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Research Article

Mitigating the Negative Emotional Effect of Workplace Ostracism on Knowledge Hoarding Among Hotel Employees: Beneficial Roles of Core Self-Evaluation and Proactive Personality

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This study delved into the relationship between workplace ostracism and knowledge hoarding among employees, a critical concern for corporations striving for innovation. Leveraging Affective Events Theory (AET), we hypothesized that workplace ostracism fosters knowledge hoarding, potentially mediated by negative emotions. In addition, we proposed that proactive personality and core self-evaluations could moderate this connection. Utilizing a time-lagged research design, survey data were gathered from 332 employees in Pakistan's hospitality service sector. Our findings revealed that workplace ostracism indeed spurred knowledge hoarding, with negative emotions acting as a mediator. Moreover, we observed that this link was stronger among individuals with lower levels of proactive personality and core self-evaluation, in line with our hypotheses. From a practical standpoint, our study provides management with valuable insights for mitigating knowledge hoarding and workplace ostracism. Overall, our contribution lies in the development and validation of a moderated mediation model that sheds light on the overlooked dynamics between workplace ostracism and knowledge hoarding among hotel employees in the Asian context of Pakistan.

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Introduction

Efficient knowledge transfer has been considered to be a key element in bringing about innovations and advancements, particularly in service-oriented

organizations [1][2]. Although knowledge sharing appears to be a prerequisite for the innovative performance of service-oriented organizations, empirical evidence suggests that knowledge is not being shared sufficiently in such organizations [1][3]. A survey poll conducted by a Canadian news agency, *The Globe and Mail*, showed that 76% of employees in North America withheld relevant organizational knowledge from their coworkers [4]. This finding supported more recent findings showing that knowledge hoarding exerts negative effects on employees' job satisfaction and psychological well-being [1][5].

Considering the importance of knowledge sharing (the antithesis of knowledge hoarding), extensive research has been done to determine the factors that could potentially determine what contributes to employees' knowledge-sharing behaviors (e.g., [6][7][8]). Extant research indicates that despite the presence of factors that encourage knowledge sharing within organizations, employees still tend to hoard knowledge within organizations [9]. In practical terms, knowledge hoarding means that an individual gathers, hides, and stores knowledge or information that is relevant to others but may or may not be explicitly requested [10][11].¹ Although knowledge hoarding may give an individual a competitive edge in performance at work over his/her peers [11][12], it is associated with many negative workplace behaviors, such as low employee performance in work units, problematic interactions between colleagues, and bullying of employees by their coworkers or supervisors [13][14]. In this study, we expected knowledge hoarding to stifle innovation, a process that would ultimately lead to reductions in organizational efficiency and productivity [10][11][14].

The primary antecedent variable of knowledge hoarding we examined in the current study pertained to workplace ostracism. By definition, workplace ostracism is the degree to which an employee observes or perceives that she/he is excluded at the workplace by others [15][16]. Workplace ostracism lowers social interaction for ostracized employees, as well as their levels of work engagement and service performance [16][17][18]. More specifically, workplace ostracism leads to lower family satisfaction [15][19], lower organizational citizenship behavior [15], emotional exhaustion [20][21], and higher instances of deviant workplace behaviors [22].

Although scholars are focusing more on workplace ostracism, to our knowledge, only a few studies have investigated workplace ostracism and its workplace outcomes in the hospitality service sector; these outcomes concern counterproductive work behaviors [18], proactive customer service performance [23], and employee service performance [17]. Although many studies on workplace ostracism have been conducted in the field of management, little is known about the impact of workplace ostracism on a deviant workplace behavior like knowledge hoarding, especially within the hospitality service sector [23]. Due to the pervasiveness of workplace ostracism in the hotel service sector and its negative impact on employee performance [24], there is a call for more studies to focus on workplace ostracism in the hotel service sector, as well as other service sectors like nursing [18]. Responding to this call for further investigations, the first aim of this study was to examine whether or not

workplace ostracism could lead to knowledge hoarding among hotel employees in Pakistan.

Zhao and Xia ^[12] showed that the relationship between workplace ostracism (predictor) and workplace hoarding (outcome) could be a curvilinear one with individuals high in political skill exhibiting a U-shaped curve representing relatively high knowledge hoarding when perceived workplace ostracism was at their low and high ends. The authors explained this interesting trend through the Conservation of Resources (COR) theory. When workplace ostracism initially proceeds from low to moderate, an ostracized employee would engage less in knowledge hoarding and more in knowledge sharing to improve his social status in the organization. However, when workplace ostracism starts to increase from moderate to high, the perception of being ostracized would become more salient and imminent, and an ostracized employee would engage more in knowledge hoarding upon the realization that his/her pro-social behaviors failed to improve his/her social standing. Knowledge hoarding under this scenario also serves as a way for an ostracized employee to conserve his/her resources (both mental and physical) and increase his/her bargaining power or influence within the organization.

Although we acknowledge the logicity of these explanations, it must be mentioned that the psychological mechanisms underlying the workplace ostracism-knowledge hoarding relationship, encompassing cognitive and emotional well-being, have not been well examined in the extant literature thus far, and hence this study aimed to explore the mediating and moderating psychological mechanisms that can better explain the causal link between workplace ostracism and knowledge hoarding. Specifically, we examined whether the relationship between workplace ostracism and knowledge hoarding was mediated by the emotions of hotel employees. We chose the factor of negative emotions as a mediator because workplace ostracism has been shown to exert negative effects on the mental health of employees ^[25]. More specifically, we drew upon Weiss and Cropanzano's ^[26] Affective Events Theory (AET) to explain how the experience of negative emotions by ostracized employees at their workplaces could lead to knowledge hoarding behaviors. AET proposes that individuals' emotions can significantly affect their judgments or evaluations of different experiences, situations, or objects ^[26]. In this article, we leveraged this theory to specifically account for the mediating role of negative emotions in strengthening the causal link between workplace ostracism and knowledge hoarding, with emphasis on the damaging effects that negative emotions can bring to assessments of working experiences and human relationships. More details on the rationale for AET inclusion are provided under the "Negative Emotions as Mediator" subsection below.

Heeding the call for more studies on the moderators that affect the impact of workplace ostracism on knowledge hoarding behaviors ^{[18][27]}, we examined the conditions under which the relationship between workplace ostracism and knowledge hoarding behaviors was strengthened or weakened. As individuals with high levels of proactive personality actively seek out changes that are favorable to self-development (Harvey et al. ^[28]) and spontaneously adapt to changes in their working environments ^[29], we expected that proactive employees would be less likely to engage in knowledge hoarding after encountering workplace ostracism.

In addition to proactive personality, we chose core self-evaluation (CSE) as another moderator. As employees with high levels of CSE tend to exhibit high levels of psychological well-being [30], optimism and resilience [31], and self-esteem [32], we expected that employees with high levels of CSE, like proactive employees, would be less likely to engage in knowledge hoarding after encountering workplace ostracism.

In the following paragraphs, we provide a detailed conceptual background of the variables included in this study and the hypotheses regarding their interrelationships.

Literature Review and Hypotheses

Linking Workplace Ostracism to Knowledge Hoarding

Ostracism is the degree to which an individual observes that he/she is being excluded by others [33]. Ostracism persists across various social settings, which include business corporations and organizations [27]. Isolating certain colleagues during social interaction at the workplace, moving an employee to an isolated location, leaving a place when an employee enters, not responding to greetings of co-workers, and avoiding eye contact are some examples of ostracism [34][35]. Workplace ostracism includes three important features. First, it does not necessarily involve the motivation to cause damage to the target [34]. This is because people sometimes ignore other colleagues when they are preoccupied with their tasks at work [12]. Second, workplace ostracism occurs when individuals of a group are unwilling to welcome another person into their group due to the preexistence of a strong group identity [35]; therefore, ostracism perceived by one individual may not be perceived by others who were already part of an in-group [34]. Third, workplace ostracism relates to “the omission of positive attention from others rather than the commission of negative attention” [34]. Since the element of attention is missing, workplace ostracism could pose a serious risk to an individual’s sense of belonging to an organization [36]. Previous research showed that workplace ostracism affected the victims more negatively than other types of mistreatment such as workplace aggression [20]. Workplace ostracism has also been shown to damage the psychological and physical well-being of employees, their organizational commitment, service performance, and job satisfaction [17].

In the extant literature, Ferris et al. [15], through the *Workplace Ostracism Scale*, showed a positive correlation between workplace ostracism and workplace withdrawal behaviors, while Zhao et al. [18] showed positive links between workplace ostracism and counterproductive workplace behaviors (organizational and interpersonal), moderated by one’s levels of proactive personality and political skill. Kouchaki and Wareham [37] further showed that workplace ostracism led to unethical pecuniary behaviors mediated by galvanic skin responses. All these aforementioned deviant workplace behaviors can share links with knowledge hoarding, which we perceive as an egocentric/self-centered behavior that seeks to increase an employee’s control over important organizational or work-related information, which may increase his/her power and influence in the organization [38]. In line with previous studies showing that knowledge hoarding occurred in settings where workplace ostracism created a

work culture low on interpersonal trust and ethical standards [3][12][13][39], we hypothesized that:

- **H1:** *Workplace ostracism would be positively related to knowledge hoarding behaviors of employees.*

Negative Emotions as Mediator

Experiencing negative treatment at the workplace in the form of ostracism can engender negative outcomes at both the individual and organizational levels. At the individual level, such consequences can be expressed in the form of negative emotions and health problems (e.g., cardiovascular ailments, sleep disturbances) that lead to high employee turnover [40][41]. Watson and Pennebaker [42] described these negative emotions as the feelings of depression, anxiety, sadness, and anger that individuals experience in a specific situation or state. Previous studies investigating the link between workplace ostracism and knowledge have highlighted the significant mediating effects of defensive silence – a proactive behavior where employees deliberately withhold relevant information as a form of self-protection out of fear [43] – and perceived organizational politics – how much an employee believes that his/her workplace is driven by self-serving hidden agendas rather than fair rules [44]. By inductive inference, we deem the behavior and cognition represented by such mediators as correlates or manifestations of negative emotional states and hence invoke Weiss and Cropanzano's [26] AET (as aforementioned) to examine how negative emotions can play a mediating role in the relationship between workplace ostracism and knowledge hoarding. A central idea of AET is that an individual's emotional response serves as an intermediary link between work-related events and behavioral outcomes. According to Weiss and Cropanzano [26], each member of an organization will inevitably experience emotional reactions to various work-related events, which will in turn affect their daily work attitudes and behaviors. Some scholars have validated the important intermediary role of negative emotions in transforming work management features (e.g., supervisory support) into work-related attitudes and behaviors (e.g., organizational commitment, job satisfaction) in a causal chain [45][46]. For instance, the negative emotion of hostility has been shown to mediate the relationship between leader mistreatment and deviant workplace behaviors [46]. In this paper, based on AET, we propose that workplace ostracism could act as a proximal cause of negative emotions because employees are perfectly capable of reacting emotionally to the workplace ostracism they experience [20][21][26]. A key objective of AET is to encourage scholars to examine the affective state changes of any person and the subsequent behaviors affected by such emotional states, followed by inferring how such states could have arisen initially from certain workplace events experienced by employees [26]. Given these facts, we predicted that when an employee is ostracized at his/her workplace, he/she would experience a negative social event that sets the foundation for the emergence of negative emotions (i.e., feelings of disappointment and sadness arising from exclusion from social activities of colleagues), which would eventually culminate in the form of knowledge hoarding behaviors.

In other words, we hypothesized that:

- **H2:** *Negative emotions would mediate the relationship between workplace ostracism and knowledge hoarding behaviors.*

Moderating Role of Proactive Personality

According to Bateman and Crant ^[47], a person with a proactive personality is unaffected by situational forces and can bring about change in the working environment. Having a proactive personality enables an individual to identify different opportunities and make organizational changes effectively ^[48]. Research on proactive personality shows that individuals vary in terms of proactivity and the ability to initiate change in their working environment (e.g., ^{[49][50]}). Importantly, Bateman and Crant ^[47] differentiated between proactive and non-proactive employees. Proactive employees find opportunities easily, demonstrate initiative, and bring about positive change, whereas non-proactive employees show little or no initiative and are less likely to identify new opportunities for initiating change in their working environments ^[47].

Given these facts, we expected that proactive employees would actively accommodate or adapt to changes in their working environments despite situational constraints that can be brought about by workplace ostracism ^[29]. These employees would not respond by hoarding knowledge but would actively seek out opportunities to generate new ideas for improving their work performance ^[51]. On the other hand, non-proactive employees face difficulty in changing their environment to deal with work-related stress and tend to accept the current situation as it is ^[47]. Under events of workplace ostracism, if the employee cannot cope with their feelings of exclusion, we deem it possible for them to engage in knowledge hoarding as a form of coping strategy or mechanism for alleviating the effects of such negative emotions and to conserve their emotional resources (see also ^[23], for a similar view). Knowledge hoarding is more likely to apply to non-proactive employees than to proactive employees as the latter tend to create social ties with friendly colleagues through their prosocial behaviors when confronted with workplace ostracism ^[16]. Specifically, proactive employees would strive to improve their inclusionary status in their organizations and share their knowledge with others by voicing their recommendations for improvements to organizational procedures and taking charge of initiating functional changes in their organizations ^{[16][52]}. In simple terms, this means that proactive employees would be less affected by situational factors and demonstrate a lower tendency to hoard knowledge than non-proactive employees between situations of low and high workplace ostracism. In view of these facts, we hypothesized that:

- **H3:** *Proactive personality would moderate the relationship between workplace ostracism and knowledge hoarding of employees such that this relationship would be stronger for employees with lower levels of proactive personality than for employees with higher levels of proactive personality.*

Moderating Role of Core Self-evaluation

To understand why an employee would feel ostracized at work and hoard knowledge, knowledge about their personality is crucial for explaining such deviant employee behaviors. One of the significant examples in predicting employee behavior is the construct of CSE ^[53], that is, how individuals assess themselves regarding their capability, competence, and capabilities. According to Judge et al. ^[54], CSE is a composite personality construct that includes four component traits: (i) *self-esteem* [general feeling and perception of one's worth,

Carson et al. [55], (ii) *generalized self-efficacy* [general belief in one's ability to succeed [56]], (iii) *locus of control* [belief in one's ability to control life events [57]], and (iv) *non-neuroticism* [ability to maintain emotional stability in the presence of disappointments, anxiety, and stress [58]].

At the workplace, CSE affects how an individual fosters social exchange relationships within the workplace [59]. Specifically, it has been found that employees with low self-efficacy and external locus of control tend not to challenge the status quo and destructive/toxic behaviors of their leaders or supervisors [60]. Such employees also tend to endure and accept misdemeanors committed by their supervisors and leaders, and are afraid of changing the contextual or situational factors that promoted such destructive leadership [61]. By contrast, employees with high levels of CSE widely view themselves as competent individuals having control over their life events and self-worth [62], and tend to endorse more optimistic outlooks on life than individuals with low levels of CSE [31].

According to AET [26], an employee's personality plays an important role in appraising different work-related events and can influence changes in employee behaviors. Linking this fact to CSE, employees with low levels of CSE may feel insecure or threatened after experiencing workplace ostracism and subsequently compel themselves to hoard knowledge as a coping strategy for protecting their psychological well-being. On the other hand, individuals with high levels of CSE have been found to apply more proactive coping strategies that alleviate the strain of daily stressors and problems [63]. Specifically, when encountering workplace ostracism, individuals with high levels of CSE will confront the situation and explore possibilities for changes or improvement rather than dwell on negative emotions and engage in knowledge hoarding. In view of these arguments and reasoning, we thereby hypothesized that:

- **H4:** *CSE would moderate the relationship between workplace ostracism and knowledge hoarding such that this relationship would be stronger for employees with lower levels of CSE than for employees with higher levels of CSE.*

By investigating all these hypothesized statistical relationships, we adopted a research philosophy that is predominantly quantitative and post-positivist, with the foresight that empirical knowledge can be obtained through theory-driven deduction, systematic measurement, and rigorous statistical testing. In addition, the inclusion of two psychological moderators in the form of proactive personality and CSE offers the unique opportunity to provide greater insights from a positive psychology viewpoint.

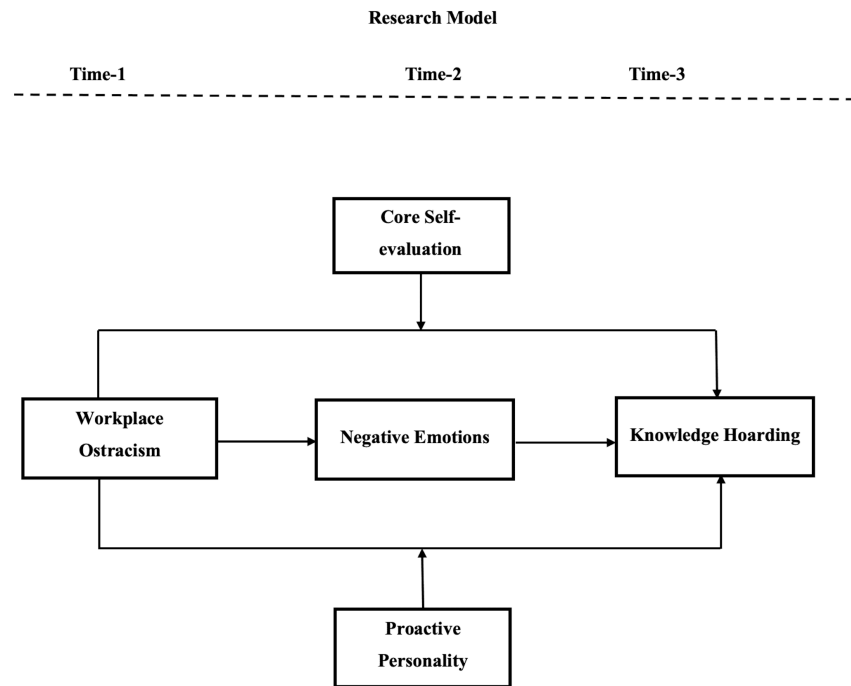


Figure 1. A hypothesized moderated mediation model showing Negative Emotions (NE) as a mediator between Workplace Ostracism (WO) and Knowledge Hoarding (KH), and Proactive Personality (PP) and Core Self-evaluation (CSE) as moderators of the effect of Workplace Ostracism on Knowledge Hoarding.

Methods

Participants and Data Collection

Data were collected by conducting a temporally segregated field survey of employees at different hotels in Pakistan at three different time points. We gained access to these companies through our personal contacts. Any employee who expressed willingness to participate in the study was provided with a cover letter, a consent form, and questionnaires. The cover letter described the purpose of the study and provided participants the assurances that their survey data would be kept private and confidential. Informed consent was obtained from all participants before their official participation, and all data were collected anonymously and treated with strict confidentiality. Data were collected over three time lags to alleviate common method biases [64]. All stages of the survey study were reviewed and approved by the ethics review board of Capital University of Science and Technology, Pakistan. All procedures conducted were non-invasive and in perfect alignment with established ethical guidelines.

At time-1, we measured workplace ostracism, core self-evaluation, and proactive personality. We circulated 600 sets of questionnaires and received 510 completed and usable questionnaires, which amounted to a response rate of 85%. After 15 days, at time-2, we measured negative emotions from all employees who completed the time-1 questionnaires. We received 405 completed questionnaires at time-2, which pertained to a response rate of 67% (computed based on the initial distribution of the questionnaires to 600 employees). After another time

lag of 15 days, at time-3, we measured knowledge hoarding. We received 332 completed questionnaires, which pertained to a final response rate of 55%. Close to two-thirds of these respondents were male (65%). We recorded their age and years of working experience (tenure) in ranked categories. Their age ranged from 21 to 25 years (61.1 %), 26 to 30 years (33.5 %), and 31 to 35 years (5.4 %). 81.1 % and 18.9 % of them had working experience ranging from 1 to 5 years, and from 6 to 10 years, respectively.

Time-lagged Survey Measures

Excluding the questionnaire on negative emotions, all questionnaires were measured on a 7-point Likert scale of agreement ranging from “1” (strongly disagree) to “7” (strongly agree), with the median value of “4” representing a neutral stance (neither agree nor disagree), and values “2” (somewhat disagree), “3” (slightly disagree), “5” (slightly agree), “6” (somewhat agree) representing intermediate levels of agreement/disagreement. Negative emotions were measured based on a 7-point Likert scale of frequency ranging from “1” (never) to “7” (always), with values “2” (rarely), “3” (occasionally), “4” (sometimes), “5” (frequently), “6” (usually) representing incremental levels of frequency between the two extremes. Scale scores were computed for each questionnaire by summing and averaging the self-report ratings from each respondent.

At time-1, workplace ostracism was measured using a 10-item scale developed by Ferris et al. ^[15]. Sample items include “Others left the area when you entered” and “Others ignored you at work.” The scale’s reliability in this study was found to have a Cronbach’s alpha value of 0.71.

Core self-evaluation was measured using a 12-item scale developed by Judge et al. ^[53]. Sample items include “When I fail, I feel worthless” and “When I try, I generally succeed.” The scale’s reliability in this study was found to have a Cronbach’s alpha value of 0.75.

Proactive personality was measured using a 17-item scale developed by Bateman and Crant ^[47]. Sample items include “If I see something I don't like, I fix it” and “I enjoy facing and overcoming obstacles to my ideas.” The scale’s reliability in this study was found to have a Cronbach’s alpha value of 0.89.

At time-2, employees’ negative emotions were measured using a five-item scale used previously by Watson and Clark ^[65]. Sample items include “You felt worthless” and “You felt as though you might have a breakdown.” The scale’s reliability in this study was found to have a Cronbach’s alpha value of 0.81.

At time-3, knowledge hoarding was measured using a four-item scale developed by Evans et al. ^[11]. Sample items include “I avoid releasing information to others in order to maintain control” and “I control the release of information in an effort to present the profile I want to show.” The scale’s reliability in this study was found to have a Cronbach’s alpha value of 0.85.

Results

Model Fit, Convergent and Discriminant Validity Analysis

Considering the self-report nature of the data, confirmatory factor analysis (CFA) was conducted to assess the discriminant validity of variables. We followed the suggestions of Anderson and Gerbing ^[66] and compared a five-factor model (with each survey measure representing a separate factor) with a one-factor

model (with all survey measures loaded on one factor). CFA results indicated that the unconstrained multiple-factor model showed better fit indices than the single-factor model. As shown in Table 1, the five-factor model yielded better fit indices than the one-factor model. The model fit indices for the hypothesized five-factor model fell within an acceptable range with .93 for GFI, .93 for CFI, .92 for TLI, and .04 for RMSEA, values which indicated adequate fit [67].

Model Type	No. of Factors	χ^2	df	GFI	RMR	RMSEA	IFI	TLI	CFI
Hypothesized	5	1227.32***	757	.93	.06	.04	.93	.92	.93
All-in-one	1	4233.54***	874	.58	.13	.10	.57	.54	.56

Table 1. Confirmatory Factor Analysis (CFA) Indices

Note. $N = 332$. χ^2 = chi-square, df = degrees of freedom, **GFI** = Goodness-of-fit Index, **RMR** = Root Mean Residual, **RMSEA** = Root Mean Square Error of Approximation, **IFI** = Incremental Fit Index, **TLI** = Tucker-Lewis Index, **CFI** = Comparative Fit Index.

*** $p < .001$

Table 2 shows the composite reliability (CR), average variance extracted (AVE), and maximum shared variance (MSV) values of the survey measures. The MSV values of all five variables (.16 – .37) were less than their AVE values (.50 – .57), showing the presence of discriminant validity. The AVE values of all five variables were .50 and above, and lower than their corresponding CR values (.87 – .93), showing the presence of convergent validity based on the criteria set by Hair et al. [68].

In addition, we applied a recent and rigorous statistical technique, the Heterotrait-Monotrait Ratio (HTMT-R), to reassess discriminant validity [69]. HTMT-R values are computed by taking the ratio of the correlations between the indicators of different constructs (heterotrait) to the correlations among indicators of the same construct (monotrait). Ideally, these values should be below .90 to indicate sufficient discriminant validity. Using our questionnaire ratings, the HTMT-R was calculated to be .52, a value that falls well below the .90 threshold. This demonstrates that our constructs were sufficiently distinct and that discriminant validity was indeed present.

Variable	CR	AVE	MSV	M	SD	Min.	Max.	1	2	3	4	5
1. Workplace Ostracism	.91	.53	.23	4.72	.669	2.31	6.60	.71	-	-	-	-
2. Negative Emotions	.93	.57	.37	4.74	.968	1.40	6.80	.64***	.81	-	-	-
3. Knowledge Hoarding	.87	.51	.16	4.86	1.01	1.50	6.25	.57***	.44***	.75	-	-
4. Proactive Personality	.89	.50	.33	4.45	.792	1.80	6.10	-.55***	-.52***	-.64***	.89	-
5. Core self-evaluation	.91	.54	.29	3.78	.560	1.75	6.00	-.23***	-.19***	-.24***	.14**	.85

Table 2. Descriptive Statistics, Reliability and Validity Indices, and Correlational Matrix of Survey Variables

Note. $N = 332$. **CR** = Composite Reliability, **AVE** = Average Variance Extracted, **MSV** = Maximum Shared Variance, **M** = Mean, **SD** = Standard Deviation, **Min.** = Minimum, **Max.** = Maximum. Cronbach's alpha values belonging to each scale (reported in Methods section) are shown in bold on the diagonal of the correlational matrix.

** $p < .01$, *** $p < .001$

Correlational Analysis

As shown in Table 2, workplace ostracism correlated significantly and positively with negative emotions [$r(332) = 0.64, p < .001$] and knowledge hoarding [$r(332) = .57, p < .001$] to a moderately high degree. Negative emotions correlated significantly and positively with knowledge hoarding [$r(332) = 0.44, p < .01$] at a moderate level. These correlational findings supported our first two hypotheses. In addition, proactive personality correlated negatively and significantly with knowledge hoarding [$r(332) = -0.64, p < .001$] to a moderately high degree, supporting our expectation that employees with higher levels of proactive personality would exhibit lower levels of knowledge hoarding.

Mediation Analysis

Mediation analysis was done using the bootstrapping procedure proposed by Preacher and Hayes [70]. We implemented a macro (PROCESS) model 4 developed by Preacher and Hayes [70] in IBM SPSS 20. We set the bootstrap sample size at 5,000, following the recommendation of Preacher and Hayes [70].

Table 3 shows results supporting Hypothesis 2: workplace ostracism was found to have an indirect effect on knowledge hoarding through negative emotions [Sobel test effect (two-tailed, normality-assumed) = 0.15, $SE = 0.035$, $Z = 4.29$, $p = .009$]. Results were further confirmed by the 95% bootstrapped confidence

intervals (0.07, 0.19), which showed no zero terms within the lower and upper limits of the Sobel test effect. This showed that there was indeed a significant reduction in the overall variance (derived from the impact of workplace ostracism on knowledge hoarding) after including negative emotions as a mediator. As for the three sets of direct effects, they were all highly significant and positive ($0.33 \leq \beta \leq 0.45$, $4.67 \leq t \leq 11.03$, $ps < .001$) [see Table 3].

Direct Effect	R ²	F	β	SE	T	p-value
	0.31***	89.32***	-	-	-	< .001
WO on NE (mediator)			0.45***	0.04	11.03	< .001
	0.36***	74.64***	-	-	-	< .001
WO on KH (outcome)			0.38***	0.06	6.72	< .001
NE on KH (outcome)			0.33***	0.07	4.67	< .001
Indirect Effect	Effect	SE	LL 95% CI	UL 95% CI	Z	p-value
Bootstrapped result (iter = 5,000)	0.15**	0.035 ^a	0.07	0.22	4.29**	.009

Table 3. Mediation Analysis with Negative Emotions as Mediator and Knowledge Hoarding as Dependent Variable

Note. $N = 332$. **WO** = Workplace Ostracism, **KH** = Knowledge Hoarding, **NE** = Negative Emotions, **LL** = Lower level, **UL** = Upper level, **CI** = Confidence Interval.

^a SE shown to the accuracy of three decimal places to ensure the precision of Z-score computation.

** $p < .01$, *** $p < .001$

Hierarchical Moderation Analysis

In the moderation analysis, centering was performed for all regressors to circumvent the issue of multicollinearity [71]. Significant interactions were plotted for simple slopes analysis of employees falling into “low” ($M - 1 SD$) and “high” ($M + 1 SD$) groups/categories around the mean [72] [see Figures 2 and 3].

In the analysis, two steps were involved: first, the independent variable and moderator were entered independently, and then the product variable representing the interaction between the independent variable and the moderator was added. Table 4 shows results supporting Hypothesis 3. Workplace ostracism exerted a significant direct positive effect on knowledge hoarding ($\beta = 0.25$, $t = 3.51$, $p < .001$), while proactive personality exerted a significant direct negative effect on knowledge hoarding ($\beta = -0.13$, $t = -2.16$, $p = .031$). The workplace ostracism $\times$ proactive personality interaction was also found to be significant ($\beta = -0.19$, $t = -2.11$, $p = .036$). Altogether, the predictors explained 29% of the variance in the dependent variable of knowledge hoarding. The positive association between workplace ostracism and knowledge hoarding was found to be significant for employees in the low proactive personality category (simple

slope $\beta = 0.37$, $t = 5.28$, $p < .001$), but not for employees in the high proactive personality category (simple slope $\beta = 0.12$, $t = 1.09$, $p = .281$). A simple slopes test showed that the strength of this workplace ostracism-knowledge hoarding relationship was stronger for employees with low levels of proactive personality than for employees with high levels of proactive personality (simple slope effect = 0.25, $t = 3.33$, $p < .001$). Figure 2 depicts this difference in association strength between employees with low and high levels of proactive personality.

Variable	R^2	ΔR^2	F	Constant	β	SE	T	p -value
	0.29***	0.06	44.66***	3.12***	-	-	-	< .001
WO					0.25***	0.07	3.51***	< .001
PP					- 0.13*	0.06	- 2.16*	.031
WO x PP					- 0.19*	0.09	- 2.11*	.036
Direct Effect of WO on KH for Low and High PP					β	SE	T	p -value
PP Low ($M - 1$ SD)					0.37***	0.07	5.28***	< .001
PP High ($M + 1$ SD)					0.12	0.11	1.09	.281
Simple Slopes Difference between Low and High PP					Effect	SE	T	p -value
					.25***	.075 ^a	3.33***	< .001

Table 4. Moderation Analysis with Proactive Personality as Moderator and Knowledge Hoarding as Dependent Variable

Note. $N = 332$. For the simple slopes test, 1 SD of PP = 0.79. **WO** = Workplace Ostracism, **PP** = Proactive Personality, **KH** = Knowledge Hoarding. R^2 relates to the proportion of variance in KH explained by all predictors, while ΔR^2 relates to the increase in model variance explained by the addition of the product variable WO x PP. ^a SE shown to the accuracy of three decimal places to ensure the precision of T -score computation for the Sobel test effect.

* $p < .05$, *** $p < .001$

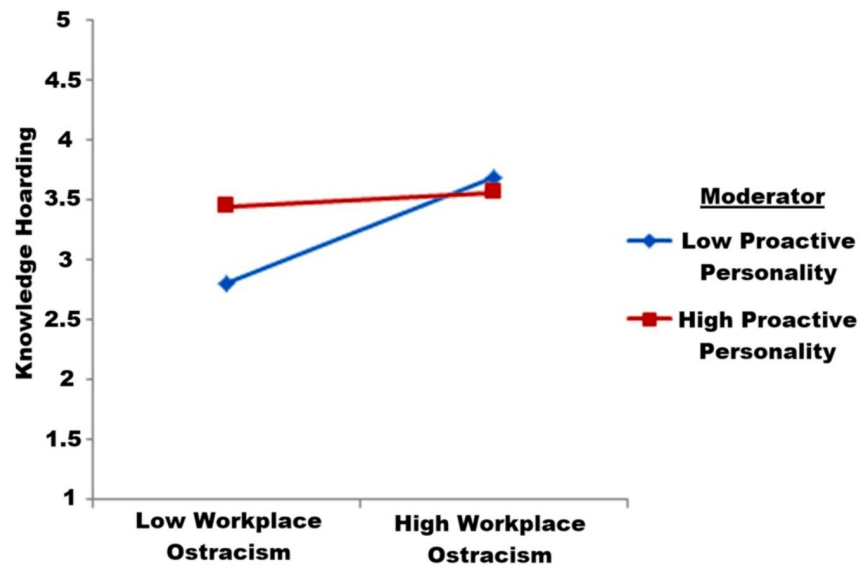


Figure 2. Interaction effects of Workplace Ostracism (WO) and Proactive Personality (PP) on Knowledge Hoarding (KH). For ease of representation, the antecedent variable WO was subdivided into low and high groups that scored, respectively, one standard deviation below and above the centered mean value. Likewise, the moderator PP was divided into low and high groups in the same fashion.

Table 5 shows results supporting Hypothesis 4. Like the findings shown above, workplace ostracism exerted a significant direct positive effect on knowledge hoarding ($\beta = 0.25$, $t = 3.58$, $p < .001$), while CSE exerted a significant direct negative effect on knowledge hoarding ($\beta = -0.21$, $t = -3.75$, $p < .001$). The workplace ostracism $\times$ CSE interaction was also found to be significant ($\beta = -0.13$, $t = -2.16$, $p = .031$). Altogether, these predictors explained 25% of the variance in the dependent variable of knowledge hoarding. The positive association between workplace ostracism and knowledge hoarding was found to be significant for employees in the low CSE category (simple slope $\beta = 0.35$, $t = 5.07$, $p < .001$), but not for employees in the high CSE category (simple slope $\beta = 0.15$, $t = 1.36$, $p = .177$). A simple slopes test showed that the strength of this workplace ostracism-knowledge hoarding relationship was stronger for employees with low levels of CSE than for employees with high levels of CSE (simple slope effect = 0.20, $t = 2.85$, $p = .005$). Figure 3 depicts this difference in association strength between employees with low and high levels of CSE.

Variable	R^2	ΔR^2	F	Constant	β	SE	T	p -value
	0.25***	0.06	36.44***	3.39***	-	-	-	< .001
WO					0.25***	0.07	3.58***	< .001
CSE					-0.21***	0.06	-3.75***	< .001
WO x CSE					-0.13*	0.06	-2.16*	.031
Direct Effect of WO on KH for Low and High CSE Levels					β	SE	T	p -value
CSE Low ($M - 1$ SD)					0.35***	0.07	5.07***	< .001
CSE High ($M + 1$ SD)					0.15	0.11	1.36	.177
Simple Slopes Difference between Low and High CSE Levels					Effect	SE	T	p -value
					0.20**	0.07	2.85**	.005

Table 5. Moderation Analysis with Core Self-Evaluation (CSE) as Moderator and Knowledge Hoarding as Dependent Variable

Note. $N = 332$. For the simple slopes test, 1 SD of CSE = 0.56. **WO** = Workplace Ostracism, **CSE** = Core Self-evaluation, **KH** = Knowledge Hoarding. R^2 relates to the proportion of variance in KH explained by all predictors while ΔR^2 relates to the increase in model variance explained by the addition of the product variable WO x CSE.

* $p < .05$, *** $p < .001$

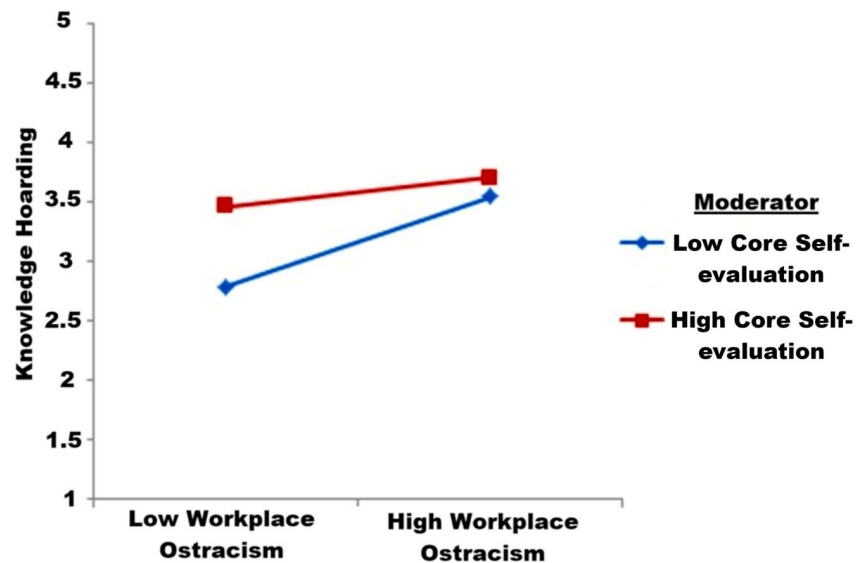


Figure 3. Interaction effects of Workplace Ostracism (WO) and Core Self-evaluation (CSE) on Knowledge Hoarding (KH). For ease of representation, the antecedent variable WO was subdivided into low and high groups that scored, respectively, one standard deviation below and above the centered mean value. Likewise, the moderator CSE was divided into low and high groups in the same fashion.

Discussion

The current study expanded the literature on workplace ostracism in the tourism and hospitality industry, in which ostracism exists but still needs to be further explored [73]. To our knowledge, this is one of the few studies to date that highlighted workplace ostracism as an antecedent of knowledge hoarding behaviors among hotel employees. Drawing upon AET, we proposed and empirically tested a conceptual model to examine how workplace ostracism could lead to knowledge hoarding behaviors through negative emotions and the impact of two moderators: proactive personality and CSE. Findings showed that workplace ostracism was positively related to employees' knowledge hoarding behaviors, both directly and indirectly, through negative emotions. Employees who experienced more workplace ostracism reported greater instances of knowledge hoarding behaviors through the intermediary effect of negative emotions. Specifically, we regard workplace ostracism as an interpersonal antecedent variable since ostracism can only occur in a social context where one feels excluded from social interactions [15][74]. Social information or contextual cues derived from interpersonal interactions (either positive or negative) could affect employees' work attitudes and behaviors, [75] and we highlighted this predictive relationship through the mediating influence of negative emotions.

Our findings can be related conceptually to previous findings by Ayoko et al. [76], in which negative workplace events (i.e., conflicts between supervisors and employees) were found to lead to negative emotions and counterproductive work behaviors. Our findings also relate well to the theoretical notion that employees' emotions or affectivity (either positive or negative) could affect their attitudes

and commitment toward ensuring optimal organizational productivity [26][77]. Specifically, concerning AET, the mediating and direct effects exerted by negative emotions on knowledge hoarding demonstrated knowledge hoarding as an affect-driven behavior that was underlain by fluctuating moods or emotions [26]. Most probably, knowledge hoarding was driven by employees' implicit or subconscious memories of the negative emotions they felt during antecedent events of workplace ostracism (see also [78], for a similar view).

Regarding moderating effects, our findings showed that employees with higher levels of proactive personality exhibited a weaker association between workplace ostracism and knowledge hoarding than their counterparts with lower levels of proactive personality. These findings replicated previous findings by Sarwar, Khan, and Mujtaba [79] and suggested that proactive employees are better at managing ostracism-related stress and less likely to engage in withdrawal behaviors (i.e., a withdrawal of useful information in this case) that would harm organizational operations or productivity. Our findings also suggested that proactive employees are less likely to consider knowledge hoarding as a means to improve their work performance since this behavior stifles the generation of new ideas for work improvement [51].

Likewise, we showed that employees with higher levels of CSE exhibited a stronger association between workplace ostracism and knowledge hoarding than their counterparts with lower levels of CSE. These findings extended previous findings of CSE as a significant moderator in the family domain (i.e., in linking uncivil domestic behaviors to psychological distress, see [80]) to the work domain. Importantly, our findings suggested that employees with higher levels of CSE are much better than their counterparts with lower levels of CSE at coping with the stress and negative emotions that accompany workplace ostracism [63].

Practical Implications

Knowledge gleaned from management research like ours can be harnessed as a tool to help employers and managers from different industries identify better solutions for managing human resources. As our main findings showed that workplace ostracism gave rise to negative emotions and knowledge hoarding behaviors, we recommend that employers and managers take active steps to reduce workplace ostracism. As workplace ostracism can be reduced through cooperative goal interdependence [81], which requires individuals to work together to develop problem-solving strategies, managers can set tasks with goals that require collective team effort and decision-making. In a hotel setting, an example can be a manager setting a team-based goal to improve customer satisfaction scores, with the goal requiring the collective efforts of various departments, such as the front desk team, housekeeping staff, and restaurant waiters. Specifically, the hotel can introduce a “premium guest experience” initiative, with each department tasked with delivering high-quality experiences to important guests.

At the same time, a team-based reward system (see, e.g., [82]) can also be established to assign awards and recognition to teams that demonstrate high degrees of mutual respect, cooperation, and productivity. Within Pakistan, where this study is based, hotel owners and managers can adopt a strategic perspective on human resource management by embracing meritocracy and diversity (e.g., recruiting talented staff from different cultural, ethnic, and language backgrounds), embarking on capacity-building initiatives (e.g., educational and

career training workshops, networking opportunities, mentorship programs), and promoting inclusive leadership that values accountability, empathy, diversity of opinions, and collaboration ^[83].

At a higher organizational or corporate level, workplace ostracism can be reduced by encouraging a collaborative work culture that promotes open discussion, equal treatment, and fair compensation for all staff members ^[84]. Ideally, such policies should be complemented by a non-stressful working environment that promotes individual autonomy ^[85], teamwork ^{[81][84]}, and positive emotions ^[86].

Moreover, employers should take the initiative to hire individuals with high levels of proactivity and CSE, as these individuals would be naturally inclined toward displaying knowledge-sharing and proactive behaviors ^[87]. Together with such hiring practices, the design and establishment of an online knowledge management system (e.g., through Microsoft Teams) may offer a transparent and cost-effective way for employees to share knowledge within a large corporation with many employees. Legal rules and policies should also be set in place to ensure that employees can freely express themselves through this digital medium without fear of persecution.

Limitations and Future Directions

Several methodological limitations should also be acknowledged. First, participant attrition occurred across the three waves of data collection, with the number of usable responses decreasing from 510 at Time-1 to 405 at Time-2 and 332 at Time-3. Although the final sample remained adequate for the analyses conducted, this attrition may have introduced non-response or attrition bias if employees who completed all three survey waves differed systematically from those who discontinued participation. Future studies may therefore benefit from examining differences between completers and non-completers and from employing strategies to minimize longitudinal attrition. Second, all variables were assessed using self-report measures. Although the temporally separated design was adopted to reduce common method concerns, self-reported assessments of a sensitive and potentially deviant workplace behavior such as knowledge hoarding may remain susceptible to social desirability bias or underreporting. Future research could complement self-reports with supervisor, peer, or other-source assessments where feasible. Third, the study was conducted exclusively among hotel employees in Pakistan recruited through convenience-based access to participating organizations. The specific occupational, organizational, and cultural characteristics of this sample may therefore limit the generalizability of the findings to other industries, service sectors, and national contexts. Replication using more diverse samples and probability-based sampling approaches would help establish the external validity of the proposed relationships.

Besides the contributions mentioned above, we acknowledge some limitations that future studies should address. Because negative emotions can emanate from activities beyond the work domain, such as social undermining in the family domain ^[88], future studies can investigate antecedent variables arising from family or other non-work domains. Likewise, as negative emotions have been shown to contribute to deviant workplace behaviors that differ from knowledge hoarding among Pakistani nurses [e.g., customer service sabotage ^[89], absenteeism from work ^[88]], future studies on hotel employees can investigate

other types of work-related outcome variables. It will also be interesting to know if our conceptual model can be applied to explain the relationship between workplace ostracism and knowledge hoarding of employees from other service-oriented industries or sectors (e.g., hospital nurses, [88][89][90]). Lastly, as people living in collectivistic Asian societies tend to be more sensitive to the negative emotions displayed by their communication partners than their Western counterparts living in Europe and North America [91], future studies can consider investigating the differential impact of negative emotions on mediating the relationship between work-related antecedent and outcome variables across different national cultures.

Conclusion

This study showed that knowledge hoarding could arise as an outcome behavior emanating from workplace ostracism and the negative emotions attached to such events of ostracism. The positive impact of workplace ostracism on knowledge hoarding was mitigated by the presence of high levels of proactive personality and CSE. Findings from mediation analysis supported AET by highlighting knowledge hoarding as an affect-driven behavior that can harm organizational productivity and the generation of innovative ideas. On the other hand, findings from moderation analysis suggested that employees with higher levels of proactive personality and CSE are better than their co-workers with lower levels of proactive personality and CSE at managing or coping with ostracism-related stress and negative emotions. To reduce the negative effects of workplace ostracism on work performance, we argued for organizational initiatives that focus on cooperative teamwork and goal setting, as well as recruitment strategies that focus on hiring individuals with high levels of proactive personality and CSE. The adoption of such procedures or policies can proceed in tandem with further investigations into the variables that are antecedent to or consequent to negative emotions in all relevant service sectors. Taken together, the findings and implications from this study provided new insights into the understudied relationship between workplace ostracism and knowledge hoarding among hotel employees within the Asian context of Pakistan.

Notes

Running head: Impact of Workplace Ostracism on Knowledge Hoarding

Statements and Declarations

Funding

No specific funding was received for this work.

Potential Competing Interests

The authors have no potential competing interests to declare.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions

J.Y.Z. and A.S. contributed to the conception and design of the study, data collection and analysis, interpretation of the findings, and preparation and revision of the manuscript. Both authors reviewed and approved the final version of the manuscript.

Footnotes

¹ Conceptually, knowledge hoarding and knowledge hiding share many similar characteristics [3][39] but should not be seen as entirely the same. This is because knowledge hiding relates to the deliberate hiding of information that is explicitly requested by others [3]. Knowledge hoarding focuses on the knowledge-gathering aspect more than the knowledge-sharing aspect, and consequently, a withholding of information stemming from knowledge hoarding may be accidental rather than intentional or strategic, the latter of which forms the central norm of knowledge hiding [10]. In this paper, we chose to focus on knowledge hoarding over knowledge hiding due to the former's deeper layer of meaning that can have a greater impact on organizational performance.

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