



## Research article

# Relationship between workplace ostracism and knowledge hiding; mediational role of reciprocity beliefs among college teachers

Ruijuan Han<sup>a</sup>, Ammara tunnisa<sup>b</sup>, Saba Ghayas<sup>b,\*</sup>, Maham Shahab<sup>b</sup><sup>a</sup> School of Normal College, Shihezi University, Shihezi, Xin Jiang, China<sup>b</sup> Department of Psychology, University of Sargodha, Pakistan

## ARTICLE INFO

## Keywords:

Workplace ostracism  
Knowledge hiding  
Reciprocity beliefs

## ABSTRACT

Based on the social exchange theory and conservation of resources theory, the present research aimed to study the role of reciprocity beliefs in the relationship between workplace ostracism and knowledge hiding among college teachers. The study was conducted on a sample of 490 college teachers (i.e., 250 men & 240 women). The sample's age ranged from 24 to 58 years ( $M = 28$ ,  $SD = 1.30$ ). Psychometrically strong measurement tools were used to measure the constructs. Simple linear regression analysis demonstrated workplace ostracism as a significant positive predictor of knowledge hiding for college teachers. Mediation analysis demonstrated that negative and generalized reciprocity beliefs significantly mediated the relationship between workplace ostracism and knowledge hiding. This research will help organizations develop clear policies that encourage knowledge sharing and provide support systems for instructors with experience of ostracism. Limitations and suggestions of the current study for further empirical endeavors have also been discussed.

## 1. Introduction

Knowledge sharing among employees is crucial to run an organization smoothly, effectively, and efficiently. Due to its significance in the success of organizations, managers and higher authorities expect knowledge sharing from the employees. Moreover, knowledge sharing improves organizational performance [1].

On the other hand, knowledge hiding negatively impacts organizational performance. Knowledge hiding is an intentional attempt by an individual to withhold or conceal the requested knowledge [2]. Employee performance suffers as a result of knowledge hiding. It also promotes a culture of distrust and hostility among employees, resulting in lower organizational identification and more staff turnover. As a result, knowledge hiding harms employees and the company [3].

To conceal knowledge, employees might undergo three strategies, depending upon the nature of the question being asked to them [4]. A complex requested knowledge will put employees in a situation to adopt an evasive hiding strategy. Evasive hiding occurs most suitably occurred most suitably when the hider provides incorrect information or misleading promise of a complete answer in the future [4]. The second strategy, playing dumb, is described as feigning ignorance of the requested knowledge [5]. For instance, the employee pretends not to have any knowledge related to the knowledge question with the intention of not helping. The third and last strategy is rationalized hiding, wherein the employee hides knowledge without any intention of harm to others. It does not necessarily

\* Corresponding author.

E-mail addresses: [hanruijuan615@outlook.com](mailto:hanruijuan615@outlook.com) (R. Han), [merrytoor786@gmail.com](mailto:merrytoor786@gmail.com) (A. tunnisa), [saba.ghayas@uos.edu.pk](mailto:saba.ghayas@uos.edu.pk) (S. Ghayas), [Mahamshahab1997@gmail.com](mailto:Mahamshahab1997@gmail.com) (M. Shahab).

<https://doi.org/10.1016/j.heliyon.2024.e29134>

Received 13 April 2023; Received in revised form 26 March 2024; Accepted 1 April 2024

Available online 4 April 2024

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involve deception. Employee justifies act of knowledge hiding by excusing from providing requested knowledge or by blaming others [6].

However, some organizations encourage knowledge-hiding practices when employees hesitate to share knowledge. Because knowledge is intangible, nothing can be done to prevent or stop knowledge from hiding. Organizations do not own their employees' intellectual property [6]. Though the negative impacts of knowledge hiding on organizational performance have been demonstrated, little evidence is available on the interpersonal antecedents of knowledge hiding and other elements that might mediate its likelihood [7].

Workplace ostracism is one key factor that can haul the social exchange process in an organizational context. Workplace ostracism refers to the experience of being ignored, excluded, or socially rejected by colleagues in the workplace. As a result it affects the interpersonal relationship among employees in an organization [8]. The victim of workplace ostracism is ultimately inclined to withhold the information requested by others. It is also validated by recent research wherein it was found that workplace ostracism is significantly positively related to various forms of knowledge hiding [2,9].

Putting it in the perspective of emotional abuse, workplace ostracism has been characterized into three distinct categories. First, workplace ostracism does not come from only one group in an organization, rather an individual is ostracized by multiple groups at a time e.g. supervisors, colleagues, subordinates, or customers [10]. Second, the thought or feeling of an individual being ostracized or not is subjective. Third and last, individuals claiming to be ostracized are uncomfortable in interpersonal interactions and find them painful, negative, and unpleasant [11].

Workplace ostracism not only harms an individual's physical and psychological health, but it also diminishes job satisfaction and commitment to the job, reduces interpersonal behavior, and reduces job performance [12–15]. The victim of workplace ostracism frequently participates in both subtle and overt tactics to get revenge on his coworkers [16]. Based on these findings, it is anticipated that workplace knowledge hiding, a specific interpersonal action, would be influenced by workplace ostracism [9].

Considering workplace ostracism as an unpleasant and unwanted interpersonal experience, the victim of ostracism will perceive those who are ostracizing him as interpersonal harm. As a result of this perception, negative reciprocity beliefs emerge. And then the resultant interpersonal mistreatment (such as knowledge hiding, counter ostracism, or interpersonal counterproductive behaviors) from the ostracized employee is justified and acceptable. Negative reciprocity beliefs and moral disengagement were found to enhance the relationship between workplace ostracism and knowledge hiding [2], job burnout appeared as an important mediator in this relationship [17]. Recently researchers tried to find out that what are the types of people who are more likely to be hide knowledge after being ostracized within any organizational setup. Researchers pointed it out the quality of peer contact and expectations about the colleagues play important role [18].

Reciprocity beliefs support this conclusion, which indicates that individuals should return actions and attitudes in the same style or form that they receive them. We should not injure or cause harm to persons from whom we have benefitted (positive reciprocity beliefs), but we can use a retaliatory approach against those who have damaged or wounded us (negative reciprocity beliefs) [19].

Reciprocity is divided into three distinct types: generalized reciprocity, balanced reciprocity, and negative reciprocity. The concept of generalized reciprocity connotes an extended time of reimbursement, an unclear rate of return, and little personal gain. This type of reciprocity makes the entitled givers altruistic who only give with the intention of help and do not expect anything of equal worth to be returned in a set time frame. Individuals' inclination to reciprocate bad treatment with negative treatment is referred to as negative reciprocity beliefs [20] ... The third one is Balanced reciprocity represents a simultaneous exchange of resources of equal value. That is, the beneficiaries must repay their benefactors with something equal in worth in a given time frame. In balanced reciprocity, in contrast to negative reciprocity, both parties mutually benefit [21].

High levels of negative reciprocity beliefs make people more susceptible to unfavorable interpersonal information and more inclined to act with selfish motivation. Those who are subjected to ostracism experience more severe behavioral and psychological reactions than the normal person hence enabling one to remain silent and thus indulge in knowledge hiding as a form of reciprocity [22]. This goes in line with the conservation of resource theory, which states that resources are one's warehouse of capabilities to meet their basic needs [23]. According to the conservation of resource theory, in the absence of any chronic stressor, individuals engage in accumulating resources as much as possible to generate a resource pool to be used in case of adversity in the future. However, when confronted with any adversity, let's say for instance workplace ostracism, individuals adopt a strategy of protecting their resources by investing a small amount in passive and defensive behaviors [24]. Therefore, for people who tend to hold negative reciprocity beliefs, it is most common for them to choose silence or knowledge hiding despite knowing the importance of their ideas and suggestions for people and organization [22]. An insightful perspective based on the COR theory described how workplace ostracism depletes people of their necessary resources for the workplace.

Based on the conservation of resource theory, we can predict that workplace ostracism plays a key role in influencing knowledge hiding. As predicted by researchers [4], knowledge hiding behavior is easily provoked by alienating behavior at the workplace. Employees were more likely to engage in knowledge-hiding behavior specifically when they were not informed of the consequences and instructions for withholding important information [25].

Previously only the role of negative reciprocity beliefs was studied in the relationship between workplace ostracism and knowledge hiding. While other dimensions of reciprocity beliefs were ignored. The current study fills the gap by studying the role of balanced, generalized, and negative reciprocity belief in the relationship between workplace ostracism and knowledge hiding. Though a lot of research have already been conducted regarding knowledge hiding unfortunately this topic has not been sufficiently explored in higher education institutions like college and universities. It is said that workplace is a hard reality and it should be widely explored [26]. Moreover it is also stated that it is a prevalent issue but its consequences are dependent upon the perception, coping strategies and beliefs of employees [27] Previously it was highlighted that it is important to study the relationship between workplace ostracism and

knowledge hiding in the higher education departments [17]. Knowledge hiding is a hindrance in the innovative academic environment [28]. In a recent research it is proved that workplace ostracism determines the outcomes performances and various behaviors of employees in any workplace setting. Furthermore, it is said that the relationship between workplace ostracism and its various outcomes should be studied in the light of personality, context and cognitions [29,30]. Previously it was also suggested that the role of workplace ostracism in the knowledge hiding should be explained through various aspects and this relationship can vary from culture to culture and context to context [31]. Keeping in view the importance of knowledge hiding among teachers, the current study planned to focus on a sample of college teachers. In order to explore this important area current study was designed to find out role of reciprocity beliefs in the relationship between workplace ostracism and knowledge hiding.

### 1.1. Hypotheses

1. Workplace ostracism would be a significant positive predictor of knowledge hiding among college teachers.
2. There would be a significant mediational role of generalized reciprocity beliefs, in the relationship between workplace ostracism and knowledge hiding among college teachers.
3. There would be a significant mediational role of balanced reciprocity beliefs in the relationship between workplace ostracism and knowledge hiding among college teachers.
4. There would be a significant mediational role of negative reciprocity beliefs in the relationship between workplace ostracism and knowledge hiding among college teachers.

## 2. Method

### 2.1. Sample

The purposive sample of the study comprised college teachers ( $N = 490$ ). Men ( $n = 250$ ) and women ( $n = 140$ ) both were given representation in the sample with age range from 24 to 58 years ( $M = 28$ ,  $SD = 8.30$ ). Data was collected from colleges of both government ( $n = 250$ ) and private sector ( $n = 240$ ). The minimum education of teachers was MA/MSc and the maximum education was PhD. Almost equal representation was given to the teachers of three faculties (arts & languages, social sciences & management, and pure sciences). All the participants were Muslims.

### 2.2. Instruments

#### 2.2.1. Reciprocity Beliefs [32]

To measure Reciprocity Beliefs, 16 items Reciprocity beliefs questionnaire (e.g. My school/college would do something for me without any strings attached, It seems important to my school/college that my efforts are equivalent to what I receive from the company) was used. Scale is comprised of three subscales including (generalized reciprocity beliefs, negative reciprocity beliefs, and balanced reciprocity beliefs). The scale was developed by Wu et al. (2006) and it was found a highly reliable and valid tool to measure reciprocity beliefs. The response format of the scale was a five-point Likert (1 = Strongly Disagree to 5 = Strongly Agree). Generalized reciprocity beliefs consist of 4 items (1, 2, 3, and 4), balanced reciprocity beliefs consist of 5 items (5, 6, 7, 8, and 9) and negative reciprocity beliefs consists of 7 items (10, 11, 12, 13, 14, 15 and 16). Internal Consistency of scales and all its subscales were found to be excellent.

#### 2.2.2. Workplace Ostracism Scale [33]

To measure workplace ostracism, 13 item workplace ostracism questionnaire (e.g. Your greetings have gone unanswered at work., You involuntarily sat alone in a crowded lunchroom at work, Others ignored you at work.) was used. The scale was developed by Ferris et al. (2008) and it was proved to be highly reliable and valid measure of workplace ostracism. Only one item of the workplace ostracism questionnaire was negatively phrased. The response format of the scale comprised of a five-point Likert scale ("1 = strongly disagree" to "5 = strongly agree"). The minimum possible score on the test was and the maximum possible score was 65. The reliability coefficient of the Workplace Ostracism Scale was found to be excellent ( $\alpha = 0.94$ ).

#### 2.2.3. Knowledge Hiding Questionnaire [34] (Connelly et al., 2012)

To assess knowledge hiding of college teachers, twelve items knowledge hiding questionnaire (e.g. did notice the request of a colleague, but did not react, agreed to help him/her but instead gave him/her intentionally wrong information) was used, comprised of three subscales (evasive hiding, playing dumb, and rationalized hiding). This scale was developed by Connelly et al. (2012), and construct validity of the scale was ensured. There are three subscales of the Knowledge Hiding Scale. Firstly, the Evasive Hiding Subscale consists of 4 items (1, 2, 3 and 4), the Playing Dumb Subscale consists of 4 items (5, 6, 7, and 8), and Rationalized Hiding Subscale comprised of 4 items (9, 10, 11, and 12). Response of the scale was five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Cronbach's coefficients of total scale ( $\alpha = 0.77$ ), Evasive hiding ( $\alpha = 0.88$ ), playing dumb ( $\alpha = 0.88$ ), and rationalized hiding ( $\alpha = 0.88$ ) was found to be good.

### 2.3. Procedure

The present research was carried out after the formal approval from the Institutional Review Board (IRB). Members of IRB reviewed all research processes in the light of ethical guidelines provided by APA. IRB allowed to conduct the present research (1603/IRB.PSY.UOS). Formal permission was taken from the authors of the scales. Before data collection permission was sought from the principals of colleges. After obtaining informed consent, the confidentiality of the provided information were ensured to the participants. Keeping in view the item-participant ratio it was decided that more than 400 participants would be appropriate for the current study. It is suggested that for the purpose of running Exploratory factor analysis or mediational analysis, item/participant ratio must be considered [35] Data collection took almost three months. Keeping in view the chance of loss of data due to random responses or incomplete questionnaires, initially, 550 forms were collected but only 490 were found suitable for further data analysis. To test hypotheses, regression and mediation analysis were carried out.

### 3. Results

In order to test the hypotheses of the current study, SPSS and Process Macros were used. As the main objective of the study was to explain the relationship between workplace ostracism and knowledge hiding via reciprocity beliefs mediation analysis was the most appropriate analysis.

Table 1 depicts alpha reliability, mean, standard deviation, and correlation among study variables.

Table 2 reveals the effect of workplace ostracism on knowledge hiding among college teachers. The  $R^2$  value of 0.26 showed that the predictor variable explained 26% variance in outcome variable with  $F(1, 288) = 101.82, p < 0.001$ . The findings showed that workplace ostracism positively predicted knowledge hiding ( $\beta = 0.51, p < 0.001$ ).

Table 3 reveals the effect of workplace ostracism on generalized reciprocity beliefs among college teachers. The  $R^2$  value of 0.01 showed that the predictor variable explained 1% variance in outcome variable with  $F(1, 288) = 4.95, p < 0.05$ . The findings showed that workplace ostracism negatively predicted generalized reciprocity beliefs ( $\beta = -0.13, p < 0.05$ ).

Table 4 reveals the effect of workplace ostracism on balanced reciprocity beliefs among college teachers. The  $R^2$  value of 0.01 showed that the predictor variable explained 1% variance in outcome variable with  $F(1, 288) = 3.99, p < 0.05$ . The findings showed that workplace ostracism negatively predicted balanced reciprocity beliefs ( $\beta = -0.11, p < 0.05$ ).

Table 5 reveals the effect of workplace ostracism on negative reciprocity beliefs among college teachers. The  $R^2$  value of 0.06 showed that the predictor variable explained 6% variance in outcome variable with  $F(1, 288) = 18.82, p < 0.001$ . The findings showed that workplace ostracism positively predicted negative reciprocity beliefs ( $\beta = 0.24, p < 0.001$ ).

#### 3.1. Mediation analysis

In order to run mediation analysis Process macro was used. Analysis revealed that generalized and negative reciprocity beliefs appeared as significant mediator of the relationship between workplace ostracism and knowledge hiding while balanced reciprocity beliefs did not play mediational role between workplace ostracism and knowledge hiding.

Table 6 shows the mediating role of generalized reciprocity belief between workplace ostracism and knowledge hiding. Model 4 of the PROCESS macro for SPSS was specified for analyzing this mediation model. Results revealed that workplace ostracism had significant negative direct effect on generalized reciprocity belief and explained 1.6 % variance in generalized reciprocity belief ( $R^2 = 0.016, F(1, 288) = 4.95, p = 0.026$ ). Generalized reciprocity belief and workplace ostracism had a significant positive direct effect on knowledge hiding. Generalized reciprocity belief and workplace ostracism explained 29% variance in knowledge hiding ( $R^2 = 0.29, F(2, 287) = 60.47, p = 0.000$ ). The 95% bootstrapped confidence interval for the negative indirect effect of workplace ostracism on knowledge hiding through generalized reciprocity belief revealed that generalized reciprocity belief mediated between workplace ostracism and knowledge hiding. This mediating role of generalized reciprocity belief has been schematically presented in Fig. 1.

Table 7 shows the mediating role of negative reciprocity belief between workplace ostracism and knowledge hiding. Model 4 of the PROCESS macro for SPSS was specified for analyzing this mediation model. Results revealed that workplace ostracism had significant positive direct effect on negative reciprocity belief and explained 6.1 % variance in negative reciprocity belief ( $R^2 = 0.061, F(1, 288) = 18.82, p = 0.000$ ). Negative reciprocity belief and workplace ostracism had a significant positive direct effect on knowledge hiding. Negative reciprocity belief and workplace ostracism explained 35% variance in knowledge hiding ( $R^2 = 0.35, F(2, 287) = 80.60, p = 0.000$ ). The 95% bootstrapped confidence interval for the negative indirect effect of workplace ostracism on knowledge hiding through

**Table 1**  
Descriptive Statistics and Interscale correlations (N = 490).

Variables	$\alpha$	<i>M</i>	<i>SD</i>	2	3	4	5
1 Workplace ostracism	0.88	33.23	13.63	-0.13*	-0.11*	0.24***	0.51***
2 Generalized Reciprocity Beliefs	0.70	13.04	3.22	-	0.64***	0.21***	0.12*
3 Balanced Reciprocity Beliefs	0.70	16.74	3.60	-	-	0.34***	0.19**
4 Negative Reciprocity Beliefs	0.77	22.58	5.01	-	-	-	0.43***
5 Knowledge Hiding	0.88	24.10	8.78	-	-	-	-

\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

**Table 2**  
Prediction of Knowledge Hiding on the basis of workplace ostracism (N = 490).

Variables	B	$\beta$	SE	t
Constant	23.16		1.17	10.09***
Workplace Ostracism	0.32***	0.51	0.03	
R <sup>2</sup>	0.26			

\*\*\*p < 0.001.

**Table 3**  
Linear regression showing the effect of workplace ostracism on generalized reciprocity beliefs among college teachers (N = 490).

Variables	B	$\beta$	SE	t
Constant	14.06***		0.49	-2.22**
Workplace ostracism	-0.03*	-0.13	0.01	
R <sup>2</sup>	0.01			

\*\*\*p < 0.001.

**Table 4**  
Linear regression showing the effect of workplace ostracism on balanced reciprocity beliefs among college teachers (N = 490).

Variables	B	$\beta$	SE	t
Constant	17.77***		0.55	-1.99*
Workplace ostracism	-0.03*	-0.11	0.01	
R <sup>2</sup>	0.01			

\*p < 0.05.

**Table 5**  
Linear regression showing the effect of workplace ostracism on negative reciprocity beliefs among college teachers (N = 490).

Variables	B	$\beta$	SE	t
Constant	19.55***		0.75	4.33***
Workplace ostracism	0.09***	0.24	0.02	
R <sup>2</sup>	0.06			

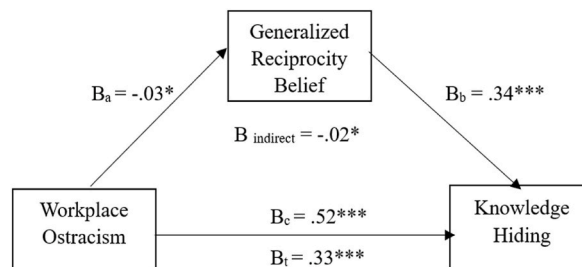
\*\*\*p < 0.001.

**Table 6**  
Generalized reciprocity belief as mediator between workplace ostracism and knowledge hiding among college teachers (N = 490).

Effects	Paths	B	95% CI for B	
			LL	UL
Direct Effect	WO→GRB	-0.03*	-0.05	-0.00
Direct Effect	GRB→KH	0.34***	0.28	0.41
Direct Effect	WO→KH	0.52**	0.25	0.78
Indirect Effect	WO→KH	-0.02*	-0.04	-0.00
Total Effect	WO→KH	0.33***	0.26	0.39

Note. WO= Workplace Ostracism, GRB= Generalized reciprocity belief, KH = knowledge hiding.

\*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05.



**Fig. 1.** Mediating role of generalized reciprocity belief between workplace ostracism and knowledge hiding.

**Table 7**

Negative reciprocity belief as mediator between workplace ostracism and knowledge hiding among college teachers (N = 490).

Effects	Paths	B	95% CI for B	
			LL	UL
Direct Effect	WO→NRB	0.09***	0.05	0.13
Direct Effect	NRB→KH	0.57***	0.40	0.74
Direct Effect	WO→KH	0.28***	0.22	0.34
Indirect Effect	WO→KH	0.05*	0.02	0.08
Total Effect	WO→KH	0.33***	0.26	0.39

Note. WO= Workplace Ostracism, NRB= Negative reciprocity belief, KH = knowledge hiding.

\*\*\*p < 0.001, \*\*p < 0.01.

negative reciprocity belief revealed that negative reciprocity belief mediated between workplace ostracism and knowledge hiding. This mediating role of negative reciprocity belief has been schematically presented in Fig. 2.

#### 4. Discussion

The present study investigated the relationship between workplace ostracism and knowledge hiding among college teachers. Additionally, it aimed to explore the role of reciprocity beliefs (generalized, balanced & negative) as a mediator between workplace ostracism and knowledge hiding. It was hypothesized that workplace ostracism would be a positive predictor of college teacher's knowledge hiding behavior. Regression analysis supported the first hypothesis of current study as findings proved that workplace ostracism is significant positive predictor of knowledge hiding among college teachers. The previous literature supports the link between workplace ostracism and knowledge hiding. Findings of previous study were in line with the current findings [2,34,36]. Findings of current study validates the postulates of Conservation of resources theory (COR). According to this theory workplace ostracism is a most significant source of knowledge hiding. Previously it is also said that workplace ostracism leads towards the workplace deviant behavior that may disturb the normal and daily operations of organization [17]).

It was also hypothesized that reciprocity beliefs would significantly mediate the relationship between workplace ostracism and knowledge hiding. Analysis supported the second and fourth hypotheses of study as it was revealed that generalized and negative reciprocity belief play significant role in explaining the positive relationship between workplace ostracism and knowledge hiding. On the other hand, third hypothesis was rejected as it was revealed that balanced reciprocity beliefs do not explain the relationship between workplace ostracism and knowledge hiding.

According to principles of reciprocity, individuals similarly treat others as they are being treated by others. An excluded or ignored employee is tended to treat others in same manner and if someone is asking for information, he/she will generally retain his/her information by using evasive, playing dumb or rationalized hiding [34]. It is also said that an excluded or ignored worker may also involve in social mistreatments including knowledge hiding, ostracism and other negative behaviors. Previously researchers also highlighted the role of reciprocity belief in relationship between workplace ostracism and knowledge hiding. They indicated that ostracism badly influences worker's pro-social behavior and ultimately negative reciprocity beliefs increases knowledge hiding behavior [2]. It is said that there is reciprocity in the workplace relationships and after receiving negative treatment from environment negative reciprocity stimulates an individual to decrease the frequency of positive behavior for instance knowledge sharing. It is also said that reciprocity beliefs determine the nature and intensity of employee's reaction to the treatment received from others [37]. Generalized reciprocity is the phenomenon that individuals treat others in the same way that others treated them in the past [38]. It is said that when an individual receives undesirable treatment in the past are more likely to perform selfish behavior and they will refuse to help other people [39].

Analysis revealed that balanced reciprocity beliefs did not play mediational role in relationship between workplace ostracism and knowledge hiding. As balanced and generalized reciprocity beliefs were not previously studied in relationship between workplace ostracism and knowledge hiding so findings of current study added new knowledge in this area. Reason behind rejection of hypothesis regarding mediational role of balanced reciprocity belief can be the core features of balanced reciprocity. Balanced reciprocity works on the principal of immediacy and individuals having high level of balanced reciprocity are more likely to be involved in the exchange of equal resources [40]. It might be possible that balanced reciprocity might not explain the relationship between workplace ostracism and knowledge hiding among teachers.

The study has significant implications in workplaces, particularly educational settings. This research will assist companies in creating a healthy work atmosphere that encourages cooperation, sharing of knowledge, and employee well-being among college teachers. Recognizing the harmful impact of ostracism on teachers' mental health is critical for fostering a healthy work environment and supporting college instructors' well-being. This research will assist organizations in developing clear policies that encourage knowledge sharing and provide support systems for instructors who may be subjected to ostracism.

#### 5. Conclusion & implications

The current research provided evidence for the validation of the conservation of resources theory on Pakistani college teachers. As previously suggested by researchers this topic should be explored within the context of higher education institutions, so the current



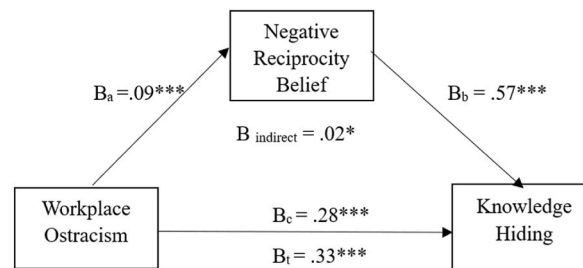


Fig. 2. Mediating role of negative reciprocity belief between workplace ostracism and knowledge hiding.

study filled that gap. The current study emphasized the direct and indirect relationship between workplace ostracism and knowledge hiding. It highlighted the reciprocity beliefs as a motivating factor behind the willingness to hide the knowledge as a result of being ostracized. It also highlights the need for qualitative work to understand the reasons and factors behind the development of various reciprocity beliefs.

The findings of the current study highlight the importance of workplace ostracism in the professional life of college teachers. The findings of the study can be helpful for both teachers and higher education institutions in the broader context. Higher education must devise certain plans to assess and deal with the experience of workplace ostracism. Institutes of higher education are meant to share and spread knowledge and it demands cooperation among teachers. The current study highlights that due to the experience of workplace ostracism, this exchange of knowledge and information interferes and an employee will be less productive and engaged. Policymakers should address the reciprocity beliefs and expectations among college teachers so that the performance of individuals and employees can be improved.

## 6. Limitations and suggestions

The current study has its limitations. The basic constraint was the generalizability of the investigation. Another restriction was quantitative exploration due to available resources and limited time (due to COVID-19). The data was collected during COVID-19 and lockdown. Data was gathered in an online, anonymous manner, reducing the likelihood that respondents' main concern was social attraction. Therefore, it is suggested that for future research qualitative data must also be gathered or future research can be done by using mixed method Approaches.

Data was taken from a single culture which may influence results. So, in the future to get more reliable and authentic results, it is suggested to perform cross cultural study. As all the variables are measured through self-report questionnaires and participants responded to all the questionnaires in one setting so common method bias is probable. Though questions of all scales are unambiguous E margin of common method bias still exists. It is recommended for the future research that proper strategies must be used to deal with this concern.

### Data availability statement

Data of the study will be available on demand.

### Ethics declaration statement

All authors have significantly contributed in the research work and there is no competing interest among authors.

### Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

### CRedit authorship contribution statement

**Ruijuan Han:** Project administration, Funding acquisition, Conceptualization. **Ammara tunnisa:** Formal analysis, Data curation. **Saba Ghayas:** Writing – original draft, Methodology, Investigation. **Maham Shahab:** Writing – review & editing, Software.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2024.e29134>.

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