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Innovating to lead: impact of organizational socialization on innovative work behavior in fintech companies mediated by organization-based self-esteem

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Abstract

Background The aims of this research are (1) to examine the direct effects of organizational socialization (OS)factors (Training (TR), understanding (UN), coworker support (CWS), and future prospects(FP)) on employees' innovative work behavior (IWB) and (2) to evaluate the mediating effect of organization-based self-esteem (OBSE) on the relationships between organizational socialization factors and innovative work behavior.

Methods Using a quantitative cross-sectional research design, data were obtained from 216 usable questionnaires collected through snowball and convenience sampling from employees working in the financial technology (FinTech) sector in Saudi Arabia. The collected data were analyzed using Mplus version 8 software, and structural equation modeling (SEM) was applied as a statistical technique.

Results The results indicated that the direct relationships between OS factors and employee innovative behavior were not significant. In contrast, the full mediating effect of OBSE on the relationships among the three OS factors and employee innovative work was supported.

These findings suggest that the feeling of OBSE from employees' perspective is important for enhancing the positive impact of OS factors, in particular, UN, CWS, and FP, on IWB. The findings also highlight the need to develop a work environment in which employees feel valued, competent, and essential to the organization's success.

Conclusion Based on the above findings, this study suggests that enhancing OBSE is essential for strengthening the positive impact of OS factors on IWB. It is recommended that managers establish a climate in which employees feel valued, competent, and essential to the organization's success. These strategies will increase employees' feelings of OBSE, which will in turn contribute positively to IWB.

Keywords Organizational socialization factors, Organization-based self-esteem, Innovative work behavior, Financial technology sector, Saudi Arabia

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Background

Currently, with the accelerating trend of economic digital transformation, innovation has become a critical necessity. Many researchers have argued that a key factor in determining a company's competitiveness is its capacity for continuous innovation in a rapidly changing business environment [1–4]. According to Pian et al. [5], organizations must innovate to achieve their development objectives. The concept of innovation has been defined by several authors. For instance, it has been defined as the creation and application of beneficial notions [6, 7]. Innovation is also defined as a process of coming up with, picking, and putting new ideas into practice using intangible resources such as knowledge and the inventiveness of employees [5]. According to Prahalad and Ramaswamy [8], an innovative mindset among employees must be promoted by organizations to ensure long-term success and value creation. By positively affecting employees' work behavior, organizational sustainability, especially its human aspect, can be achieved. The human aspect of organizational sustainability refers to the human sustainability or social aspect. It means the ability to maintain employees' well-being, capabilities, and motivations over time within the organization to ensure the success of the organization's performance. Compared with the economic and environmental aspects of sustainability, the human aspect has received less attention within the three dimensions of organizational sustainability [9–11]. Therefore, to promote human sustainability, which can ultimately lead to organizational sustainability, it is essential to focus on innovative work behavior (IWB) across various work environments. A key factor in organizational success is having innovative employees [7, 12]. Innovative individuals can develop new techniques for recognizing problems, generating alternative strategies, assessing possible outcomes, and determining which option provides the greatest advantage [13]. Thus, organizations must formulate methods to foster IWB, as a nonsupportive environment constrains employee innovation [14]. One way to enhance IWB is by applying organizational socialization (OS) factors [15–20]. Additionally, although the importance of investigating the role of organization-based self-esteem (OBSE) as a mediator variable in the relationship between OS and IWB has been acknowledged, it remains widely unexplored. Therefore, this study considers OBSE as a mediator variable.

Scholars have defined OS as the process by which a person not only learns how to work in a certain organization but also learns to accept and act in ways that are acceptable for that organization [21, 22]. It includes four factors: training (TR), understanding (UN), coworker support (CWS), and future prospects (FP) [22, 23]. OBSE refers to the extent to which individuals in an organization believe that their needs can be fulfilled through engagement in roles within the institutional framework [24].

Owing to the limited number of studies conducted outside Western contexts, this research is carried out in the Saudi context. Saudi Arabia has been working hard to build a thriving economy. Thus, it is necessary to understand how to improve innovative work behavior, especially among companies in the FinTech industry, which depend on innovation and creativity. IWB is an important factor for organizations that deal with technology, and many empirical studies have investigated IWB in high-technology work environments [25]. According to the latest annual FinTech report for 2023, the FinTech industry in Saudi Arabia has undergone significant expansion and transformation [26]. New businesses, high funding, novel company models, favorable regulatory regulations, and a rising demand for innovative financial products are fuelling this advancement [26]. In Saudi Arabia, the FinTech industry is considered a new paradigm in financial services that concentrates on innovation [27]. Its role exceeds adaptation to global transformation and is a main factor for diversifying the Saudi economy [27]. Furthermore, the Financial Sector Development Program (FSDP) in Saudi Arabia is motivating FinTech companies to promote innovation and competition by 2030 [26, 28]. The Saudi market continues to evolve because of significant consumer demand for innovative and accessible financial services [26]. The rapid growth of the FinTech industry is evident in the increasing number of FinTech companies. On the basis of FSDP's latest annual report (2024) [28], the number of.

FinTech players increased from 14 in 2020 to 261 in 2024, exceeding the target for 2025, which is 230 companies. FSDP aims to have 525 FinTech companies by 2030 [26]. Additionally, more than 11,000 direct jobs have been created by FinTech companies [26]. These statistics reflect the bright future of the FinTech industry and highlight the need to enhance it by promoting IWB.

To date, there is a lack of consensus in existing research regarding how OS factors affect IWB through OBSE, particularly in the FinTech industry, whose core business depends on innovation. Consequently, by addressing these issues and employing social exchange theory (SET) [29] alongside self-consistency motivational theory (SCMT) [30–32], this study aims to highlight the impact of OS factors on IWB through the mediating role of OBSE. These theories constitute the theoretical foundation that clarifies the following research questions. RQ1: Do TR, UN, CWS, and FP affect IWB positively? and RQ2: Does OBSE mediate the relationships between OS factors and IWB?

Literature review

An in-depth literature review is provided in this section regarding the main study's theories, OS factors, OBSE, and IWB.

Theoretical background

This study is based on two main theories: SET [29] and SCMT [30–32]. SET clarifies the reciprocity principle in social relationships and suggests that people tend to deal with others on the basis of the treatment they receive. Accordingly, this study expects that when an organization provides a professional work environment that incorporates the four OS factors (TR, UN, CWS, and FP), its employees will try to reciprocate the supportive treatment they receive. For instance, they will work hard to be innovative to benefit their organization. In addition, researchers have indicated that employees are more likely to help organizations achieve their goals when they receive high-quality treatment [33].

The second theory, SCMT, posits that employees strive to sustain an integrated identity for themselves. Thus, this study expects that OS factors enhance employees' competence and value within the organization, which in turn increases the feeling of OBSE. As a result, these employees tend to act in a way that is consistent with their feelings regarding themselves, such as being innovative within the work environment.

There are three main concepts in this study: OS factors, OBSE, and IWB. The OS process has a continuous nature, comprising progressive adjustments that lead to a particular result [23]. OS factors are fundamental to each organization. According to Taormina [23], the main OS factors are TR, UN, CWS, and FP. TR is the extent to which the organization has trained the employee to perform a job. UN refers to the employee's understanding of the organization's operations and their ability to work within them. CWS reflects the quality of the employee's relationships with other organization members. FP reflects the employee's perspective of the organization's long-term viability, including expectations of sustained employment and the benefits provided by the organization [23].

With respect to OBSE, it is important to note that self-esteem is a self-assessment that people develop and maintain about themselves. In other words, it is a mindset of self-acceptance or self-rejection [24]. Pierce et al. [24] introduced the concept of self-esteem within the organizational context, referring to it as OBSE. According to this concept, individuals with OBSE experience a sense of self-sufficiency as members of the organization and a feeling that they have fulfilled the demands of their previous organizational roles [24]. Therefore, OBSE demonstrates how individuals view their own worth in the workplace [24]. In other words, the workforce feels important, productive, and valuable when they have a strong sense of OBSE. Numerous empirical studies have demonstrated the beneficial effects of OBSE on personal attitudes and behaviors, including work engagement [34], organizational citizenship behavior [35], career commitment [36], and psychological capital [37].

The last concept in this study is IWB. To remain competitive and drive change, businesses must innovate while creating and delivering products and services. Thus, organizations rely on workers to innovate procedures, methods, and operations to succeed [38]. According to Janssen [39], IWB includes idea generation, promotion, and realization. It is important to note that IWB is not anticipated from employees in their official capacity, nor does it constitute a legal agreement between the employees and the organization [40]. These actions are entirely discretionary, referred to as extra-role behaviors, and are not officially acknowledged by organizational reward systems [40]. Nevertheless, understanding how this behavior can be encouraged and enhanced remains crucial. Thus, many empirical studies have shown that IWB is influenced by various variables, including innovative intention [41], knowledge-sharing behavior [42], and person-organization fit [42].

Hypotheses development

Relationship between organizational socialization factors and innovative work behavior

Training and innovative work behavior

Despite the widespread acknowledgment of innovation's significance by experts and researchers, fostering innovative behavior in workplace settings continues to pose a considerable challenge [43]. Consequently, many organizations are endeavoring to enhance their internal inventive processes [39]. One of the mechanisms to enhance IWB is providing training for employees. According to Andoh et al. [44], "training is not an end in itself but a means to an end" (p. 689). This statement underscores the significance of TR and its potential to enhance various attributes, including innovativeness and efficiency. Owing to the important role of training, it is classified as one of the labor practices/decent work aspects that are considered a factor for the social disclosure that an organization has to disclose [45].

Although some studies have reported that there is a nonsignificant relationship between TR and IWB [46, 47], several empirical studies have illustrated the significance of human resource (HR) training techniques in fostering innovation [17, 48–54].

Furthermore, from the perspective of social exchange theory (SET), this relationship can be explained by the principle of reciprocity. SET posits that when individuals engage in reciprocal actions, employers and employees gradually form stronger social bonds, resulting in positive

emotions such as commitment, loyalty, and trust [55]. The theory is based on the notion of giving and taking, which leads to mutually beneficial social exchanges [29]. This study anticipates that when a firm offers the necessary training, reciprocal behaviors will ensue between the organization and its employees. Consequently, employees will exhibit greater innovation to reciprocate to their organization.

Although the link between TR and IWB has been explored in various contexts, studies examining this relationship are scarce within the Saudi context, particularly in the FinTech industry, which requires continuous training to address digital changes. Consequently, in light of the influence of TR on IWB, the following hypothesis is posited:

> H1. TR has a significant and direct positive relationship with IWB.

Understanding and innovative work behavior

Another factor for OS is UN, which encompasses details regarding the organization's aims, operational procedures, and methods for accomplishing tasks, among other aspects [56].

There is a limited body of research on the impact of UN on IWB. One recent study found that the relationship between UN and IWB is not significant [47]. Additionally, other researchers [57] reported that other similar constructs, such as role clarity, have a nonsignificant relationship with IWB. In contrast, Kundu et al. [58] found a positive relationship between role clarity and IWB. According to Ohly et al. [59], employees can utilize their cognitive resources and time to generate and implement innovative thoughts when they understand their jobs and do not require repeated directions concerning daily work obligations. While the converse is correct, when employees are uncertain about their responsibilities, they devote more time to determining what they are expected to do rather than completing their job duties efficiently [60]. This finding is consistent with the findings of [61], who found that there is a negative relationship between role conflict and ambiguity and employee creativity. Because role conflict and ambiguity are opposite to understanding, it is expected that UN has a positive effect on IWB.

Furthermore, from the perspective of SET, this study expects that when a company promotes employee understanding as an essential element of socialization, it offers significant cognitive and psychological assets. Consequently, employees are expected to have a sense of duty or inclination to reciprocate via IWB, which ultimately benefits the firm. This is important, especially within the FinTech industry, which requires a comprehensive understanding the work nature. Therefore, the following hypothesis is posited:

> H2. UN has a significant and direct positive relationship with IWB.

Coworker support and innovative work behavior

According to Zhou and George [62], when employees feel significant support from their coworkers, it makes them feel like creativity is a viable choice. As a result, support from coworkers is directed toward creative activities. In addition, many studies [63] suggest that support from peers and management increases the likelihood that employees will engage in IWB.

Although some studies have reported a nonsignificant relationship between CWS and IWB [47], several studies have offered an empirical illustration of the significant role of coworker support in fostering innovation [15, 63–65].

Furthermore, the link between CWS and IWB can be explained from the perspective of SET, which posits that supportive behavior among group members promotes consistency, interaction, and task completion [66]. This study expects that when employees perceive support from their colleagues in an advanced work environment, such as the Fintech industry, they will be more innovative in return. Therefore, the following hypothesis is posited:

> H3. CWS has a significant and direct positive relationship with IWB.

Future prospects and innovative work behavior

Employees' perceptions of what the organization offers them can affect IWB. The FP concept includes the acceptability of factors that encourage employees to continue working in an organization, such as promotions and bonuses, and not being overlooked [23].

There is a lack of consensus in the existing literature regarding the impact of FP on IWB. For instance, one recent study revealed that the relationship between FP and IWB is not significant [47]. Another study revealed a negative relationship between compensation, which is an FP factor, and IWB [46]. Conversely, other studies [17, 21, 67–69] have provided empirical evidence of the significant role of rewards, which is an FP factor, in fostering innovation. In addition, job security is an important offer that organizations provide to their employees, and it is related to the FP concept. According to Faulks et al. [70], employees' perceptions of job instability are likely to have an adverse effect on their innovative behavior. This reflects the importance of job security in enhancing IWB.

Furthermore, the link between FP and IWB can be explained from the perspective of SET. This study expects that when employees feel that their organizations will provide valuable benefits in the future, they will be more innovative in return. Because there are several conclusions regarding the impact of FP on IWB, this

relationship is worth highlighting. On the basis of the literature and SET, this research tends to expect that the impact will be positive, especially in a complicated work environment such as the FinTech industry. Employees need to have positive perceptions regarding their relationship with the organization, which leads to a higher level of IWB. Therefore, the following hypothesis is posited:

> H4. FP has a significant and direct positive relationship with IWB.

Mediating effect of organization-based self-esteem on the relationships between organizational socialization factors and innovative work behavior

Many studies investigate OBSE as a mediator variable in the relationship between IWB predictors and IWB, such as the study conducted by Amin et al. [71]. This study proved the role of OBSE as a mediator between harnessing inclusive leadership and IWB. However, the role of OBSE as a mediator between OS elements and IWB has not been previously examined. This research highlights these relationships to fill these gaps. In addition, Arzeen et al. [72] noted that previous studies have highlighted the need to explore the antecedents of IWB at the individual and organizational levels. Therefore, he investigated the impact of OBSE on IWB and found a positive relationship. Thus, this study selects OBSE as a variable at the individual level to examine its mediating effect on the relationships between OS factors and IWB.

Mediating effect of organization-based self-esteem on the relationship between training and innovative work behavior

Although TR might positively impact IWB, this research anticipates that this impact can be achieved via OBSE as a mediator variable. The four OS domains and OBSE are likely and directly related in a favorable manner [73]. Thus, on the one hand, this study claims that TR has a positive effect on OBSE. Additionally, similar constructs to TR, such as feedback [74] and directive manager behaviors [75], have a positive effect on OBSE. On the other hand, a previous study has shown that many employee behaviors can be influenced by OBSE [76]. Individuals with high OBSE tend to be more adventurous, open to trying new things, and innovative [77–80]. In addition, a recent study found that there is a positive relationship between OBSE and IWB [81].

From the perspective of SCMT [30–32], this study anticipates that the level of OBSE will increase because of work experiences with the organization, such as TR. This sensation of OBSE will enable employees to engage in positive behaviors, such as IWB. In other words, as employees receive more training, they will feel more OBSE, which in turn fosters their innovative behavior. By combining the previous claims, the following hypotheses are posited:

> H5a. TR has a significant and direct positive relationship with OBSE.
> H5b. OBSE has a significant and direct positive relationship with IWB.
> H5. OBSE mediates the relationship between TR and IWB.

Mediating effect of organization-based self-esteem on the relationship between Understanding and innovative work behavior

Although UN might positively impact IWB, this research expects that this impact can be achieved through the mediating effect of OBSE. Thus, this study claims that UN has a positive effect on OBSE. No studies have investigated the relationship between UN and OBSE. However, similar constructs to UN, such as role clarity [82, 83] and self-efficacy [35], have a positive effect on OBSE. In addition, opposite constructs to UN, such as role ambiguity and role conflict [76], negatively impact OBSE. These relationships suggest that the absence of UN has an adverse effect on OBSE. In contrast, as previously discussed, there is a positive relationship between OBSE and IWB.

From the perspective of SCMT [30–32], this study anticipates that the level of OBSE will increase because of work experiences with the organization, such as UN. This feeling of OBSE will enable employees to engage in positive behaviors, such as IWB. In other words, as employees have more job understanding, they will feel more OBSE, which in turn fosters their innovative behavior. By combining the previous claims, the following hypotheses are posited:

> H6a. UN has a significant direct positive relationship with OBSE.
> H6. OBSE mediates the relationship between UN and IWB.

Mediating effect of organization-based self-esteem on the relationship between coworker support and innovative work behavior

Although CWS might positively impact IWB, this research anticipates that this impact can be achieved via OBSE as a mediator variable. Thus, on the one hand, this study claims that CWS has a positive effect on OBSE. Several studies have offered an empirical illustration of the significance of CWS in fostering OBSE [83]. In addition, similar constructs to CWS, such as organizational respect [84], perceived organizational support [76, 85], and coworker social support [76], have positive effects on

OBSE. On the other hand, as discussed before, there is a positive relationship between OBSE and IWB.

From the perspective of SCMT [30–32], it is anticipated that the level of OBSE will increase because of work experiences with an organization, such as CWS. This feeling of OBSE will enable employees to engage in positive behaviors, such as IWB, and increase their sense of competence. In other words, as employees receive more support from their coworkers, they will feel more OBSE, which, in turn, fosters their innovative behavior. By combining the previous claims, the following hypotheses are posited:

H7a. CWS has a significant and direct positive relationship with OBSE.
H7. OBSE mediates the relationship between CWS and IWB.

Mediating effect of organization-based self-esteem on the relationships between future prospects and innovative work behavior

Although FP might positively impact IWB, this research anticipates that this impact can be achieved via OBSE as a mediator variable. Thus, on the one hand, this study claims that FP has a positive effect on OBSE. No studies have investigated the relationship between FP and IWB. However, similar constructs to FP, such as salary [76], relational psychological contract [86], future-oriented management role [75], job security [74, 83], and total rewards [87], have a positive impact on OBSE. In addition, constructs opposite to FP, such as job insecurity [76], negatively impact OBSE. These relationships show that the absence of FP has an adverse effect on OBSE. On the other hand, as previously discussed, there is a positive relationship between OBSE and IWB.

From the perspective of SCMT [30–32], this study anticipates that the level of OBSE will increase because of work experiences with the organization, which provides a good visualization of FP. This feeling of OBSE will enable employees to engage in positive behaviors, such as IWB. In other words, as employees feel that their organization applies different techniques to encourage them to stay with the organization, they will feel more OBSE, which, in turn, fosters their innovative behavior. By combining the previous claims, the following hypotheses are posited:

H8a. FP has a significant and direct positive relationship with OBSE.
H8. OBSE mediates the relationship between FP and IWB.

Conceptual framework for the current study

The research model is depicted in Fig. 1. This model reflects the direct and indirect effects of OS factors on IWB. On the basis of the data in Fig. 1, this model hypothesizes that OS factors (TR, UN, CWS, and FP) directly and positively affect IWB (H1–H4). In addition, it is hypothesized that OBSE plays a mediating role in the relationships between OS factors and IWB. To examine the mediating effect of OBSE, subhypotheses should be applied between OS factors and OBSE (H5a, H6a, H7a, and H8a) and between OBSE and IWB (H5a). These subhypotheses are the main components of the mediating hypotheses (H5–H8).

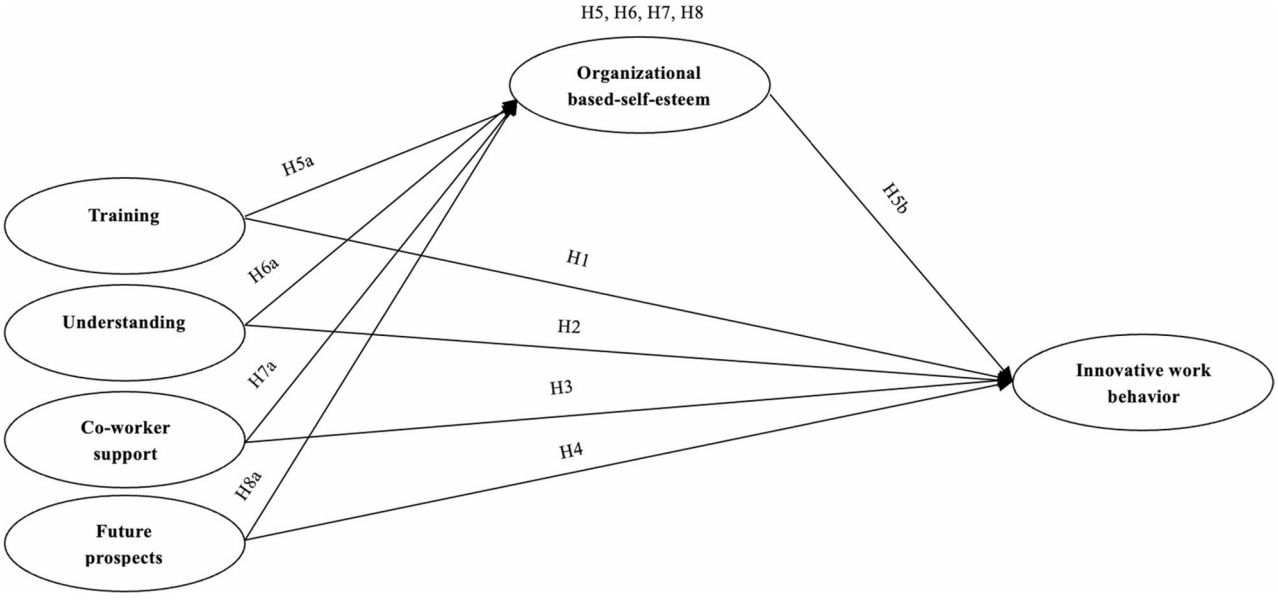

Fig. 1 Study model

Methodology

Research design

This study applied a quantitative research approach to address the research questions and hypotheses. This design was chosen because it allowed for the efficient collection of data from a large sample at a single point in time, making it suitable for examining existing relationships between multiple variables. This approach was selected to obtain a large sample during a specific time period and investigate the relationships between several variables.

Population and sample

This research seeks to conduct an empirical study focused on the FinTech sector within the Saudi context. The target sample consisted of all Saudi employees working in FinTech companies. The primary tool for collecting the required data is a self-administered online questionnaire using convenience and snowball sampling. Despite the limitations of using convenience sampling, such as sampling bias and limited generalizability, it is widely applied, low-cost, and easy to apply, and it is suitable for nonprobability sampling [88, 89]. In addition, the sampling bias issues can be checked by using Harman's single-factor test as applied in this study, and it is confirmed that there are no bias issues. Snowball sampling is known to be time consuming [90], but it is suitable for accessing sensitive sectors such as the FinTech industry.

Data were collected from December 2024 until March 2025. The data were cleaned before being analyzed. After the data were collected, 309 responses were received. Irrelevant responses were excluded. After the data were cleaned and the outliers were removed, the total final sample size was 216. The questionnaire items were translated following the Brislin approach [91, 92], employing forward and backward translation. The researcher also used cognitive pretesting procedures (e.g., think-aloud) to determine whether participants grasped the planned closed-ended questions. Some items were adjusted on the basis of the results of the think-aloud by rewording the sentences.

The online questionnaire was divided into multiple sections. It began with an introduction that offered a comprehensive description of the research and the intended sample. Informed consent was obtained from all the individual participants included in the study. In addition, the cover letter of the survey followed ethical guidelines, guaranteeing confidentiality and voluntary participation while gathering quantitative data. The participants' demographic information, such as gender, nationality, marital status, age, educational level, total years of work experience, and total work experience with their current employer, was collected in the second section. The final section comprised the items for all of the study variables (see Table 1).

Table 1 Sample demographic information ($N = 216$)

Variables	Frequency, *n* (%)
Gender	
Male	127 (59)
Female	89 (41)
Social status	
Married	77 (36)
Unmarried	139 (64)
Age (years)	
< 20	1 (0.5)
20–29	117 (54)
30–39	79 (36)
40–49	17 (8)
50–59	2 (0.9)
Educational level	
High school	7 (3)
Two-year Diploma	15 (7)
Bachelor's degree	160 (74)
Master's degree	33 (15)
Doctoral degree	1 (0.5)
Total job experience (years)	
< 1	10 (5)
1–5	113 (52)
> 5	93 (43)
Total job experience with the current employer (years)	
< 1	46 (21)
1–5	151 (70)
> 5	19 (9)

Table 2 Study measures

Measure	Items	∝	References
Organizational socialization			
Training	5	0.92	Taormina [56]
Understanding	5	0.81	Taormina [56]
Coworker support	5	0.85	Taormina [56]
Future prospects	5	0.85	Taormina [56]
Organization-based self-esteem	10	0.92	Pierce et al. [24]
Innovative work behavior	6	0.76	Scott and Bruce [94]

∝ = Cronbach's alpha reliability

Measures

In this study, all the scales are 5-point Likert-type scales where 1 reflects "*strongly disagree*," 2 reflects "disagree," 3 reflects "neutral," 4 reflects "agree," and 5 reflects "strongly agree." The reliability for all the variables was achieved and exceeded 0.7 [93]. Table 2 shows the details of the measures.

Data analysis

This research used two main statistical programs. First, the Statistical Package for the Social Sciences (SPSS) version 22 was used to analyze the descriptive data.

Table 3 Means, standard deviations (SDs), and correlation statistics

Variables	Mean ± SD	Edu	TR	UN	CWS	FP	OBSE	IWB
Edu	3.03 ± 0.609	–						
TR	3.39 ± 1.068	−0.021	**0.92**					
UN	3.92 ± 0.705	−0.075	0.636**	**0.81**				
CWS	4.13 ± 0.651	−0.161*	0.458**	0.485**	**0.85**			
FP	3.47 ± 0.896	0.030	0.632**	0.536**	0.511**	**0.85**		
OBSE	4.27 ± 0.553	−0.046	0.352**	0.528**	0.444**	0.473**	**0.92**	
IWB	4.13 ± 0.521	0.091	0.176**	0.252**	0.250**	0.258**	0.488**	**0.76**

The AVE root square values are shown in bold in the matrix

Abbreviations: *CWS* coworker support, *Edu* education level, *FP* future perspective, *IWB* innovative work behavior, *OBSE* organization-based self-esteem, *SD* standard deviation, *TR* training, *UN* understanding

*$P < 0.05$ (two-tailed)

**$P < 0.01$ (two-tailed)

Table 4 Model fit of the confirmatory factor analysis

X^2	df	*P* value	CFI	TLI	SRMR	RMSEA	90% CI for RMSEA
832.973	536	0.000	0.921	0.912	0.072	0.051	0.044–0.057

Abbreviations: *CFI* Comparative fit index, *CI* Confidence interval, *df* Degree of freedom; lower limit, *RMSEA* Root mean square error of approximation, *SRMR* Standardized root mean square residual, *TLI* Tucker–Lewis index, *UL* Upper limit

Second, Mplus version 8 [95] was used to examine the study's hypotheses by applying confirmatory factor analysis (CFA) and structural equation modeling (SEM). This research applied CFA and SEM for many reasons. First, when the research model has different kinds of variables, such as independent (exogenous) variables and (endogenous) dependent variables, mediators, and moderators, SEM is the most appropriate method, as it allows complex relationships to be examined simultaneously [96]. Conversely, regression analysis examines each relationship separately. Second, SEM helps researchers investigate the relationships between latent variables or variables that cannot be observed directly [97]. Third, compared with regression analysis, SEM is explicative, accurate, and rigorous [97]. Fourth, this kind of modeling is also able to confirm the theory with the study's data by using a confirmatory factor analysis [97]. Finally, CFA is a theory-driven approach for confirming a hypothesized factorial structure [98]. Thus, it is appropriate for this study, which is based on a theory-driven approach.

The analysis began with descriptive analytics. Given that all variance inflation factors (VIFs) were less than 10, the initial data analysis did not reveal any multicollinearity [99]. The means, standard deviations, intercorrelations, and AVE root square values of the variables are displayed in Table 3.

Common method bias (CMB) was checked to detect any bias by using Harman's single-factor test. In this study, the total variance explained was 34.111 (less than 50%). As a result, this investigation did not reveal any prevalent approach biases.

Measurement model

To verify the suggested model of the factors and their relationships with the observed variables, a confirmatory factor analysis (CFA) was performed [98]. To evaluate the model fit, several goodness-of-fit indices were applied. Using several indices provides a complete evaluation compared with depending on a single index. In addition, to obtain an accurate assessment of model validity and theoretical consistency, combined goodness-of-fit indices should be applied [100–102].

On the basis of the CFA results, the data demonstrated a good model fit [98] after some modification indices. See Table 4.

In addition, the variables' factor loadings are high enough to be statistically significant [99], except for one item for IWB, which was removed because of its low factor loading. The composite reliability (CR) for each variable meets the required criteria of being greater than 0.7 [103]. Since all the CR values were greater than 0.70, it is acceptable that some of the AVE values were less than 0.5. Therefore, convergent validity was achieved, as shown in Table 5. The AVE root square values for each variable exceeded the correlations between the latent variables. Thus, discernment validity was achieved (see Table 3).

Structural model

Goodness-of-fit indices were calculated and contrasted with the GOF criteria for the structural model. The structural model demonstrated good fit. See Table 6.

Hypotheses testing

Edu was added as a control variable into the structural model following the previous literature [104]. The

Table 5 Confirmatory factor analysis

Item	Factor loading	CR	AVE
Training (TR)		0.914	0.686
TR1	0.825		
TR2	0.834		
TR3	0.881		
TR4	0.609		
TR5	0.951		
Understanding (UN)		0.797	0.449
UN1	0.509		
UN2	0.556		
UN3	0.857		
UN4	0.627		
UN5	0.741		
Coworker support (CWS)		0.843	0.521
CWS1	0.766		
CWS2	0.642		
CWS3	0.780		
CWS4	0.767		
CWS5	0.638		
Future prospective (FP)		0.839	0.512
FP1	0.670		
FP2	0.690		
FP3	0.724		
FP4	0.647		
FP5	0.832		
Organization-based self-esteem (OBSE)		0.924	0.553
OBSE1	0.661		
OBSE2	0.774		
OBSE3	0.736		
OBSE4	0.715		
OBSE5	0.692		
OBSE6	0.713		
OBSE7	0.788		
OBSE8	0.849		
OBSE9	0.884		
OBSE10	0.573		
Innovative work behavior (IWB)		0.769	0.403
IWB1	0.662		
IWB2	0.742		
IWB3	0.558		
IWB5	0.586		
IWB6	0.608		

The factor loadings of all the items are sufficiently high (> 0.50) and statistically significant ($p < 0.001$)

Abbreviations: *AVE* average variance extracted, *CR* composite reliability

Table 7 Structural model results

Relationships	Standardized coefficients	SE	Results
Direct effects			
H1: TR → IWB	0.009	0.101	Not supported
H2: UN → IWB	−0.050	0.129	Not supported
H3: CWS → IWB	−0.007	0.089	Not supported
H4: FP → IWB	0.071	0.118	Not supported
Indirect effects			
H5a: TR → OBSED	−0.225	0.116	Not supported
H5b: OBSED → IWB	0.590***	0.062	Supported
H5: TR → OBSED → IWB	−0.132	0.068	Not supported
H6a: UN → OBSED	0.403**	0.132	Supported
H6: UN → OBSED → IWB	0.237**	0.081	Supported
H7a: CWS → OBSED	0.206**	0.071	Supported
H7: CWS → OBSED → IWB	0.121**	0.045	Supported
H8a: FP → OBSED	0.245*	0.114	Supported
H8: FP → OBSED → IWB	0.145 *	0.068	Supported

CWS coworker support, *Edu* education level, *FP* future perspective, *IWB* innovative work behavior, *OBSE* organization-based self-esteem, *SE* standardized error, *TR* training, *UN* understanding

*$P \leq 0.05$

**$P \leq 0.01$

***$P \leq 0.001$

findings of the suggested hypotheses are shown in Table 7.

More detailed clarifications are provided below:

> H1. TR has a significant and direct positive relationship with IWB.

The findings indicate that there is no direct relationship between TR and IWB. This result is inconsistent with previous findings of the significant and positive role of TR on IWB [17, 48–54].

> H2. UN has a significant and direct positive relationship with IWB.

The finding indicates that there is no direct relationship between UN and IWB. This result is inconsistent with the findings of Kundu et al. [58], who found a significant and

Table 6 Model fit of the structural model

X^2	df	*P* value	CFI	TLI	SRMR	RMSEA	90% CI for RMSEA
883.209	569	0.000	918	0.910	0.072	0.051	0.044–0.057

Abbreviations: *CI* confidence interval, *CFI* comparative fit index, *df* degree of freedom, *RMSEA* root mean square error of approximation, *SRMR* standardized root mean square residual, *TLI* Tucker–Lewis index

positive relationship between role clarity, which is similar to UN, and IWB.

> H3. CWS has a significant and direct positive relationship with IWB.

The findings indicate that there is no direct relationship between CWS and IWB. This result is inconsistent with previous findings that offered an empirical illustration of the significant and positive role of coworker support in fostering innovation [15, 63–65].

> H4. FP has a significant and direct positive relationship with IWB.

The findings indicate that there is no direct relationship between FP and IWB. This result is inconsistent with previous findings [17, 21, 67–69] that have provided empirical evidence of the significant and positive role of rewards, which is an FP factor, in fostering innovation.

> H5a. TR has a significant and direct positive relationship with OBSE.
> H5b. OBSE has a significant and direct positive relationship with IWB.
> H5. OBSE mediates the relationship between TR and IWB.

With respect to the mediating effect of OBSE, this research begins with the main components of the mediating effect of OBSE on the relationship between TR and IWB. H5a, which reflects the relationship between TR and OBSE, is not significant. Thus, H5a is not supported. This finding is inconsistent with previous findings that have provided empirical evidence of the significant and positive role of similar constructs to TR, such as feedback [74] and directive manager behaviors [75], on OBSE. As expected, the findings proved that there is a significant and positive relationship between OBSE and IWB (β = 0.590; $p \leq 0.001$). Thus, H5b is supported. This finding supports previous studies that found a positive relationship between OBSE and IWB [81]. However, H5, which reflects the indirect impact of TR on IWB through OBSED, is not significant. Thus, H5 is not supported. Since the training that employees receive has a nonsignificant effect on OBSE, the mediating effect of OBSE will not occur even if OBSE fosters IWB.

> H6a. UN has a significant direct positive relationship with OBSE.
> H6. OBSE mediates the relationship between UN and IWB.

The mediating effect of OBSE on the relationship between UN and IWB, H6a, which reflects the relationship between UN and OBSE, is significant (β = 0.403; $p \leq 0.01$). Thus, H6a is supported. This finding supports previous studies that found a positive relationship between OBSE and similar constructs to UN, such as role clarity [82, 83] and self-efficacy [35]. In addition, as previously noted, H5b was supported. Accordingly, H6, which reflects the mediating effect of OBSE on the relationship between UN and IWB, is significant (b3b2 0.237; $p \leq 0.01$). The results also prove a full mediating effect, as the direct impact of UN on IWB is not significant. Thus, H6 is supported. This means that as employees have more job understanding, they will feel more OBSE, which in turn fosters their innovative behavior.

> H7a. CWS has a significant and direct positive relationship with OBSE.
> H7. OBSE mediates the relationship between CWS and IWB.

In relation to the mediating effect of OBSE on the relationship between CWS and IWB, H7a, which reflects the relationship between CWS and OBSE, is significant (β = 0.206; $p \leq 0.01$). Thus, H7a is supported. This finding supports previous studies that found a positive relationship between CWS and OBSE [83]. In addition, as noted before, H5b is supported. Accordingly, H7, which reflects the mediating effect of OBSE on the relationship between CWS and IWB, is significant (β = 0.121; $p \leq 0.01$). This result indicates a full mediating effect since the direct effect of CWS on IWB is not significant. Thus, H7 is supported. This means that as employees receive more support from their coworkers, they will feel more OBSE, which in turn fosters their innovative behavior.

> H8a. FP has a significant and direct positive relationship with OBSE.
> H8. OBSE mediates the relationship between FP and IWB.

In addition, concerning the mediating effect of OBSE on the relationship between FP and IWB, H8a, which reflects the relationship between FP and OBSE, is significant (β = 0.245; $p \leq 0.05$). Thus, H8a is supported. This finding supports previous studies that found positive relationships between OBSE and similar constructs to FP, such as salary [76], relational psychological contract [86], future-oriented management role [75], job security [74, 83], and total rewards [87]. In addition, as noted before, H5b is supported. Accordingly, H8, which reflects the mediating effect of OBSE on the relationship between FP and IWB, is significant (β = 0.145; $p \leq 0.05$). This result also indicates a full mediating effect since the direct

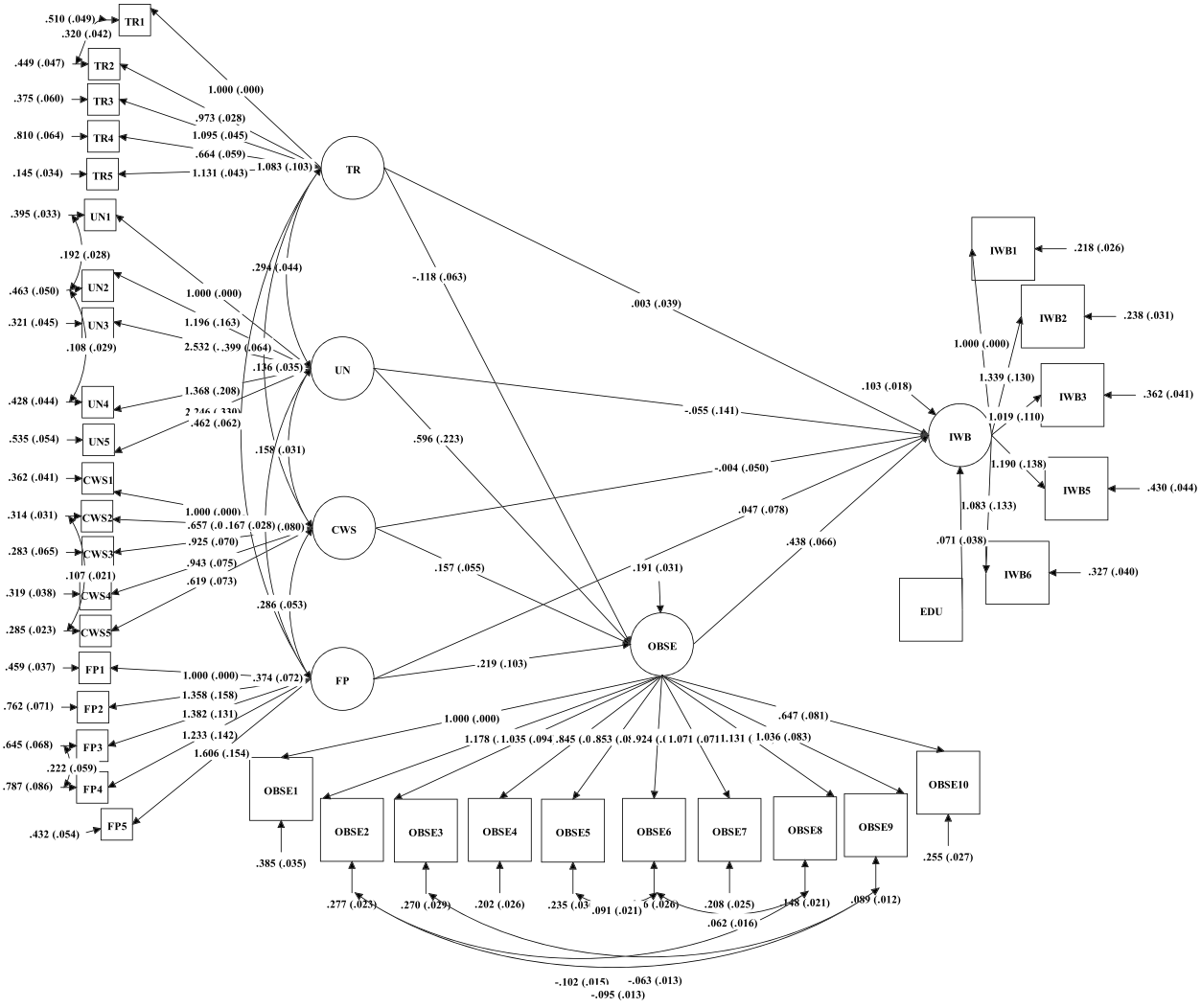

Fig. 2 Structural model

effect of FP on IWB is not significant. Thus, H8 is supported. Finally, for the control variable, Edu has no effect on IWB.

Fig. 2 shows the hypotheses and findings of the proposed structural model.

Discussion

With rapid changes in work environments, IWB has become essential for sustaining competitiveness in the market. To enhance IWB, many studies have highlighted its predictors and the mediator variables that link IWB antecedents to IWB. Nevertheless, empirical studies that link OS factors remain insufficient and have reached different conclusions, as discussed in the literature review section of this study. Moreover, OBSE has received limited attention as a mediating variable in the relationships between OS factors and IWB, despite its important role. Therefore, the core purpose of this research is to highlight the relationship between OS factors and IWB by considering the mediating effect of OBSE on the relationship between OS factors and IWB. The current study argues that to enhance employees' IWB, organizations should concentrate on applying OS factors and strengthening OBSE. Contrary to expectations, the findings of this study reveal that there are no significant relationships between OS factors and IWB. Many reasons may help explain these outcomes. First, previous empirical studies have reached different conclusions regarding the effects of OS factors on IWB. Although the author's point of view was aligned with the positive impact of OS factors on IWB, the study's findings were unexpected. Second, applying the study in a new context (such as the Saudi context) might lead to different outcomes. According to Hofstede [105], there are cultural differences between countries. These differences might affect the research findings from one society to another. Therefore, the cultural difference between non-Western contexts and Western contexts might lead to surprising results.

Third, the specific nature of the Fintech industry, such as the continuous changes, challenges, and strict regulatory control, might affect the results. It should be noted that the sensitivity of the fintech sector affected the author's ability to collect more data. Fourth, the sample size might have affected the study's findings. In other words, collecting the required data from a large sample size will increase the accuracy of the findings.

With respect to the impact of OC factors on OBSE, the findings indicate that TR has a nonsignificant relationship with OBSE. This outcome could be due to the weak nature of the training process. In addition, it might not add value to employees' skills and development. However, the relationship between OBSE and IWB was significant. One possible interpretation for this finding is that when employees receive more recognition from their organization and their efforts are valued, this psychological feeling will encourage them to be innovative and engage in activities that align with their feelings of self-esteem within the organization. This outcome aligns with that of SCMT [30–32], which indicates that people engage in activities that are consistent with their self-concept. Thus, when they have a high level of OBSE, they are more likely to engage in IWB. The mediating effect of OSBE on the relationship between TR and IWB was not significant because of the inconsistency between TR and OSBE. In other words, since the training that employees received did not lead to OBSE, which in turn leads to IWB, the mediating effect did not occur

In terms of the impact of UN on OBSE, the findings were significant. This outcome means that employees' feelings of OBSE increase when they have a greater understanding of their job. Since the positive effect of OBSE on IWB was confirmed, the mediating effect of OBSE on the relationship between UN and IWB was also confirmed. This mediating effect aligns with that of SCMT [30–32]. This means that when employees have more job understanding, they will feel more OBSE, and consequently, they will engage in activities that are consistent with their self-esteem, such as IWB

In addition, the findings of this study reveal that there is a positive relationship between CWS and OBSE. This reflects the importance of the relations between the coworkers and support within the organizational context, which enhances the feeling of OBSE. Additionally, as discussed earlier, there is a confirmed relationship between OBSE and IWB. Thus, the mediating effect of OBSE on the relationship between CWS and IWB was also confirmed. This relationship can be interpreted from the perspective of SCMT [30–32]. When support is present within the work environment, employees feel more OBSE, which in turn fosters their innovative behavior

Furthermore, the findings show that FP has a positive effect on OBSE. This outcome reflects the important role of employees' perspectives in the future relationship with organizations. When an organization can provide diverse benefits to its employees and there is job security, they will feel that they are valuable, which will enhance OBSE. Since the relationship between OBSE and IWB was confirmed, the mediating effect of OBSE on the relationship between FP and IWB was also confirmed. This aligns with SCMT [30–32], which suggests that OBSE is influenced by the experiences an individual has within an organization [24]. This, in turn, leads to an increase in IWB.

In addition, it is crucial to know that the mediating impact of OBSE in this study represents a full mediator because of the nonsignificant direct relationships among UN, CWS, FP, and IWB. This reflects the important role of OBSE in enhancing the relationships among OS factors, namely, UN, CWS, and FP, and IWB. This research is among the first to provide factual proof, which expands the existing literature on the mediating role that OBSE plays in the relationships among the three OS factors, namely, UN, CWS, and FP, and IWB.

Theoretical implications

This study is highly valuable because of its potential theoretical implications. First, this study was developed on the basis of two fundamental theories, SET [29] and SOMT [30–32]. These theories provide a more in-depth understanding of the relationships examined in this study. Second, owing to the lack of studies that highlight the impact of OS factors on IWB, this study expands the literature by investigating this issue. Third, despite the important role of OBSE in the relationship between OS factors and IWB, these relationships are widely unexplored. Thus, this research has examined its impact and revealed that OBSE plays a valuable role as a mediator in the relationships examined in this study. Fourth, examinations of OS factors, OBSE, and IWB in a unified model remain inadequate. Thus, applying a novel model is crucial for adding valuable information to the literature. Finally, this study contributes to the existing body of knowledge by examining the relationships among OS factors, OBSE, and IWB in Saudi Arabia's emerging FinTech sector. It provides a non-Western perspective that is currently underrepresented in the literature.

Managerial implications

The findings of this study have numerous ramifications for practitioners and decision-makers in the FinTech industry. The findings indicate that organizations should prioritize the development of OBSE among their employees to improve the positive impact of OS factors on IWB. Since the impact of OS factors on IWB occurs only when OBSE is considered, enhancing OBSE among employees is vital. For instance, managers must establish

a climate in which employees feel valued, competent, and critical to the organization's success. This can be achieved by establishing new strategies for enhancing role clarity. For instance, job descriptions should be designed clearly to avoid any ambiguity. This helps employees feel competent and increases their self-confidence, which enhances their feelings of OBSE. With respect to CWS, some strategies are related to adapting to a supportive peer culture, which encourages knowledge sharing and open communication between coworkers. Furthermore, designing reward systems with a work environment that is characterized by job security will increase employees' perspectives regarding FP and what the organization can give them. This, in turn, increases employees' feelings of OBSE and leads to IWB. In addition, instead of focusing on motivating only IWB, FinTech managers should concentrate on the psychological conditions that encourage employees to think innovatively. This can be achieved by supporting employees in making some risk decisions that lead to innovativeness and allowing them to participate in problem-solving meetings. By enhancing the feeling of OBSE, the OS factors within the work environment will lead to IWB.

Limitations of the study

This study has several limitations that should be discussed. First, the quantitative data obtained in this study were obtained through convenience and snowball sampling, which raises concerns about the sample's representativeness and limits the generalizability of the findings. Second, this study was applied in a specific sector—the FinTech sector—in the Saudi context. This might affect the ability to generalize the findings in other contexts. Third, this study has a limited sample size because of the sensitivity of the sector, leading to difficulties in collecting the required data. Fourth, self-reported data were used in this study. In other words, the study's data were exclusively collected via one response type, which was from employees. This procedure might lead to a bias in the study's findings. Finally, the data in this study were collected during a single time period. Consequently, longitudinal analyses are advised for future research to obtain more precise results.

Future directions

To enhance the generalizability of the results, future researchers are encouraged to consider employing various sampling strategies to acquire larger data samples, replicating this study across different sectors and contexts, and increasing the sample size. Since this research found nonsignificant relationships in some of the hypotheses, such as the direct relationships between OS factors and IWB, cultural differences should be assessed as moderating variables in these relationships, and the results should be compared. In addition, applying a comparison study between two countries from different contexts (Western and non-Western contexts) and considering the effects of cultural differences is highly recommended. Although there was no CMV in this study, future research will benefit from the collection of data from a variety of sources to increase the precision of the results. Finally, longitudinal analyses are advised for future research to obtain more precise results instead of depending on one time period.

Conclusions

This study provides a comprehensive understanding of how OBSE fully mediates the relationships between three OS factors, namely, UN, CWS, and FP, and IWB. The results highlight the vital role of OBSE in enhancing the relationships between OS factors and IWB. In other words, the effect of OS factors on IWB will not occur unless OBSE is considered. When employees understand their work, obtain support from their colleagues in the work environment, and have future prospects regarding their work within the organization, they will feel more self-esteem within the work context. This, in turn, will enhance their innovativeness. Consequently, these findings reflect the need to enhance OBSE by creating a suitable work environment that supports this feeling. In addition, many strategies, such as encouraging knowledge sharing and communication between coworkers and designing reward systems, should be considered to increase OS factors. At the end, IWB will be fostered. Finally, to the best of our knowledge, this research is among the first to empirically investigate the mediating role of OBSE in the relationships among UN, CWS, and FP and IWB.

Abbreviations

OS	Organizational Socialization
TR	Training
UN	Understanding
CWS	Coworker support
FP	Future prospects
IWB	Innovative work behavior
OBSE	Organization-based self-esteem

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Authors' contributions

Sultanah Mohammed Alsudays: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

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Data availability
The datasets used and analyzed during the current study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate
All study procedures, including human participants, align with the ethical standards of the institutional and/or national research committee and with the Helsinki declaration (1964) and its later amendments or comparable ethical standards. The study was approved by the Imam Mohammed Ibn Saud Islamic University (IMSIU) Committee for the Ethics of Research (1308). Informed consent was obtained from all the individual participants included in the study. In addition, the cover letter of the survey followed ethical guidelines, guaranteeing confidentiality and voluntary participation while quantitative data were gathered.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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