychological Ownership of Knowledge, EL=Ethical Leadership, YS=Years of service.

Results

The hypotheses were tested using regression analyses in SPSS and the PROCESS macro for SPSS

from (Hayes, 2017). PROCESS macro tool is precisely aimed for testing multifaceted moderation, to test the significance of the indirect effects.

Hypothesis 1 predicted that psychological ownership of knowledge is positively related to knowledge hiding. Our empirical analysis supports this hypothesis (β = .38, p < .05), as it is presented in table 3. Hypothesis 2a looked at the influence of ethical leadership on knowledge hiding. Table 3 shows that ethical leadership is indeed negatively linked to knowledge hiding (β = -.50, p < .05). Thus, H2a is confirmed.

Table 3. **Results of the regression and moderation analysis**

Model	Coefficient	SE	t	p-value
POK	.38	.08	4.29	.000
EL	-.50	.12	4.32	.000
Interaction effect (POK*EL)	-.09	.03	-3.40	.000
Model summary	R^2 = .21	F =15.14	*df* = 174	.000

Notes: * p < .05; ** p < .01; *** p < .001. POK =Psychological ownership of knowledge; EL = Ethical leadership.

Hypothesis 2b concerns the interaction effects of ethical leadership on the relationship between psychological ownership of knowledge and knowledge hiding. To test this hypothesis, we used

Model 1 in PROCESS macro for SPSS from (Hayes, 2017). The findings indicate that ethical leadership moderates the relationship between psychological ownership of knowledge and knowledge hiding (β =

-.09, p < .05). The interface of psychological ownership of knowledge and ethical leadership is designed in figure 2. As it is noted, ethical leadership lessens the connection between POK and knowledge hiding.
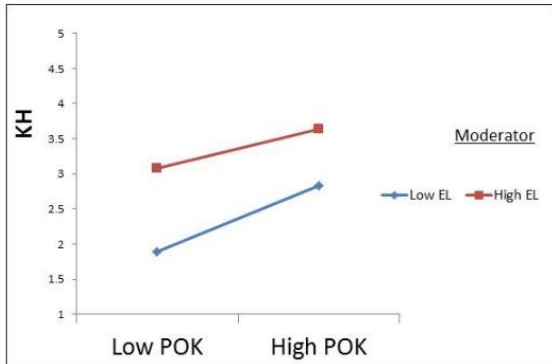

Figure 2. **Moderation of Effect between (POK) Psychological Ownership of Knowledge and (EL) Ethical Leadership on (KH) Knowledge Hiding.**

Discussion

The aim of this research was to examine the connection between psychological ownership of knowledge and knowledge hiding and how this association is moderated by ethical leadership. This attempt advances our understanding on how psychological ownership of knowledge influences knowledge hiding, and on the other hand to what extent the ethical leadership style can moderate between and individual-related factor of knowledge hiding and knowledge hiding as a behavior. Empirically testing the relationships, the findings showed that public organizations can embrace ethical leadership as a positive leadership style to solve the issue of knowledge hiding. It reveals that the principles of ethical leaders have similar impact in an Islamic context as well. The results and findings can be discussed in two main ways:

First, the present study relates psychological ownership of knowledge as an individual-related factor to knowledge hiding; it was planned that the feeling ownership of knowledge is a living variable to predict knowledge hiding. The outcomes indicate that if an employee has the feeling of ownership towards a targeted knowledge, he is more likely to hide what he knows. It is concurred with previous studies in the area of knowledge hiding (Černe et al., 2017; Connelly et al., 2012; Xiao & Cooke, 2019). The central focus in this paper is based on knowledge as the target of ownership. Previous studies such as Peng (2013); Xinyan and Xin (2006) identified knowledge as the target of ownership but

the authors did not consider how the psychological feeling is formulated. It is crucial to consider knowledge as the target, as it is the most significant organizational and individual asset. This assertion is in line with previous studies on the relationship between psychological ownership of knowledge and knowledge hiding (Peng, 2013). One explanation for the revealed outcomes might be associated with the employees' fear to lose their control and power over their knowledge. In addition, some employees try to protect their competitive advantage amongst co-workers. Second, ethical leadership moderated the relationship between psychological ownership of knowledge and knowledge hiding, such that the relationship is weak when leaders ethically lead the employees and vise-versa (ALPAY, 2020; Pa'wan & Said, 2020; Tümkan, 2021). This is in line with the previous studies on the role of ethical leadership. According to the social learning theory employees will learn the appropriateness of a behavior imitating their surroundings and they select to continue of rewarded behaviors and refrain from unfavorable manners. Ethical leaders have the right to reward their followers if they behave according to the common organizational goals. As a result of this motivation, employees might be less willing to hide knowledge. Additionally, Avey, Wernsing, and Palanski (2012) established that ethical leaders impact employees' psychological ownership through practices comparable to social learning standards. Parallel to the above studies study, the findings of this research suggest that ethical leadership can mitigate knowledge hiding. On the other hand, we referred employee's behaviors with ethics, and this helps us to understand if ethical leadership functions in Kurdish culture, as it had worked across other cultures or not because what is ethical in a culture might be unethical in another one.

Theoretical Implications

Even though this study is conducted in a totally different setting of a non-western and Islamic from other studies which are carried out in western context, the findings of this study have some theoretical contributions (H. Hassan, Ali & Ahmad, 2021). First, the findings of this study offer empirical evidence on the importance impact of psychological ownership of knowledge and knowledge hiding in public organizations. Furthermore, to the best knowledge of authors, this is the first attempt that reveals the moderating impact of ethical leadership that can reduce knowledge hiding in public sector organizations.

Secondly, this study originally contributes in enriching the literature by bringing some findings in an unexplored context - north of Iraq. This is parallel with previous studies which concluded that in a typically dominant Asian culture, the power distance is higher and as a result the abusive behaviors are often presented in the workplace (Khalid, Bashir, Khan, & Abbas, 2018). Thirdly, this study is significantly contributing to the existing literature because it encourages researchers to research on other theoretical ways of associating ethical leadership with social learning theory. On the other hand, it suggests the practitioners and organizational leaders to pay more attention on the impact of role modeling.

Practical Implications

Organizations need an effective knowledge management to survive and compete in today's competitive era. Understanding the factors that may lead to knowledge hiding and knowing mitigating mechanisms have some practical implications. Firstly, this study confirmed the need to address the individual-related factors of knowledge hiding. Among these factors, psychological ownership of knowledge plays a crucial role and that public university leaders should pay more attention to it (Pagani, Ramond, Da Silva, Zammar, & Kovaleski, 2020). One mechanism to slow down the role of psychological ownership of knowledge-on-knowledge hiding could be emphasizing on management practices that reduce the employee's perception of knowledge possession. For example, organizational leaders can adopt some management practices such as encouraging teamwork spirit, building collective ownership of knowledge and increasing organizational commitment (Zellars, Tepper, & Duffy, 2002).Secondly, organizations should take the role of ethical leadership into consideration as a mechanism to weaken knowledge hiding. To accomplish this, public universities could take some measures to hire leaders who are ethics-oriented. In addition, public academic institutions should hold trainings for employees and managers on the essence of ethics and significance of role modeling (Tepper, Duffy, Henle, & Lambert, 2006). To conclude, the application of ethical leadership principles will have an enhancing impact on knowledge hiding in public organizations of Iraqi Kurdistan.

Limitations and future directions

Each study has its own boundaries, and this paper has some limitations as well. Firstly, the results of the study are taken from a cross-sectional data that do not let for some detailed tests of the way of causality; therefore, there is a sense to our suggested model which is associated with prior studies. Secondly, this study is limited to individual traits (psychological ownership of knowledge) alone which influence knowledge hiding. Future studies may focus on other factors such as personality types or organization-related factors such as organizational climate, motivation, and conflict, the focus can be on knowledge content traits as well. Thirdly, the study scope has covered public universities; a similar model might be applied in private universities as well to investigate about the differences and similarities in two different contexts - public and private. Future researches may consider other nationalities especially academics and expats who work in private universities. Finally, in terms of the attributes of knowledge, this study has taken both (tacit and explicit) knowledge together. This study would add more to the theory if each attribute was taken separately. Tacit and explicit knowledge have different characteristics (Gourlay, 2006). Theoretically analyzing tacit knowledge is more complicated to communicate and as a result, employees can conceal tacit knowledge easier than explicit knowledge. Furthermore, since tacit knowledge is laid in the individual's cognitive nest, it is more attached to human psychology and inner possession. Hence, future research could concentrate on tacit and explicit knowledge separately.

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