



Do we need friendship in the workplace? The effect on innovative behavior and mediating role of psychological safety

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Abstract

Employees spend a huge time of their lives at work. As a result, friendships are often formed between individuals in the workplace. Workplace friendship is a fundamental value of human nature. Forming friendships in the workplace is vital to increase satisfaction and engagement at work. The present study proposes and tests a theoretical framework to explore the workplace friendship mechanisms and their impact on the innovative behavior of employees in the Omani service sector, and to clarify the mediating role of psychological safety. The data was gathered from the employees of private service sector in Oman. An online questionnaire form was distributed to the participants and 405 valid questionnaires were analyzed by SmartPLS software using structural equation modeling. The results indicated that workplace friendship aspects namely, friendship opportunity and friendship prevalence positively affected innovative behavior. Furthermore, friendship prevalence was positively correlated in relation to psychological safety. However, psychological safety did not have a mediating role between workplace friendship and innovative behavior. The findings are meaningful for the academic research and also give some practical suggestions for managers from a new viewpoint for the evaluation of workplace friendship in the context of the service sector, in order to achieve psychological safety, and to promote the innovative behavior of employees in this sector.

Keywords Workplace friendship · Friendship opportunity · Friendship prevalence · Innovative behavior · Psychological safety · Oman

Introduction

Workplace friendship was mentioned in the modern management literature by Taylor (1914). Specifically, he pointed out that in order to get the best results within an organization, it is necessary to follow four basics theories of scientific management: real science development, employees' scientific recruitment, scientific training of staff, and friendship between supervisors and employees. Maslow (1943) postulated that the concept of friendship is one of the main requirements in the hierarchy of needs theory, and the belonging need and love fulfillment is one of the forms of friendship. Wright (1984) suggested that there should be two basic criteria for friendship in the workplace. The first is the mutual interest between individuals, and the second is the

commitment to free time for interaction between individuals in the absence of pressure or constraints in the relationship. McClelland (1988) declared achievement, power, and affiliation as the main motives in the needs theory. The affiliation motive, which expresses the desire to establish and maintain strong relationships with others, demonstrates friendship. Mayo (2004) mentioned that friendly, pleasant, and happy working environments are a prerequisite to building good relationships. Conversely, working overtime, monotonous jobs, and poor treatment of staff are the root cause of problems in the workplace.

Nielsen et al. (2000) stated that there are three reasons why workplace friendship is important: (a) the relationship between friendship and important work-related outputs, (b) the contribution of workplace friendship to informal structures of organizations, and (c) the growing trend of using groups and teams within institutions. Friendship in the workplace is a complex issue, and understanding its impact is crucial since it is a part of organizational culture. Thus, many companies encourage friendship in the workplace because it is advantageous to the workers (Ozbek, 2018), such as

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increased productivity (Song & Olshfski, 2008), career success (Markiewicz et al., 2000), organizational obligation, (Gupta, 2020), job satisfaction, (Denison & Mishra, 1995), job performance (Li, 2017; Ozbek, 2018), teamwork efficacy (Herman et al., 2008), and employee engagement (Khaleel et al., 2016).

In contrast, much research has explored the disadvantages of friendship in the workplace, in that it can be positively associated with sexual harassment (Berman et al., 2002), dependence on other people, nepotism and gossip (Zaleznik, 1997), and organizational deviance (Gupta, 2020). Friendships can blur boundaries and can sometimes be a distraction from the job (Morrison & Nolan, 2007). Workplace friendship impairment can increase the turnover of employees, cause stress, and reduce the ability to implement work (Choi & Ko, 2020; Sias et al., 2004) provided five reasons for friendship deterioration, namely distracting life events, personality issues, promotion, betrayal, and conflicting expectations. Morrison (2009) described friendship in the workplace as a double-edged sword.

On the other hand, if psychological safety exists in the business environment, employees will take calculated risks at work. When individuals feel safe psychologically, they are more likely to share in the behaviors that drive learning and positive change. Psychological safety can also function as a safety net for people (Kark & Carmeli, 2009). It consciously creates inclusive environments, increases performance, activates innovation, accelerates learning, and challenges the current situation, without the fear of being marginalized, embarrassed, or somehow punished (Clark, 2019).

Although friendship in the workplace is omnipresent, there are still important missing pieces in our perception of the impact of friendship in the workplace, so it is essential to understand how it affects employee behavior to provide innovative services. Promoting innovative behavior among employees is a common concern among managers of organizations as employee innovation in the workplace is the key to organizational success. Drawing on social cognitive theory, the current research proposes a theoretical framework that highlights how friendship is represented in the workplace, and how it can influence the innovative behavior of employees. In addition, this model illustrates the mediating role of psychological safety and the link between workplace friendship and innovative behavior. Social cognitive theory (SCT) is one of the most frequently applied theories of health behavior (Bandura, 1986). SCT posits a reciprocal deterministic relationship between the individual, his or her environment, and behavior; all three elements dynamically and reciprocally interact with and upon one another to form the basis for behavior, as well as potential interventions to change behaviors (Bandura, 2001). Specifically, we suggest that workplace friendship may help individuals obtain sense of belonging and feel supportive by their

colleagues (Berman et al., 2010), thus maintaining a high level of psychological safety, which refers that the risk and cost of unsuccessful innovative behavior can be reduced and employees are more likely to adopt creative behavior. From the perspective of social cognitive theory (Bandura, 1999), we further argue that psychological safety associated with workplace friendship will affect employees' innovative behavior. Psychological safety is a decisive factor for individuals to take action (Kahn, 1990; West, 1990). When psychological safety of work place is in high level, individuals are more likely to innovate and explore new methods because psychological safety greatly alleviates their fear of possible failure and its negative results (Hirak et al., 2012; Huang et al., 2016). Thus, the primary research question is: *How does workplace friendship explain the variation in employees' innovative behavior through psychological safety in the business environment?* In sum, this research is meaningful for managerial practice and we hope the theoretical framework will contribute to provide a new perspective of understanding friendship at work thus stimulate further research.

Literature review and hypotheses development

Friendship in the workplace and innovative behavior

Organizations consist of individuals who have an innate desire to form a network of social relationships and friendships among themselves (Cao & Zhang, 2020). As a result, a number of factors, such as common culture, similarities in lifestyle, and personal interests mean that friendship is a natural and essential occurrence in the workplace (Asgharian et al., 2013). Many employees spend more hours with their co-workers than they do with their families. As such, it is important to build good relationships with fellow workers (Van Diemen, 2018; Sias & Cahill, 1998) advocated developing and strengthening friendship in the workplace by increasing frequent intimate interaction between individuals. Friendships help to provide support and resources, and make employees feel comfortable about completing assigned tasks, managing associated work stress, improving cooperation and harmony, and increasing effective communication with colleagues in the organization (Bandura, 1982; Gupta, 2020).

Berman et al. (2002) defined friendship in the workplace as a non-exclusive job relationship that includes reciprocal liking, commitment, mutual trust, and shared values and interests. Furthermore, friendship has been described as an unofficial personal relationship in a business environment that offers an intimate relationship among the staff (Dobel,

2001; Nielsen et al., 2000). The basic objective of relationships in the workplace is to provide support between individuals and to promote emotional and relational well-being (Morrison & Cooper-Thomas, 2016; Morrison, 2004) stated that friendship in the workplace is colored by relationships and comprises of four characteristics, namely voluntary, informality, communal, and socio-emotional norms (Pillemer & Rothbard, 2018). The development of friendships at work is well known and prevalent among employees in various types of organizations (Bridge & Baxter, 1992). Friendship in the workplace guides individuals to be mutually accepting of each other (Sias & Cahill, 1998). Friendship in the workplace plays a vital role in creating a supportive and effective business environment (Chen et al., 2013). Friendship develops at the workers' discretion (Morrison & Wright, 2009), and the employees in these relationships interact with each other without pressure or restrictions (Wright, 1984).

Nielsen et al. (2000) divided workplace friendship into two aspects. The first is friendship opportunities that demonstrates how accommodating the organization is regarding conversing and building informal relationships with others. The second is friendship prevalence. This refers to the efforts made by organizations to identify and bring like-minded people together to form work teams that are characterized by a spirit of friendship and effectiveness (Duck, 1983). Riordan and Griffeth (1995) noted that the opportunities for friendship and prevalence in the workplace are associated with significant results for both individuals and organizations, as higher degrees of friendship mean that employees are more engaged in their work, and are more satisfied with their tasks. Additionally, individuals who have more opportunities to make friends at work are more emotionally attached to their institution and have less desire to quit their jobs (Nielsen et al., 2000).

In general, previous research on friendship in the workplace has focused on attitude and output variables; however, few studies have discussed behavior variables such as innovative behavior (Cao & Zhang, 2020). The innovative behavior of individuals is essential to the survival and continuity of organizations under changing situations (Newman et al., 2017). According to the social cognitive theory, individual behavior mostly interacts with the social work environment (Bandura, 1986). As a result, strong friendships in the workplace encourage individuals to support each other, and to share their various resources that contribute to harmonious work climates and help workers to acquire better problem-solving skills (Berman et al., 2002). Liu and Shi (2009) indicated that the innovative behavior of individuals is determined by the prevailing organizational atmosphere.

A high camaraderie creates a friendly atmosphere, facilitates mutual trust between colleagues, reduces worry and fear when approaching challenging tasks, and in turn,

encourages innovative behavior. In contrast, when friendship among individuals in the workplace is low, increased perceived risk and innovation deters employees from taking innovative behavior (Cao & Zhang, 2020). Moreover, friendship in the workplace is a clear solution to reinforcing the innovative behavior climate in organizations (Xiao et al., 2020). The innovative behavior of employees has a direct impact on an organization's creativity and contributes to determining its survival and continuity in the business world (Eva et al., 2019). The survival and continuity of organizations is difficult due to various challenges (Carmeli et al., 2014). If an organization wants to be prosperous, it must enhance innovation (Nembhard & Edmondson, 2006). The innovation process occurs when new ideas, products, or thoughts, which are the essential elements of people's innovation behavior, are advanced or implemented by organization members. (Zhang et al., 2011). From this theoretical underpinning, we can say that the presence of friendship in the workplace facilitates access to innovative knowledge and abundant skills from co-workers that can help them to carry out innovative work. So the following hypotheses are conjectured:

H₁: Friendship opportunity (FO) and innovative behavior (IB) are significantly related.

H₂: Friendship prevalence (FP) and innovative behavior (IB) are significantly related.

Workplace friendship and psychological safety

In contemporary organizations, most functions are interrelated and as such, are conducted collaboratively between co-workers (Collins & Smith, 2006). Inadequate experience, complex work, specialization, and diversity require these individuals to work together to achieve organizational goals (Edmondson & Lei, 2014). Psychological safety has been identified as a vital factor when comprehending how individuals will cooperate to fulfill common outcomes (Edmondson, 2004). When friends feel psychologically safe in the work environment, they believe they are safe from personal risk (Kostopoulos & Bozionelos, 2011). The psychological safety of individuals in the work environment is a priority matter (Leroy et al., 2012; Nembhard & Edmondson, 2011). It is the extent whereby an individual feels capable of manifesting and employing themselves without fear of negative consequences of self-image, profession, or status. Furthermore, it is a psychological state whereby individuals feel confident that the personal context around them is not threatening, and that they will not be punished or embarrassed for expressing themselves (Zhang et al., 2010).

Psychological safety describes employees' perceptions of the consequences of personal risk in a specific context, such as at a place of work (Edmondson, 1999). Psychological

safety makes it easier to contribute ideas and actions to a joint project (Edmondson & Lei, 2014), it helps to explain why individuals share knowledge and information (Collins & Smith, 2006; Siemsen et al., 2009), and suggests improvements (Detert & Edmondson, 2011; Liang et al., 2012). Furthermore, it enables groups and organizations to learn (Bunderson & Boumgarden, 2010) and perform (Schaubroeck et al., 2011). Relationships in the workplace are fundamental to building psychological safety. They shape not only people's perceptions of each other, but also people's perceptions of themselves, including the way staff and managers interact with each other. The primary relationship in the workplace is between the employee and his or her line manager, while the relationship with colleagues is secondary. Therefore, managers and leaders must provide a framework for a healthy workplace in order to form these relationships and friendships, and to create a psychologically safe environment (Wellbeing Works, 2021). Based on the above, we can say that having a psychologically safe work environment in an organization, individuals will have good relationships with their colleagues in the workplace, form friendships, respect and care for each other, have real intentions, and are able to engage more in work. As such, the following hypotheses are proposed:

H₃: Friendship opportunity (FO) and psychological safety (PS) are significantly related.

H₄: Friendship prevalence (FP) and psychological safety (PS) are significantly related.

Psychological safety and innovative behavior

Psychological safety has become a phenomenon worthy of focus owing to the growing importance of innovation in today's institutions (Edmondson & Lei, 2014). The context of psychologically safe depicts an atmosphere whereby the focus is on constructive debate that avoids trouble and achieves common objectives (Safdar et al., 2017; Tierney & Farmer, 2002) assert that in order for individuals to adapt to huge change in their institutions, they must feel comfortable and psychologically secure. Psychological safety is a performance engine, showing how people can contribute to achievement in a psychologically safe environment (Kim et al., 2020). Psychological safety affords employees greater motivation to communicate with others, and to share work-related information with them because they feel less threatened (Men et al., 2018; Zhao et al., 2016). When psychological safety in an organization is high, individuals may be more willing to talk within the group about taking personal risks (Cauwelier et al., 2019). The climate is more intimate and open to ideas, and employees are able to talk about work-related content that motivates them to collaborate and innovate. In turn, this contributes to a more open

environment for the creation and sharing of ideas among employees (Edmondson, 1999). In addition, Schein (1985) has argued that a higher level of psychological safety encourages innovation among employees. This creates a more comfortable work environment where people are close friends (Carmeli et al., 2010).

Gong et al. (2012) examined psychological safety and its relationship to information exchange and individual creativity. They considered that proactive individuals are willing to share information with colleagues to enhance trust, and to create the psychologically safe environment that individuals require to share their creative actions. Furthermore, several studies have indicated a link between employees' perception for psychological safety and their levels of innovation (Kark & Carmeli, 2009) and creative thinking (Palanski & Vogelgesang, 2011). Several studies discovered that psychological safety is closely correlated with research and development innovation (Gu et al., 2013), knowledge induction (Choo et al., 2007), and process innovation performance (Lee et al., 2011; Kessel et al., 2012) found that knowledge mediates the relationship between psychological safety and creative team performance. Therefore, it can be argued that people with higher levels of psychological safety are more likely to show innovative behavior since the context of psychological safety allows individuals greater freedom to share ideas. Thus, we proposed the following hypothesis:

H₅: Psychological safety (PS) and innovative behavior (IB) are significantly related.

Mediating role of psychological safety

Psychological safety illustrates an individual's valuations and perceptions of their environment, and their behavioral and attitudinal response (Liu et al., 2021). It determines the position of individuals in an organization and enables them to conduct innovative and difficult tasks (Kahn, 1990). It is a visualization that allows individuals to present and express themselves fully without fear or concern about their self-image, promotion or status (Appelbaum et al., 2016). Knowledge of the workplace and trust among colleagues has a significant impact on the psychological safety of employees (Atkinson, 2004). Similarly, friendship in the workplace helps to perceive the emotional support of employees making it easier to deal with difficulties and cope with stress (Guchait et al., 2014; Yin et al., 2015). Specifically, friendship in the workplace may help people feel a sense of belonging and support from their colleagues, thereby maintaining a high level of psychological safety and adopting innovative behavior (Yin et al., 2015).

Good interpersonal relationships in organizations provide psychological safety for their members. As psychological safety is closely linked to innovative behavior, making

friends at work can help individuals to feel respected and connected in ways that allow them to conquer the uncertainty that accompanies their job. By solving problems and experimenting with different solutions, these quality interpersonal relationships can bring about more innovative behavior from employees (Kahn, 1990; Kim, 2020; Kratzer et al., 2006) affirmed that human interaction in an organization is an important factor for innovative behavior, this means that innovation depends on collaboration between the individuals of the organization. Moreover, friendship in the workplace as a social group motivates workers to share ideas and methods for solving problems or generating new services or products (Helmy et al., 2020; Berman et al., 2002) suggested that friendships in the workplace may help employees to experience a sense of belonging and involvement in the work environment, and to feel supported by their coworkers, thus maintaining a high level of psychological safety. This may be an indicator that the risks and costs of unsuccessful innovative behavior will be lower, and therefore, individuals are more likely to adopt innovative behavior. According to Cao and Zhang (2020) friendships in the workplace are an important way to motivate and reinforce innovative employee behavior. Therefore, it can be argued that the strong relationships with colleagues in the workplace can promote greater psychological safety, when psychological safety in an organization is at a high level, employees are more likely to explore and contribute to new ideas and adopt innovative behavior. Thus, we proposed the following hypotheses:

H₆: Friendship opportunity (FO) and innovative behavior (IB) is mediated by psychological safety (PS).

H₇: Friendship prevalence (FP) and innovative behavior (IB) is mediated by psychological safety (PS).

Research methodology

Participants and procedure

The study was designed to evaluate a structural model consisting of four latent variables made up of two sides: an

inner model, and an outer model. The current study was conducted between May 2020 and February 2021. Due to the COVID-19 pandemic, a web-based questionnaire was followed. Quantitative methodology and survey method were adopted in the present study.

The respondents consisted of employees from the private service sector in Oman. In total, 405 completed questionnaires were received, and the valid percentage was 90%. Among the 405 respondents who participated in the survey, 31.8% were in healthcare, 27.4% in banking, 22.2% in education, and 18.6% in telecommunications. Also, 52.8% of respondents were male and 47.2% were female; 53.8% were unmarried and 46.2% were married; 43.5% of the participants were more 35 years old; 67.9% of participants had a university degree; 31.6% of participants had more than 7 years of experience in their field.

On other the hand, to reduce concerns regarding the effect of common method variance (CMV) on the findings, Harman's single factor test was used (Jordan & Troth, 2019). All 15 elements of the study constructs were loaded onto a single factor using exploratory factor analysis (Fuller et al., 2016). The total variance was 25.561%, as shown in Table 1. This value is lower than the 50% cut-off, according to Podsakoff et al. (2012). Hence, no bias was found in the data in this study.

Measures

To measure the study variables, the constructs were adapted from the previous literature. This research proposed to identify the effect of friendship in the workplace on innovative behavior using psychological safety as a mediator variable. A 3-section survey was prepared to examine the constructs in this pilot study. Nielsen et al. (2000) created the scale to cover two dimensions of workplace friendship, and it consisted of seven items designed to measure workplace friendship opportunity. Friendship opportunity: FO1, FO2, and FO3 (3 items). A sample item was, "I have the opportunity to get to know my coworkers." Friendship prevalence: FP1, FP2, FP3, and FP4 (4 items). A sample item was, "I formed intensive relationships at work." Psychological safety:

Table 1 Common method variance (CMV)

| Components | Initial eigenvalues | | | Extraction sums of squared loadings | | |
|------------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 3.834 | 25.561 | 25.561 | 3.834 | 25.561 | 25.561 |
| 2 | 1.842 | 12.280 | 37.842 | | | |
| . | . | . | . | | | |
| . | . | . | . | | | |
| 14 | 0.433 | 2.886 | 97.367 | | | |
| 15 | 0.395 | 2.633 | 100.000 | | | |

PS1, PS2, and PS3 (3 items) was measured on a scale developed by Li and Yan (2009). A sample item was, “There are many kinds of optional threats at work.” Innovative behavior: IB1, IB2, IB3, IB4, and IB5 (5 items) was assessed using a scale developed by Yang and Zhang (2012). A sample item was, “I usually communicate with others and try to introduce fresh ideas.” A 5-point Likert scale ranging from (1) strongly disagree to (5) strongly agree, was made for data collection in the current study. PLS–SEM methodology was performed to analyze the collected data.

Data analysis and findings

IBM SPSS Statistics and SmartPLS programs were used to analyze the collected data in the current study. IBM SPSS software was used to find the descriptive statistics for the study variables, the normality test, the multicollinearity test, and the common bias method, while the SmartPLS software was used through a two-stage approach to report the results of the PLS–SEM. The first stage is a measurement model assessment, and the second stage is a structural model assessment as per the recommendations of Henseler et al. (2009).

Figure 1 displays the study model. It consists of the workplace friendship with its two sides (friendship opportunity and friendship prevalence), which were used in this model as exogenous constructs. Innovative behavior and psychological safety were used as endogenous constructs. The items were generated by underlying or latent variables, and the indicators of construct were of a reflective type (Hair et al., 2017).

First stage: measurement model assessment

The study measurement model was performed based on PLS–SEM (Ringle et al., 2015). To assist the measurement model, Cronbach’s alpha (α), factor loading, average extracted variance (AVE), composite reliability (CR), and validity of discriminant were assessed, as shown in Fig. 1; Tables 2 and 3. Hair et al. (2010) recommended factor loading values of constructs to be more than 0.60. The results in Table 1 show that all factor loading values of variables exceeded 0.60, and ranged between 0.625 and 0.841. Two coefficients were used to estimate the reliability of the items: CR and (α) (Dijkstra & Henseler, 2015). Table 1 indicates that according to George and Mallery (2003), the values of (α) for all variables were above 0.60: FO = 0.662, FE = 0.696, PS = 0.626, and IB = 0.788. Raykov (1997) mentioned that the composite reliability value above 0.7 is adequate. In this study, all the values overrode the cut-off: FO = 0.815, FE = 0.811, PS = 0.749, and IB = 0.855. Thus, these results obtained appropriate levels of reliability in the studied sample. Moreover, Hair and Lukas (2014) indicated that the AVE should be more than 0.5. The results revealed that the AVE exceeded the cut-off of 0.50: FO = 0.596, FE = 0.518, PS = 0.501, and IB = 0.540. Consequently, convergent validity was met.

For the purpose of determining the degree of difference between constructs, the validity of discriminant was performed. The Fornell and Larcker (1981) criterion that compares the correlations between the AVE square root and the constructs was used. The results in Table 3 indicate that all constructs: friendship opportunity (FO), friendship prevalence (FP), psychological safety (PS), and innovative behavior (IB), had values (**in boldface**) higher than the other construct correlation values; therefore, these results

Fig. 1 Structural model assessment

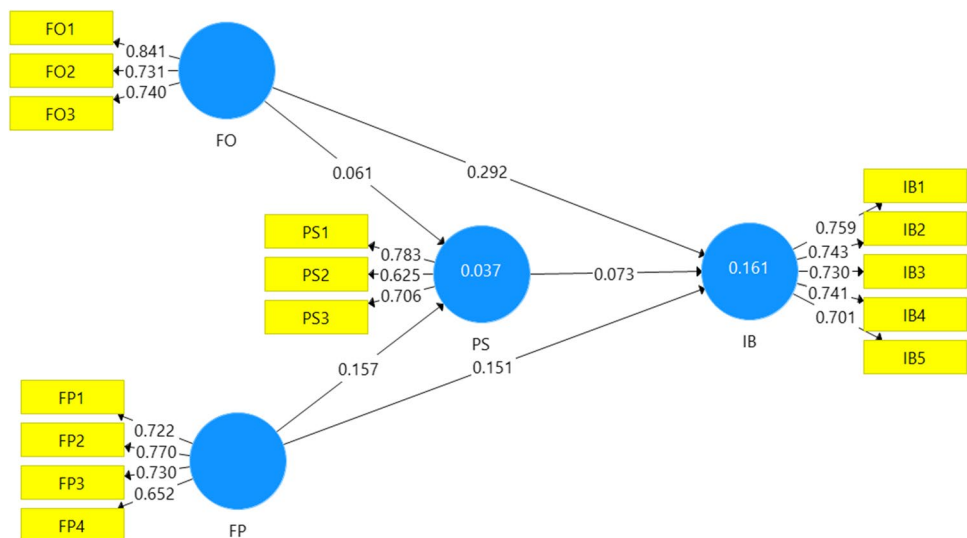


Table 2 Measurement model assessment

| Construct | Item | Factor loading > 0.60 | Convergent validity | | |
|-----------------------------|-----------------|-----------------------|---------------------|-----------|------------|
| | | | $\alpha > 0.60$ | CR > 0.70 | AVE > 0.50 |
| Friendship Opportunity (FO) | FO ₁ | 0.841 | 0.662 | 0.815 | 0.596 |
| | FO ₂ | 0.731 | | | |
| | FO ₃ | 0.740 | | | |
| Friendship Prevalence (FP) | FP ₁ | 0.722 | 0.696 | 0.811 | 0.518 |
| | FP ₂ | 0.770 | | | |
| | FP ₃ | 0.730 | | | |
| | FP ₄ | 0.652 | | | |
| Psychological Safety (PS) | PS ₁ | 0.783 | 0.626 | 0.749 | 0.501 |
| | PS ₂ | 0.625 | | | |
| | PS ₃ | 0.706 | | | |
| Innovative Behavior (IB) | IB ₁ | 0.759 | 0.788 | 0.855 | 0.540 |
| | IB ₂ | 0.743 | | | |
| | IB ₃ | 0.730 | | | |
| | IB ₄ | 0.741 | | | |
| | IB ₅ | 0.701 | | | |

α is Cronbach’s alpha; CR is Composite Reliability; and AVE is Average Variance Extracted

Table 3 Discriminant validity, descriptive statistics and multicollinearity

| Construct | FO | FP | PS | IB | Mean | St.D | Kur. | Ske. | Tol. | VIF |
|-----------|--------------|--------------|--------------|--------------|-------|-------|--------|--------|-------|-------|
| (FO) | 0.722 | | | | 4.342 | 0.508 | -0.139 | -0.500 | 0.826 | 1.211 |
| (FP) | 0.427 | 0.720 | | | 3.577 | 0.681 | 0.385 | -0.358 | 0.812 | 1.231 |
| (PS) | 0.128 | 0.183 | 0.708 | | 3.347 | 0.694 | -0.296 | 0.023 | 0.969 | 1.032 |
| (IB) | 0.366 | 0.289 | 0.138 | 0.735 | 4.162 | 0.516 | 1.033 | -0.606 | - | - |

The values in the boldface are the AVE square root

emphasized adequate discriminant validity (Chavali et al., 2022; Gye-Soo, 2016).

Also, Table 3 illustrates the descriptive statistics of the four study constructs. The results show that the construct means ranged between 3.347 and 4.342, and the values of standard deviation were of low dispersion. Furthermore, the values of kurtosis and skewness were within the reasonable limits between ± 3 (Mohammad et al., 2021; Ghasemi & Zahediasl, 2012). Thus, the collected data in the present study followed a normal distribution. On the other hand, a multicollinearity test was employed among independent variables, as shown in Table 3. The tolerance values were more than 0.05, and the variance inflation factor (VIF) values were below 10. Hence, the condition of multicollinearity was achieved according to Ghouse et al., 2021 and Hair et al., 2017.

Second stage: structural model assessment

SEM was performed by SmartPLS to identify the direct and indirect impact of study constructs. To estimate the path coefficients significance, bootstrapping was employed through SmartPLS, as shown in Table 4, where three of the

path coefficient values were more than 0.1, indicating the dependent variable is affected by the independent variables (Nasaruddin et al., 2018).

Detailing the findings of Table 4, both aspects (friendship opportunity and friendship prevalence) were positively related to innovative behavior: T-Statistic = 6.127, P -value = 0.000; T-Statistic = 3.197, P -value = 0.001, respectively. With relation to effect size f^2 , H_1 and H_2 had a small effect: 0.083 & 0.022, respectively, according to Cohen (1988). Consequently, the hypotheses H_1 and H_2 are supported by the study results. Also, friendship prevalence was positively related to psychological safety: T-Statistic = 2.458, P -value = 0.014; and the effect size f^2 of H_4 had a small effect: 0.021. Thus, hypothesis H_4 is supported.

The other hypotheses, H_3 and H_5 , are not supported by the study results because the p -values are insignificant: 0.139 & 0.376; and the effect sizes f^2 are less than 0.02 (0.006 & 0.003). This means that psychological safety was not associated to innovative behavior, and friendship opportunity was not related to psychological safety. Moreover, the determination coefficients: R^2 : 0.161 & 0.037 indicated that there is a small interpretive ability, as explained by Falk and Miller (1992).

Table 4 Results of direct and indirect effects

| Hypothesis | Path Coeff. | T-Statistic | P-Value | Decision | f ² | R ² | Q ² _{predict} | GoF |
|-----------------------------------|-------------|-------------|---------|---------------|----------------|----------------|-----------------------------------|-------|
| H ₁ : (FO -> IB) | 0.297 | 6.127 | 0.000 | Supported** | 0.083 | 0.161 | 0.080 | 0.231 |
| H ₂ : (FP -> IB) | 0.163 | 3.197 | 0.001 | Supported** | 0.022 | | | |
| H ₃ : (PS -> IB) | 0.073 | 1.480 | 0.139 | Not Supported | 0.006 | | | |
| H ₃ : (FO -> PS) | 0.061 | 0.885 | 0.376 | Not Supported | 0.003 | 0.037 | 0.014 | |
| H ₄ : (FP -> PS) | 0.157 | 2.458 | 0.014 | Supported* | 0.021 | | | |
| H ₆ : (FO -> PS -> IB) | 0.004 | 0.658 | 0.511 | No Mediation | | | | |
| H ₇ : (FP -> PS -> IB) | 0.012 | 1.228 | 0.220 | No Mediation | | | | |

Significant at P* less 0.05, P** less 0.01

The predictive capacity of the model was made to interpret the Q^2_{predict} values in the study, as shown in Table 4. The values of predictive relevance were more than zero: 0.080 & 0.014, supporting the claim that the present study model has the appropriate ability to predict, according to Fornell and Cha (1994) and Hair et al. (2019). Furthermore, the model fit value was $GoF = 0.231$. Thus, this model is adequate for considering model viability (Wetzels et al., 2009).

On the other hand, the PLS–SEM bootstrapping procedure was chosen to monitor the effect of mediation (indirect effect), as shown in Table 4. It was found that the association between friendship opportunity and innovative behavior was not mediated by psychological safety: T-Statistic = 0.658, P-value = 0.511. In addition, psychological safety did not mediate the relationship between friendship prevalence and innovative behavior: T-Statistic = 1.228, P-value = 0.220. Accordingly, the hypotheses H₆ and H₇ are not supported in this study.

Discussion and conclusion

This article utilized the quantitative approach to address the impact of workplace friendship on innovative behavior in the service sector, and considered the mediating role of psychological safety in this relationship. The findings were based on a sample of 405 participants from service sector institutions in the Sultanate of Oman. The current study established that workplace friendships affected employees' innovative behavior in the service sector. The friendship prevalence was found to be significantly related to psychological safety. These results are thus in line with past studies.

The research results have confirmed the vital role of friendship relationships in molding innovative behavior. In this article, the hypothesized effect between friendship in the workplace and innovative behavior was supported through the results. Friendship in the workplace was deliberated through two dimensions: friendship opportunity and friendship prevalence. According to the findings, the two constructs of workplace friendship had a positive and significant effect on innovative behavior. The success of any

innovation in an organization depends on the employees involved in the process, and the nature of the relationships between them (Mishra et al., 2014). This is because the innovation of employees is important for the survival and continuity of organizations, in light of intense competition (Newman et al., 2017); therefore, friendship in the workplace is an important way to stimulate employees and reinforce innovative behavior (Cao & Zhang, 2020). Employees with friendship opportunities and friendship prevalence at work had a strong emotional correlation to the organization 'that they represented which motivated them to present innovative ideas and ways of working (Nielsen et al., 2000).

On the other hand, friendships were a source of support for employees, as friends used each other to solve problems and discuss options (Luo, 1999). Once an individual produces an idea, he looks to supporters to provide the necessary strength during its implementation (Galbraith, 1982). In addition, friends working together are more active in exploring strange and unfamiliar cases compared to non-friends (Schwarz, 1972). Thus, friendship in the workplace motivates employees and creates an innovative climate in the organization (Berman et al., 2002). Friendship in the workplace is the key facilitator in promoting innovative service behavior. A friendly work environment has a crucial role in developing new services and creating innovation opportunities (Helmy et al., 2020). Moreover, friendship in the workplace provides trust and emotional support to employees. Personal confidence encourages open discussion, effective communication between individuals, and an understanding of work-related problems. Therefore, friendship in the workplace motivates employees to work collectively when addressing problems and inventing solutions. When staff see each other as true friends, they will voluntarily exchange ideas to create problem-solving strategies (Helmy et al., 2020).

The assumed relationship between friendship prevalence and psychological safety was also statistically supported. Friendship prevalence in the workplace is critical to building psychological safety (Wellbeing Works, 2021). In a psychologically safe work environment, individuals have a good relationship with their colleagues and seek to form close friendships among themselves (Newman et al.,

2017). The existence of quality relationships between colleagues in the workplace contributes to enhancing psychological safety further (Jehn & Shah, 1997). The prevalence of the concept of friendship between individuals in the workplace may help them to feel a sense of belonging and support from others, thus maintaining a high level of psychological safety (Yin et al., 2015). The relationship between friendship opportunities and psychological safety was not statistically supported in this study. The formation of true friendships between individuals in an organization can take time; therefore, colleagues do not always trust each other, and they may feel fear, anxiety, tension and distraction. This in turn will contribute to lower levels of psychological safety in the work environment (Morrison & Nolan, 2007).

On the other hand, the findings indicated that psychological safety is not significantly related to innovative behavior. As the researched organizations worked in the private service sector, the level of psychological safety in these organizations was below average, and as a result, in the prevailing climate, they were unable to cooperate or share information among themselves that in turn discouraged employees from expanding their thoughts, innovating services, or creating new ideas. Thus, the organizations that want survival, continuity and success must enhance the innovation process (Ngatimun, 2020). Innovations occur when new ideas are advanced or performed by the institution staff, and are a major factor in their innovative behavior. However, this behavior is considered non-routine. Therefore, laborers require psychological safety, so they can facily express and implement their innovative thoughts and ideas (Carmeli et al., 2010).

With regard to the mediation role of psychological safety in the relationship between friendship in the workplace with its dimensions (friendship opportunity and friendship prevalence) and innovative behavior, it was established that the study did not support this mediating role. Due to the COVID-19 pandemic, the work environment in the private service sector in Oman is no longer a stable environment, and it is not psychologically safe for employees. In the present work environment, with a fluctuating level of psychological safety, this will not encourage individuals to form strong friendships among themselves; furthermore, it will not motivate them to present bright ideas and innovative methods of providing services. Bandura (1999) indicated that at its highest, the psychological safety associated with friendship in the workplace affects the innovative behavior of employees, as individuals explore and devise new methods because psychological safety reduces their anxiety, their fear of potential failure, and the negative consequences (Hirak et al., 2012; Huang et al., 2016).

Theoretical contributions

This study developed a theoretical framework by focusing on the formation of friendships between individuals and ensuring safety within the unique Omani work environment, so it can contribute to the development of relationships and administrative work in the workplace. This paper responds to calls to expand friendship research in the workplace (Yin et al., 2018). Previous studies on friendship in the workplace focused primarily on outcome variables, such as job satisfaction (Denison & Mishra, 1995), emotional commitment (Gupta, 2020), job success (Markiewicz et al., 2000), job performance (Li, 2017; Ozbek, 2018), and job engagement (Khalili, 2016), while the current research focuses on the behavior of individuals. Thus, this theoretical model can contribute to expanding the research on friendship in the workplace by emphasizing its effects towards innovative behavior.

Another contribution of this paper is that it identifies the dimensions of workplace friendship, where understanding its determinants is vital and fundamental to the innovation process. Previous studies have identified friendship in the workplace as a univariate (Abdulmuhsin & Tarhini, 2020; Mao & Hsieh, 2017). In this research, two dimensions of friendship in the workplace were identified: friendship opportunity and friendship prevalence, neither of which have received sufficient empirical attention as yet (Choi & Ko, 2020). Therefore, these findings can help private sector organizations to better understand how friendship constructs can be used to develop innovation services and processes.

The present article expands the existing literature on friendship in the workplace in the context of the service sector. It contributes not only to strengthening the link between work friendships, psychological safety, and innovative behavior, but it also highlights a unique combination of workplace friendship dimensions to achieve innovative behavior from employees. It is also one of the few studies that examined the mediation role of psychological safety in the relationship between friendship and innovative behavior in the Gulf region in general, and the Sultanate of Oman in particular, as there have not been enough studies so far to examine this relationship, especially in the service sector. Therefore, this study could be among the first pilot studies to explore these relationships in the Omani service sector.

Managerial and practical implications

Based on this article's results, friendship among employees in the workplace is an important way to motivate their innovative behaviors. However, in order to reinforce these behaviors, managers must create appropriate conditions for

establishing and developing interpersonal friendships in the workplace, and properly direct them to avoid social isolation among individuals. For example, managers can provide channels of communication for employees by holding frequent meetings, arranging outings, taking care of social events among themselves, and participating in all group activities. Moreover, managers can recruit staff who are easy to deal with and conduct businesslike training for them. Friendship between co-workers is essential for the happiness of employees as friendship works to link social life with working life, and organizational friendship increases happiness, reduces work stress, and creates a positive atmosphere in the organization (Haar et al., 2019). The most important factors that help increase friendship opportunity and friendship prevalence in the workplace are the level of trust between individuals (Berman et al., 2002) and the shared values and interest in others (Gordon & Hartman, 2009). People who have friendships in the workplace enjoy positive emotions (Buunk, 1991).

Many organizations tend to focus on the workplace simply as a place for transactions, where formal relationships are dominant. Managers often dislike close friendships between employees because they believe it will distract them from being productive, resulting in less time spent at work and more time spent on socializing. Therefore, this view must be changed by focusing on relationships between individuals, and working to strengthen and enhance them by encouraging them to engage in teamwork and informal organizations. When friends act jointly, they are more confident and obliged to each other's success and as a result, they share more information, they spend more time helping, are more motivated to perform above the requirements of the job and thus, contribute to innovative behavior (Van Diemen, 2018). The study also suggested that more effort should be put into making friends in the workplace because they nurture relationships between employees and team members, as friends who can trust and appreciate each other, share common interests, and experience emotional and effective support. Since friends are freer to disagree than non-friends, they will often have a difference of opinion as they convey their ideas to find the best solution to enhance the innovative behavior of the employees (Heaphy & Dutton, 2008).

Those responsible have to pay close attention to the psychological safety climate due to its vital and important role in the work environment. When a secure environment is available, staff facilitate learning from failure (Hirak et al., 2012). The employee's behavior and ability to adapt to the environment can also be improved (Gong & Li, 2019). Therefore, managers can put a strategy that elevates the psychological safety climate and catalyzes interaction between individuals to form relationships among themselves. Safety is an enabling factor for employee

performance in organizations (Edmondson, 2018). The organizational context of psychological safety plays a significant role in the innovative behavior of employees. The prevailing organizational atmosphere can foster individuals to exchange information, to express themselves, and to develop the effectiveness of their performance leading to innovative behaviors (Mao & Hsieh, 2017).

Moreover, this research has important implications for decision-makers as the advanced mechanism requires successful implementation. Therefore, to understand the motives and mechanisms behind the innovative behavior of employees, it is important to understand its requirements during the implementation. It is necessary to adopt practices that enhance interpersonal relationships, make true friendships, remove any difficulties in its path, and pave the way for a psychologically safe environment to ensure the innovative behavior of employees.

Limitations and future study directions

The present study has various limitations that would be course for research in the future. First, a self-reported survey was utilized in this article that may cause popular concerns about style difference. Although a single-factor Harman test was performed to explore this issue (Podsakoff et al., 2012), further research could combine data from different respondents to eschew the concerns of CMV. Second, although this research is cross-sectional in nature, using a longitudinal setting may provide other findings to further explore the process of friendship in the workplace on individuals' innovative behavior. Third, psychological safety as a mediating variable failed to influence the relationship between workplace friendship and innovative behavior; this could be due to the sources of data, research theoretical construction, or methods of statistical analysis. In the future, it will be necessary to use other theories or adopt a qualitative analysis to further explore the mechanism for this effect. Fourth, we only investigated Omani participants, and this may limit the universality of our findings. In the future, it is granular to replicate our study in the Gulf Cooperation Council as it is an ideal environment for friendship in the workplace. Finally, according to Sias and Cahill (1998), three levels of friendship in the workplace exist, namely friends, close friends, and best friends. Future study may explore the relationship between these different friendship levels in the workplace and job outcomes.

Data availability The datasets generated during and/or analyzed during the current study are not publicly available due [DATA ARE NOT

PUBLIC] but are available from the corresponding author on reasonable request.

Declarations

Conflict of interest The corresponding author states that there is no conflict of interest.

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