The significance of general skills training for early career graduates: Relationships with perceived organizational support, job satisfaction and turnover intention.

Abstract

Purpose

The aim of our study is to address the mixed predictions about the relationship between general skills training and turnover intention of early career graduates by examining the mediating mechanisms of perceived organizational support and job satisfaction through which this relationship might be enacted. We adopt organizational support theory as our guiding theory and examine the concept of perceived organizational support as critical for predicting and explaining relationships in the conceptual framework.

Design/methodology/approach

A quantitative survey method was used on a sample of 147 Chinese early career graduate trainees. Analysis was conducted using Partial least square-based structural equation modelling (PLS-SEM).

Findings

Our main finding is that participation in general skills training does not directly impact turnover intention, rather perceived organizational support is a mechanism through which this negative relationship operates. We also found significant evidence for serial mediation by perceived organizational support on participation in general skills training and its relationship with turnover intention. Importantly, JS only has an effect on turnover intention when in the presence of serial mediation by POS.

Originality

This research emphasizes the important role of perceived organizational support in the relationship between early career graduate trainees' participation in general skills training and their turnover intentions.

Research limitations/implications

Cross-sectional study of a small survey sample. Nonetheless, the findings have major implications for research theories on the relationship of general skills training with employee turnover.

Social implications

Participation in general skills training does not directly impact turnover intention, rather perceived organizational support is a mechanism through which this negative relationship operates.

Keywords

General skills, Turnover intention, Training, Perceived organizational support, Job satisfaction, Human capital.

Introduction

Training is a major function of any system of human resource management that supports organizational strategies by developing employees' skills and abilities to change (Noe, 2019). Training is often delivered to improve general and specific skills (Streeck, 2011; Christenko *et al*., 2020). The focus of our research is on early career graduates who in their first few years of full-time employment often encounter formal and informal training opportunities in both specific and general skills (McDermott, Mangan & O'Connor, 2006). We concentrate on general skills because employers often provide training in these areas (e.g., communication skills, time management, stress management, work-life balance) for graduates lacking relevant work and business experience after completion of their higher education studies (Zenner-Höffkes, 2021).

Furthermore, in reports and academic publications on the employability of young graduate new entrants to the labour market, general skills or soft skills are the ones that employers argue are most notably lacking (Zenner-Höffkes *et al.,* 2021). Interestingly, Zenner-Höffkes *et al.,* (2021) observed that in many quantitative studies, employers rate soft skills more highly than technical skills.

For decades, a significant number of employers and young students have been known to express concerns that higher education inadequately prepares graduates for the demands of work and could do more to improve their employability (e.g., Cheng *et al.*, 2022; Higdon, 2016; Oraison et al., 2019; Tynjälä *et al*., 2006). In this empirical research, we concentrate on general skills training and some of its effects

on young Chinese graduates who represent a significant part of the new generation entering contemporary labour markets. Generation Z born between 1995-2009 constituting approximately 17% of the population in China have been characterized as tech savvy, but having impaired social skills, focused on the present, reacting rapidly, expecting immediate remuneration, and concentrating on what interests them (Berkup, 2014; Bencsik, Horváth-Csikós and Juhász, 2016; Yu, 2022). Some studies on graduate employability claim that those from generations Y and Z have experienced difficulties with work and employment due to their insufficient general skills (Zenner-Höffkes *et al.,* 2021).

Economists and management researchers continue to debate the practical utility of general skills training, for example, according to human capital theory, general skills training increases employability but leads to higher turnover rates (Becker, 1994; Campbell *et al.,* 2012; Chatterjee, 2017). General skills, Becker argued, increase the productivity of labour across all companies whereas 'specific' skills increase labour productivity in a single company. In short, developing general skills relevant to many firms increases job opportunities for employees elsewhere.

Other scholars, such as proponents of organizational support theory (OST), argue that training can actually reduce employee turnover intention (Eisenberger *et al.*, 1990). Whenever work and their organizational contexts possess idiosyncratic characteristics requiring specific skills, then consistent with human capital theory's predictions, specific skills training has potential for bonding trainees to their employing organization. However, given that new graduates are often criticized by

employers to be lacking in general skills rather than specific, vocational and academic skills (Andrews and Higson, 2008; Mok *et al.*, 2021; Succi and Canovi, 2020) and that general, or soft rather than hard, specific skills are predicted to be even more in demand in the future (Zenner-Höffkes et al., 2021), we chose to concentrate on general skills in our empirical research study. Hence, an important research question on provision of general skills training in any organization is to examine "what relationship exists between employee participation in general skills training and individuals' turnover intentions?"

We analyze in a sample of young graduates the impact of their participation in general skills training on their intention to quit. In addition, we examine the roles of perceived organizational support and job satisfaction in the relationship. The importance of job satisfaction and its role in employee withdrawal decisions (Mobley, 1977) have been studied extensively for almost 100 years (Hoppock, 1935; Spector, 2022a). Similarly, Barrett and O'Connell (2001) found general training had positive effects on productivity and Koster, de Grip and Fouarge's (2011) study concluded employee participation does not increase employee intention to quit, supporting predictions of social exchange theory and organization support theory (Eisenberger et al., 1990).

Therefore, it is worthwhile examining the relationship of perceived organization support with turnover intention. The extent that any young graduate likes or dislikes the job is especially pertinent because usually at this stage in their career there are fewer work and family commitments to consider in mobility from one organization to

another. In short, we conducted a quantitative survey study of young graduate employees' participation in general skills training, and their assessment of perceived organizational support (POS), and job satisfaction (JS) that might affect turnover intention. We analyzed the evidence for POS and JS mediating the relationship between general skills training and turnover intention. Furthermore, we assessed whether POS and JS also act as serial mediators between general skills training and turnover intention.

The aim of our study was to address the mixed predictions about the relationship between general skills training and turnover intention of early career graduates by examining the mediating mechanisms of POS and JS through which this relationship might be enacted. If in this and subsequent studies, the bulk of empirical evidence begins to show that employees' turnover intentions could be reduced in the context of general skills training, when mediated by POS, then, such findings start to challenge the standard expectation of human capital theory. Namely that organizations' development of employees' general skills is likely to lead to increased turnover.

We therefore adopt OST as our guiding theory and the concept of Perceived Organizational Support (POS) as critical for predicting and explaining the relationships in our presented conceptual framework and for understanding the specified concepts' perceived value and importance for individuals and organizations. In the next section, we review relevant theory and literature on POS and the current state of empirical knowledge on our key concepts and construct variables general skills training, POS, JS and turnover intention. At the end of the review, we present

our hypotheses, then, we explain our research methodology, present the main findings and analyses, followed by a discussion of their contribution to the literature. In summary, we explain general skills training's relationships with turnover intention and two mediating variables POS and JS. Finally, we identify some limitations, give suggestions for future research and state our main conclusions.

Literature review

Theoretical framework

OST contends mutual benefits may arise for employees and employers whenever there exists organizational support that takes into account the well-being of employees and increases their happiness (Eisenberger, Huntingdon, Hutchison and Sowa, 1986). POS specifically concerns employees' attitudes and perceptions about their organization's support.

POS is defined as "global beliefs about the extent to which the organization cares about employee well-being and values their contributions" (Eisenberger *et al.,* 1986, p. 501). Employees who have strong POS are more likely to have deep feelings of attachment and loyalty to their organization (Eisenberger *et al*., 1990).

Eisenberger *et al*.'s (1990) application of OST explains how relationships between employees and their employers operate at a psychological level. OST proposes that when employees feel that they are needed and valued by the organization, then they will consider it an obligation to achieve organizational goals and initiate subsequent

value exchanges. At the same time, employees may also begin to expect higher returns when they create more value for the organization (Kurtessis *et al*., 2017). Studies have shown that OST can reasonably accurately predict the psychological states of employees, including factors such as their POS, JS and organizational commitment (Riggle *et al*., 2009).

The antecedent role of POS has been assessed in a few research studies specifically on organizational support for *development* rather than organizational support in general. This small group of studies have tested conceptual frameworks containing major outcome variables such as employee job performance and turnover intentions. Some report positive significant effects (e.g., Allen *et al*., 2003; Wayne *et al.*, 1997). However, Kraimer *et al*., (2011) caution that although organizational support for development signals that employees are valued and respected, the results of empirical research have been inconclusive on both the antecedent role of organizational support for development and the effects on outcomes (e.g., Ito and Brotheridge, 2005; Kozlowski and Hults, 1987; Kozlowkski and Farr, 1988; Lee and Bruvold, 2003: cited in Kraimer *et al*., 2011, pp.488-487). Kraimer *et al*., (2011) investigated organizational support for development and based on their findings especially for perceived career opportunity, concluded that more attention should be given to other constructs and issues that may change the influence of organizational support. We did not adopt Kraimer *et al.*'s, (2011) measure of organizational support for development which concentrates on development of functional specialist skills and managerial skills. We focused rather on Eisenberger's measures of perceived

general support from the organization (i.e. POS).

In relation to career success factors, Ballout (2007) reviewed the literature on a group of factors frequently found significant and influential. The factors emphasized were human capital, person-job fit, person-organization fit, and person-culture fit. We fully acknowledge the importance of these and others, for research on specific and general skills training. However, we decided not to examine career success in this study since our early career study context is one where many managers' and employees' views are still forming on the extent that individuals and the yearly intake cohorts of young graduates will be successful in their careers.

Definition and research status of general skills training

Since Becker (1994) divided skills into general skills and specific skills, scholars have debated how best to distinguish between the two. Becker (1994), one of the main founders of human capital theory, argued that specific skills are only valuable in one or a few organizations, while general skills have the same value in different organizations. Researchers have debated how specific and general skills should be defined and distinguished. To some extent, they also are enmeshed and embedded in each other (Brum, 2007; Kraimer *et al.*, 2011). Morris *et al.,* (2017) propose that Becker's original distinction is problematic and confusing arguing that, for example, an employee's willingness and ability to make firm-specific investments can also be a type of general skill signaling to other employers the focal individual's potential to make specific skill investments in multiple organizations (Morris *et al*., 2017). These concepts of specific and general skills have been criticized for lacking adequate quantitative

parameters, for example, how many organizations should value a skill at the same time for it to be considered a general skill that has regular labour market demand (Campbell *et al.*, 2012). Often, general skills will not hold identical use value for different organizations, because their worth is influenced by many internal and external environmental factors, such as organizational strategy and industry context.

Unsurprisingly then, there are mixed reports in the training and development literature on the value of general skills training for employers in particular organizations and industries. In a country comparative study, Zenner-Höffkes *et al.,* (2021) found occupational differences in the relative valuation of specific and general skills for employability and successful work performance. Managers in the hotel sector considered general skills to be of central importance for front desk staff, whereas in the automotive industry, managers attended more to specific technical, mathematical and literacy skills necessary for technicians' successful work performance.

Scholars have used a variety of approaches to distinguish general skills from specific skills when researching the contribution of general skills and general skills training in organizations, for example, type of education (Culpepper, 2007), the cost of changing companies or occupations (Kambourov and Manovskii, 2009), and employees' knowledge of the customer's business and their ability to use technology to deliver superior value for the firm (Chatterjee, 2017). To distinguish general skills from specific skills, Streeck (2011) proposed three criteria (skillfulness, portability, and breadth of skill set) to assess the specificity or generality of a skill. These and other criteria have been developed to achieve a more rigorous position than can be obtained using

Becker’s (1994) original classification criteria.

Recently, Christenko *et al*. (2020) examined the specificity of skills based on four features within two dimensions. According to Christenko *et al*. (2020), a general skill should be portable (low cost to change employers) and fungible (low cost to change employees) in the economic dimension, and at the same time accessible (easy to learn and low proficiency requirements) and similar (actual value is similar in different organizations) in the practical dimension. Clearly identifying general skills, such as communication skills and business propriety, arguably becomes somewhat more achievable following criteria such as in Christenko *et al*.'s approach to identifying general and specific skills.

Not only do scholars use different methods to identify general skills in their research, they also disagree on the value of general skills training in organizational management and whether or not organizations should provide general skills training to employees. Based on a field study of 347 software development projects in a leading multinational firm in the global IT services industry, Chatterjee (2017) argues that developing employees’ general skills in different industry and business domains and in technological capabilities can generate superior project returns and add value to the organization. Mincer (1988) argued that general skills training could reduce turnover. Green *et al.,* (2000) further embellished on this conclusion arguing that training (skill-specific and general skills) which is paid for by the company and has low transferability reduces turnover. Barrett and O'Connell (2001) however argued that general skills training had the potential to both increase employee productivity

and promote turnover behaviour. Clearly, unknowingly exacerbating employee turnover behaviour could create significant dilemmas for employers.

It is noteworthy that Barrett and O'Connell's (2001) make reference to the value of skills for firms as a criterion for distinguishing general skills from specific skills but this approach is limited by not attending to influential environmental factors such as the industry and corporate context. Which skills are common and which ones are rare differs according to industry context. Therefore, it is necessary to study the role of general skills training in organizations in the knowledge that what constitutes general and specific skills varies according to the classification criteria adopted and organizational, industry and labour market environments addressed.

Turnover intention and behaviour

Mobley's (1977) classic theory of voluntary turnover has the advantage of portraying the entire process from employees evaluating their current jobs to eventually deciding to leave their organization. Mobley's (1977) representation of the process of resignation intention and behaviour has been criticised for presenting an overly rational model of employee decision making. It also does not fully represent a number of influencing factors such as the degree of job embeddedness (Mitchell *et al.*, 2001) experienced by employees and their assessments of the external market demand for their labour and the general marketability of their skills and the probability of gaining another job (Hulin *et al.*, 1985). A limitation of voluntary turnover models is that they treat employees' turnover intentions and behaviours as capable of rational explanation, without perhaps paying sufficient attention to the role of emotions as

well as non-rational and irrational behaviours. As Maertz and Campion (2004) have mentioned, in some situations employees do not make rational evaluations of their current jobs and may make impulsive decisions to leave.

Scholars of human capital theory and organizational support theory do not make identical predictions on how general skills affect turnover intentions. Traditional human capital theory argues that the value of employees increases after employers provide general skills training (Becker, 1994). However, once possessing appropriate general skills for gaining employment in other organizations, employees are more likely to become attracted to working for other employers based on the general suitability of their skill set, and so general skills training is predicted to not reduce and even to increase the rate of employee turnover (Morris *et al.*, 2017). Empirical research work by several scholars supports this opinion (Benson *et al.,* 2004; Sieben, 2007; Cheng and Waldenberger, 2013). When general skills training fails to increase turnover rates in some empirical studies, human capital theory explains this outcome as the result of information asymmetry of employees' talents and abilities in the labour market (Kampkötter and Marggraf, 2015). Further, due to the search costs (Kessler, and Lülfesmann, 2006) of finding a new job, some employees fail to identify new employers and therefore do not transfer the value provided by general skills training on to new organizations. In such scenarios, general skills training does not increase employee turnover.

Organizational support theorists argue from a distinctly different viewpoint to the position commonly asserted by human capital theorists. General skills training can

increase POS (Eisenberger *et al.,* 1990) enhancing the emotional commitment between employees and their organization, especially when employees realize that these skills can be transferred to other employers (Barrett and O'Connell, 2001). Based on an equal value exchange relationship, OST assumes that employees will reward the organization with high work engagement and low turnover intention (Koster *et al.*, 2011). Therefore, general skills training provided by employers should actually reduce employee turnover intentions. In some studies, however, general skills training increases employee turnover intentions (Sieben, 2007; Cheng and Waldenberger, 2013). One reason given for this outcome is that employees feel that providing general skills training is the responsibility of the organization rather than a manifest sign of support for their own personal development. In such cases, the assumptions behind OST fail to apply since employees tend to assess the opportunity costs of leaving (e.g. foregoing fees paid by employers for qualification studies) and visible signs such as promotion (Benson, *et al.,* 2004). Since many factors have the potential to affect turnover and the relationship between them is complex theoretically, it remains important to study and examine empirically the processes by which general skills training influence employee turnover and retention.

Perceived organizational support (POS) and job satisfaction (JS)

JS is an important concept in the traditional voluntary turnover model (Mobley, 1977). Moreover, according to the theory of planned behaviour, JS is a behavioural attitude, and an antecedent of planned behaviour (Ajzen and Clarke, 1985). So, whenever employees are dissatisfied with their jobs, such behavioural attitudes may stimulate

intentions to leave that eventually lead to actual turnover behaviour. Despite a number of limitations with JS accurately predicting individual instances of employee turnover, over the years many studies have demonstrated that JS does predict general turnover behaviours in organizations (Huang and Su, 2016; Hollenbeck and Williams, 1986; Arnold and Feldman, 1982). Therefore, it is worthwhile examining the relationship of JS to employee turnover.

JS is affected by a diverse range of organizational and individual factors, such as organizational culture, employee emotions and personality (Agarwal, 2012). Low organizational commitment has been found to be related to low JS (Saridakis *et al.*, 2013). JS is also known to sometimes be influenced by demographic factors such as gender and family background. Some groups of women possessing lower job expectations than men (Clark, 1997) have demonstrated higher JS for the same job or position than men. Gurgand and Godechot (2000) observed that parents' occupation and income can affect their children's JS. Moreover, POS has been argued to have an indirect effect on employees' JS through their job performance and emotional commitment (Sungu *et al.*, 2019). JS has also been found to mediate the relationship between POS and transfer of training (Zumrah and Boyle, 2015).

POS can have a positive influence on job engagement (Kurtessis *et al.*, 2017), and when there is a positive relationship between POS and employee trust, and positive employee-organization emotional connections a negative effect on turnover has been identified (Crossley *et al*, 2007).

Organizational support for employees' personal development can be perceived by

employees as a positive form of support (Lee and Bruvold, 2003; Eisenberger *et al*., 1997) and research by Koster *et al.*, (2011) provides evidence that participation in general skills training has a positive effect on employees' perception of developmental support. Even though employee perceptions of developmental support are not identical to POS, in this study we assess the possibility of a correlation between general skills training and POS. Moreover, POS may affect JS and JS is a valid predictor of turnover intention, so therefore we claim that it is worthwhile measuring employees' POS and JS when analysing the relationship of participation in general skills training with employee turnover intention.

Hypotheses Development

Prior literature presents mixed empirical findings about the relationship between general skills training and turnover intention. One group of studies (e.g., Laser, 1980; Mincer, 1988; Green *et al.*, 2000; Noe, 2019; Pinnington *et al.*, 2022b) supports the idea that general skills training reduces turnover at least under certain conditions such as when employers reimburse education tuition and the employees have not yet qualified (Benson *et al.*, 2004; Benson, 2006). Another group of studies (e.g., Barrett and O'Connell, 2001; Sieben, 2007; Cheng and Waldenberger, 2013) find and argue the reverse that training increases turnover. For example, Sieben (2007) suggests that increasing employees' marketability through general skills training may actually encourage search for alternative employers. Green *et al.,* (1996) note that employers may respond to high employee turnover by increasing training, and in so doing might yet further increase the rate of turnover! The starting point of our framework is located

therefore in a problem of general uncertainty about the actual consequences of any training activity. Acknowledging such ambiguity, human capital theories argue that due to problems such as information asymmetry between employers and employees, and obstacles created by employment search costs, some employees fail to leave their jobs such that participation in general skills training fortuitously does not become associated with higher turnover. So, while acknowledging contextual variation, general uncertainty and ambiguous outcomes, consistent with OST and empirical studies such as Green *et al.*, (2000), Laser (1980), Mincer (1988), Noe (2019), and Pinnington *et al.*, (2022b) we hypothesize that:

H_{1a}: Participation in general skills training has a negative relationship with turnover intention.

Aligned with arguments for POS (Eisenberger *et al.,* 1990; 1997), several empirical studies (Crossley *et al*, 2007; Koster *et al.*, 2011; Lyubovnikova *et al*., 2018; Madera *et al.*, 2011; Mullen *et al.*, 2006; Ogbonnaya *et al.*, 2018), and based theoretically on OST, we assert that when employees participate in general skills training, they perceive the organization as being supportive and caring about their personal growth. Hence, we propose that

H_{1b}: Participation in general skills training has a positive relationship with POS.

Moreover, when participation in general skills training motivates employees to feel they are increasing their competence in their work tasks, that they perceive as

difficult due to their prior lack of general skills training, their JS will increase (Jones *et al.,* 2009; Schmidt, 2007; Pinnington *et al.,* 2022a). We therefore propose:

H_{1c}: Participation in general skills training has a positive relationship with JS.

Existing studies have shown that an increase in employee POS can improve JS, job engagement and reduce turnover intention (Ahmed and Nawaz, 2015; Eisenberger *et al*., 2002; Sungu *et al*., 2019; Sucipto, 2020). Maertz et al., (2007) concluded that POS (and perceived supervisor support) demonstrates strong effects on employee turnover and may also have significant interactive effects on turnover behaviour. Based on meta-analysis of antecedents and consequents of POS (Ahmed and Nawaz, 2015) and empirical studies of POS and its relationship with turnover intention (Arasanmi and Krishna, 2019; Eisenberger et al., 2002; Hussain and Asif, 2012; Kalidass and Bahron, 2015; Maertz *et al.*, 2007; Rhoades and Eisenberger, 2002) we assert:

H_{2a}: POS has a negative relationship with turnover intention.

Following a group of studies finding a positive relationship between POS and JS (Baranik *et al.*, 2010; Islam and Ahmed, 2018; Li *et al.*, 2020; Maan *et al*., 2020; Zumrah and Boyle, 2015), we state:

H_{2b}: POS has a positive relationship with JS.

If H_{1a}, H_{1b} and H_{2a} are all supported, then we anticipate that participation in general

skills training may have an indirect effect on turnover intention through POS. One reason for making this assertion is that POS has been found in numerous studies to mediate the effect of HR practices on organizational outcomes that are desirable for employers. Similarly, if participation in general skills training has a positive effect on POS and POS has a positive effect on JS, i.e., H_{1b}, H_{1c} and H_{2b} are all supported, then POS may also be an intermediary between general skills training and JS. These proposed mediations are indeed supported by the theoretical argument that when employees perceive participation in general skills training as organizational support for their personal development, this perception will increase POS and strengthen the emotional commitment between the organization and employees (Sungu *et al*., 2019). Georgellis and Lange (2007) pointed out that enhancement of the emotional contract between organization and employee improves JS. According to OST, organizations enhancing emotional commitment and the psychological contract can motivate employees to show high work engagement and low turnover intention (Koster *et al.*, 2011). Consequently, when employees view training opportunities as organizational support, participation in training will enhance their emotional commitment and contract, indirectly increasing POS, JS and decreasing turnover intention. Consequently, we propose hypotheses H_{2c} and H_{2d}.

H_{2c}: POS mediates the relationship between participation in general skills training and turnover intention.

H_{2d}: POS mediates the relationship between participation in general skills training and JS.

JS plays an important role in employee voluntary separation and has been shown to negatively affect a range of behaviours unwelcome to employers, including employee turnover. We believe that the effect of JS on turnover intention in our sample should be consistent with existing findings. Thus, we propose.

H_{3a}: JS has a negative relationship with turnover intention.

If H_{1a}, H_{1c} and H_{3a} all hold, then we propose that JS could be a mediator between participation in general skills training and turnover intention and transmit part of the effect of participation in general skills training on turnover intention. Our argument is consistent with OST which asserts that training is a form of organizational support. Several empirical studies on training and job satisfaction (Schmidt, 2007; Jones *et al.*, 2009); training and employee turnover intention (Pinnington, 2022a) and job satisfaction and employee turnover (Jones *et al.*, 2009) have reported significant relationships. Meanwhile, if H_{2a}, H_{2b} and H_{3a} are all supported, then JS is also likely to mediate the relationship between POS and turnover intention. These hypotheses are aligned theoretically with assumptions of OST that job satisfaction together with employee perceptions of organizational support is likely to relate negatively to turnover intentions. Substantial empirical evidence has been reported for H_{2a} (Arasanmi and Krishna, 2009; Eisenberger *et al*., 2002; Hussain and Asif, 2012; Kalidass and Baron, 2015; Maertz et al., 2007), several studies support H_{2b} (Baranik *et al.*, 2010; Zumrah and Boyle, 2015; Maan et al., 2020) and some available research supports H_{3a} (Jones *et al.*, 2009; Li *et al*., 2020). We therefore propose

hypotheses H_{3b} and H_{3c}.

H_{3b}: JS mediates the relationship between general skills training and turnover intention.

H_{3c}: JS mediates the relationship between POS and turnover intention.

According to the existing research studies and our hypotheses above, POS and JS may not only be the mediators between general skills training and turnover intention at the same time, but also there is a causal relationship between POS and JS (Baranik *et al.*, 2010; Zumrah and Boyle, 2015; Li *et al.*, 2020; Maan *et al.*, 2020). Therefore, we assert that there could be a chained intermediary relationship between participation in general skills training, POS, JS and turnover intention. That is, an increase in participation in general skills training will improve POS, and then the increases in POS will lead to higher JS. Thus, increased JS leads to lower turnover intention. So, we propose hypothesis H_{4a}.

H_{4a} POS and JS are serial mediators between participation in general skills training and turnover intention.

We present all the hypotheses that will be tested in this study in Figure 1.

Insert Figure 1 here

Figure 1: Conceptual Model

Method

Sample and procedure

The data were collected using a questionnaire survey which was administered in December 2021-January 2022 to young Chinese employees who graduated after 2017 and had some work experience. We focused on Chinese graduates for several reasons. The employment problem of Chinese graduates is gradually becoming a social problem. According to recent work reports of the Chinese government (Keqiang, 2022; MOE, 2021), the number of new jobs that year was almost equal to the number of new graduates (approximately 12.06 million jobs and 10.76 million new graduates). This means that competition for jobs is already fierce in the country. This competitive environment may influence current graduates' attitudes towards job opportunities and rewards. Potentially, young graduates are highly mobile and are more likely to change jobs frequently than are other employees with 10 years or more employment within the organization. In China, some courses in science, industry and technology have age limitations for taking examinations, reducing older employees' mobility in cross-occupational or cross-industry job changes. Therefore, cohorts of young graduates have relatively high capability to change jobs and employers.

Using a purposive sampling approach, respondents were obtained from reputable Chinese universities and private colleges. Two managers in two Chinese private colleges assisted with distributing questionnaires to recent graduates.

The respondents were assured that their anonymity will be maintained, and the collected data will only be analyzed after aggregation. This step acted as an ex-ante

control for the common method bias (Chang *et al.*, 2010) while meeting the research ethics requirements. The questionnaire was translated into Chinese because the respondents were young Chinese graduates.

An a priori sample estimation was done using G*power analysis (Faul *et al*., 2007) at 80 per cent with effect size 0.15 (Cohen, 1998). As the model had a maximum of three predictors, the minimum required sample size was estimated at 77. Our initial sample comprised 185 responses which were then screened to ensure data reliability. Respondents who took less time than the minimum calculated for reading and completing the survey were discarded. Cases that took less than 100 seconds to complete were deleted. Also, responses that were not eligible based on demographics were considered invalid data. For example, respondents who graduated earlier than 2017 or had full-time work experience (other than undergraduate student internships) before graduation were excluded. The year of graduation for the sample was between 2017-2021. After screening of the sample, the 147 retained respondents clearly exceeded the estimated minimum size of 77.

Variable definition and measurement

The questionnaire was divided into five parts: demographic questions, participation in general skills training (PGST), perceived organizational support (POS), job satisfaction (JS), and turnover intention. The researchers designed demographic questions and a section on PGST. Question items of POS, JS, and turnover intention were taken from peer-reviewed studies (See Appendix 1 for the questionnaire items and the references).

Participation in General Skills Training (PGST)

This study defined Participation in General Skills Training (PGST) as the amount of time an employee participates in general skills training in the organization each year. This research treated skills that are general in both practical and economic dimensions as general skills consistent with the argument advanced by Christenko *et al*., (2020). The questionnaire provided a definition of general skills to ensure that respondents' understanding of general skills training was the same as the definition employed in the research design. The statement of definition mentioned communication skills and business etiquette as examples to direct and focus their understanding.

Koster *et al*., (2011, p. 2410) have measured PGST as "the sum of all general skills training attended by an individual". Following their conceptualization, we used the time spent on general skills training each year to measure an employee's PGST. We formulated a formative scale that covered aspects of the frequency and duration, including the availability of training provided by the organization and participation of employees. The construct was a sum of observable items, and so our scale to measure this construct was formative. This construct was treated as a composite set of items that measured the frequency and duration, including the availability of training provided by the organization and participation of employees. The items used to measure the construct are not reflective as they are not interchangeable, rather absence of one will lead to not measuring PGST correctly. Hence the construct is treated as composite/formative (Hair et al., 2021).

Five items were used to measure this concept. For example, "How many general skills training courses does the organization offer each year?" and "What is the total time

you spend on general skills training organized by this organization each year?" Respondents rated their PGST using a 5-point Likert. We also added a reflective item at the psychological level, to measure the actual effect of training, that is, the number of skills or knowledge acquired by employees in the organization, as an auxiliary evaluation standard for PGST. This item was utilized for redundancy analysis to check the validity of the formative construct.

Perceived Organizational Support (POS)

POS is defined as employees' perceptions of "the extent to which the organization values their contributions and cares about their well-being" (Eisenberger *et al*., 1990, p. 51). This research used a six-item scale developed by Eisenberger *et al*., (2001) to measure respondents' POS. Respondents were asked to respond to the statements on a a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Job Satisfaction (JS)

JS is defined as "How much employees like or dislike their work" (Spector, 1997, 2022a, 2022b). The eight items from Spector (1997) were adopted to measure respondents' JS. Again a 5-point Likert scale consistent with the POS section was used to measure the level of satisfaction of the respondents.

Turnover Intention.

The definition of turnover intention in this study was the possibility of giving up the current job for a period of time which Mobley (1977, p. 238) called the withdrawal decision process. The questionnaire used the six-item scale from Roodt (2004) to measure respondents' turnover intentions. A 5-point Likert scale was used for all items

and was consistent with Roodt (2004) in the wording of options.

Several ex-ante strategies were adopted while administering the questionnaire survey to reduce common method bias such as, using reverse coded items and ensuring that the latent variables were clearly segregated in the survey (Jordan & Troth, 2020). Following Podsakoff *et al.*'s (2003) suggestions we took several other steps to rule out the risk of common method bias. First, to reduce evaluation anxiety, we assured our respondents about their anonymity and the data confidentiality. Next, we pretested the questionnaire to remove any item ambiguities. To remove method bias, several of the items were worded negatively. Finally, the post-hoc Harman's single-factor test was also conducted to detect the common method bias (Podsakoff et al., 2003). As the majority of the variance was not attributed to a single factor, there were no common method variance issues with the data (Fuller et al., 2016).

Data analysis

Partial least squares structural equation modelling (PLS-SEM) was employed using the SmartPLS package version 3 (Ringle *et al.,* 2015). PLS-SEM can handle the analysis of both reflective and formative models (Hair *et al*., 2021) and hence was suitable for this study as we have a mixed model with PGST construct specified as a formative construct, whereas the remaining constructs in the model are reflective. PLS-SEM allows simultaneous evaluation of relationships between multiple independent and dependent variables (Hair *et al.*, 2021) and is extensively used in social science research owing to its flexibility while offering robust analytical capabilities (Ahammad *et al*., 2017). Moreover, it accommodates small sample sizes while offering good

predictive power (Hair *et al*., 2021).

Results

Sample characteristics

All respondents were between the ages of 21 and 29, with an average age of 24.3 years, 91 respondents (61.9%) were male and 56 were female (38.1%). Among 147 respondents, 59 persons graduated in 2021 (40.1%), 42 persons graduated in 2020 (28.6%) and 46 persons (31.3%) graduated before 2020. 68% of respondents work in large enterprises with more than 500 employees.

Measurement model

As our model had both reflective and formative constructs, we examined the reliability for both types of constructs.

Assessment of reflective constructs: The reflective constructs were checked for reliability, convergent validity, and discriminant validity. Table 1 details the results of these tests. The examination of indicator loadings revealed that the items loadings of JS4, JS5, TI3 and TI5 were below 0.7 and their removal increased the corresponding AVE (Hair *et al*., 2021), hence these were deleted. All the remaining items were retained. The values of composite reliability (CR) and Cronbach's alpha (CA) exceeded the recommended threshold of 0.7 (Nunnally, 1978). To assess the convergent validity Average Variance Expected (AVE) values were examined, which were above the cutoff value of 0.5 for all constructs and were in the range of 0.51 to 0.66.

Next, discriminant validity was assessed by the Heterotrait–Montrait (HTMT) test

(Henseler *et al.*, 2015; Hair *et al*., 2021). The test results showed (Table 2) that all HTMT values were well below 0.9, hence supporting the discriminant validity of our model constructs.

Insert Table 1 here

Table 1: Evaluation of reflective constructs and corresponding items

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Insert Table 2 here

Table 2: HTMT discriminant validity test

Assessment of formative construct: Since PGST was specified as a formative construct, we conducted the tests recommended by Hair *et al*., (2021) to examine the formative construct's reliability and validity. First, convergent validity was tested by conducting a redundancy analysis whereby, the model constructed by the formative indicators was correlated with a reflective global measure (PGST6). The strength of the path coefficient linking the two constructs indicates the level of the validity of the formative construct with a magnitude of 0.7 and above. Our results showed this value to be 0.772 with an R^2 of 0.596 which was significant producing a lower boundary of 0.699 and an upper boundary of 0.857 for the 95% percentile confidence interval. Hence, the required criteria for redundancy analysis were met (Sarstedt *et al*., 2019).

Next, VIF values were examined to rule out the collinearity issues which were found below the threshold level of 3 (Becker *et al*., 2015) (See Table 3). Table 3 also shows

the outer weights and significance of the formative indicators. Though the weights of some items were not significant their loadings were near or above the threshold of 0.6 and were significant. Hair *et al*., (2021) advise retaining such items if theory supports the relevance of such indicators. Hence, all indicators were retained for analysis.

Insert Table 3 here

Table 3: Multicollinearity diagnostics and path weights for PGST

Structural model

First, the collinearity of the endogenous constructs with the predictors was evaluated by checking the variance inflation factor (VIF) values. All the VIF values were below the threshold of 3 (Hair *et al*., 2021), suggesting no multicollinearity issues.

For the PLS-SEM structure model evaluation the values of coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2) and standardized root mean square residual (SRMR) were determined (Hair *et al*., 2021). Table 4 presents the structural model results showing these values along with the hypothesis test results. Figure 2 summarizes the structural model results showing R^2 values and the standardized path coefficients (β).

Insert Figure 2 here

Figure 2: Structural Model Results

The structural model explains 17.3 % of variance for POS (R^2 =0.173), 55.6% for JS (R^2 = 0.556), and 52.5% for turnover intention (R^2 = 0.525), showing weak to moderate predictive power as according to Chin (1998), R^2 values of 0.67, 0.33 or 0.19 are considered strong, moderate or weak, respectively.

Next, the effect size f^2 results were examined to determine the true impact of the exogenous construct on the endogenous construct. Cohen (1992) suggests that values below 0.02 represent a small effect size, between 0.15 to 0.35 show medium effect size and values above 0.3 indicate large effect size. Table 4 shows that the effect size values of the supported relationships ranged between low to high effect.

Insert Table 4 here

Table 4: Structural model results

The conceptual model proposes six direct relationships (H_{1a}, H_{1b}, H_{1c}, H_{2a}, H_{2b}, H_{3a}), and five mediation relationships, including four simple mediations in H_{2c}, H_{2d}, H_{3b} and H_{3c} and one serial mediation in H_{4a}. A bootstrapping procedure was conducted with 5000 subsamples to test the significance of relationships. Results show that PGST has a positive significant effect on POS (β=0.416, $p < 0.05$). However, no direct significant effect was found between PGST and turnover intention (β=-.005, $p > 0.05$), or towards JS (β=0.095, $p > 0.05$). Additionally, a negative direct relationship was supported between the POS and turnover intention (β=-0.282, $p< 0.05$), whereas a significant

positive direct effect was found between POS and JS (β=0.701, p< 0.05). Finally, a negative significant effect was found between JS and turnover intention (β=-0.488, p< 0.05).

After looking at the direct relationships, we examined the results of the mediated paths. Results showed that the indirect effect of PGST on turnover intention via POS was negative and significant (β=-0.117, p< 0.05) which implies a full mediation by POS as the direct path between PGST and turnover intention was found non-significant in the presence of POS. Similarly, the indirect effect of PGST on JS via POS was positive and significant (β=0.291, p< 0.05), thus supporting full mediation by POS as the direct relationship between PGST and JS was also non-significant in the presence of POS. The third proposed indirect effect of PGST on turnover intention via JS was not found significant (β=-0.046, p >0.05). Next, the indirect effect of POS on turnover intention via JS was found negative and significant (β=-0.342, p< 0.05) which is a complementary partial mediation as the direct path between POS and turnover intention was also negative and significant. Finally, the relationship between PGST and turnover intention is proposed to be sequentially mediated by POS and JS. This relationship was found significant (β=-0.142, p< 0.05) with a non-significant direct relationship between PGST and turnover intention, thus confirming a full serial mediation.

We examined the influence of gender as a control variable on the constructs of POS, JS and turnover intention after coding it as 0 for male and 1 for female. The results showed that gender had a significant effect on turnover intention (β=0.149, p< 0.05)

but non-significant for POS (β=0.016, p >0.05) and JS (β= 0.054, p >0.05). Women in this study sample report higher turnover intention than men.

Finally, model fit was confirmed by checking the standardized root mean square residual (SRMR) value. Henseler *et al.*, (2016) suggest that a value below 0.08 is acceptable. The results showed an SRMR value of 0.074 which was below the threshold. Moreover, the Q^2 values of endogenous constructs > 0 indicated satisfactory model predictive relevance (Henseler *et al.*, 2009).

Discussion

The main finding and contribution to knowledge from this empirical study is the abundant support for POS and its relationships with general skills training and turnover intention. Participation in general skills training had a positive relationship with POS (H_{1b}), POS had a negative relationship with turnover intention (H_{2a}), a positive relationship with JS (H_{2b}), and mediated the relationship between participation in general skills training and turnover intention (H_{2c}) and with JS (H_{2d}). Consistent with many reported JS studies in the literature (Pinnington *et al.*, 2022b) JS had a negative relationship with turnover intention (H_{3a}). Furthermore, conforming to the assertions of OST (Eisenberger *et al.*, 1990) JS mediated the relationship between POS and turnover intention (H_{3c}, H_{4a}).

We also observed that participation in general skills training was not significantly related to turnover intention (H1a) and neither was this training significantly related to JS (H1c) as both of these relationships were fully mediated by POS. Thus, implying

that participation in general skills training leads to reduced turnover intention and enhanced JS, respectively by affecting the underlying mechanism of POS. Also, the mediation of general skills training by JS on turnover intention (H3b) was not supported.

Theoretical implications

The theoretical contribution of this study lies in explaining the relationship between participation in general skills training and turnover intention of early career graduates by examining the role of POS and JS in enacting this relationship. An important finding is that our results are not consistent with predictions made by human capital theorists (Becker, 1994) that general skills training as such is unlikely to increase employees' JS or reduce their turnover intention. Participation in this type of training does increase JS and reduce turnover intention when POS is present. We propose that assessments of training outcomes on employee turnover intention and indeed, actual turnover behaviour should incorporate in their theoretical models, variables that capture factors central to employees' POS.

Research investigations examining predictions based on human capital theories are equally important as are studies consonant with OST, Social Exchange theory and other theories emphasizing social issues of support, inclusion and reciprocal relationships. When combined in a productive dialogue, OST and human capital perspectives will motivate more insightful theory-based analyses of the opportunities, limitations and varied efficacy of training activities.

Future research on training and development approaches intentionally designed to provide organizational support for development (Kraimer *et al*., 2011) could lead to more comprehensive scholarly understanding of when investments in specific and general human capital increase or decrease employee turnover. Moreover, future studies should consider specific human capital investments, such as domain knowledge training as important control variables that can be included to determine the added value of general human capital investments.

It is interesting to note that participation in general skills training to turnover intention through JS is not supported. POS plays an important role in the relationship between participation in general skills training and turnover intention but JS does not. Based on the fact that full serial mediation exists (at least in our data), we conclude that if POS is present, it also will increase JS and only then will there be an overall effect on turnover intention. Indeed, we see support for H3c, showing that some of the effect of POS on turnover intention is through JS. Nonetheless, overall, we argue that POS is a very important mediator that should be reviewed and achieved by organizations. Therefore, future studies should be carefully designed to assess the role of POS in general skills training and turnover intention. This could over time increase academics' understanding about which individual and organization contexts are likely to support the expectations of human capital theories (Becker, 1994; Campbell *et al.*, 2012; Chatterjee, 2017; Kambourov and Manovskii, 2009; Kessler and Lülfesmann, 2006; Kraimer *et al*., 2011; Morris *et al*., 2017) in contrast with those predictions made in organization support and psychological commitment models (Benson, 2006;

Eisenberger *et al.,* 1990, 1997, 2001; Koster *et al.*, 2011; Riggle *et al.*, 2009; Saridakis *et al.*, 2013; Sungu *et al.*, 2019).

Practical Implications

A practical implication of the study findings is that HRM practices such as training and development are likely to be significantly influenced by individuals' perceptions of the amount of organizational support they receive. New recruits will be alert to formal and informal signs of organizational support in their interactions with immediate supervisors and new work colleagues. They also will be sensitive to leadership styles that will influence both their participation in general skills training and its consequences. In our study, we found that women probably experience lower expectations than men of the organizational career benefits (Pinnington *et al.*, 2022a) from participation in general skills training. HRM specialists in organizations can assist by developing policies and practices encouraging demonstrable equality of opportunity for career advancement.

The mediating role of POS but not JS is something that employers, managers and employees themselves could all be more informed about. Such awareness-raising might create more knowledge amongst internal stakeholders of the critical role that POS plays while also communicating how general skills training is important and emphasizing what benefits it potentially delivers.

Limitations

The authors of this research acknowledge several limitations of the study. First, the sample is based on young graduates employed in China. Future studies could achieve a larger sample as well as collect data on groups more closely representative of China's existing and new areas of business, industry, occupations, full-time, part-time and precarious employment. Data collection and sampling could also compare China particularly with other Asian countries.

Other notable limitations are the use of cross-sectional survey methods and self-report data. Future research could implement a longitudinal or multi-source design based on more data sources and levels of analysis to identify more thoroughly salient training issues during the first few months and years of graduates' employment.

Our study examined only general skills and future research could examine both specific and general skills comparing distinctive occupational, organizational and industry contexts (Roberts and Cullinane, 2023). Zenner-Höffkes *et al*., (2021) found in survey studies on employability that employers rate soft skills more highly than do graduates. Hence, it is important to know more empirically about individual differences within early career graduate employees that support or negate the relationship between participation in general skills training and employee turnover intentions. As well as individual differences there may be systematic variation between the generations, with Generation Z perhaps valuing general skills training and acting differently to earlier graduate trainee cohorts from Generation Y.

Conclusion

We investigated the relationship between employee participation in general skills training and individuals' turnover intentions. In particular, this study examined the mediating roles of perceived organizational support and job satisfaction in the relationship. Our main finding is that participation in general skills training does not directly impact turnover intention, rather POS is a mechanism through which this negative relationship operates. We also found significant evidence for serial mediation by POS on participation in general skills training and its relationship with turnover intention. Importantly, JS only has an effect on turnover intention when in the presence of serial mediation by POS. We recommend that future research on general skills training and employee turnover intentions further tests the criticality of POS as a mediator.

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APPENDIX A: Questionnaire Items for the model constructs

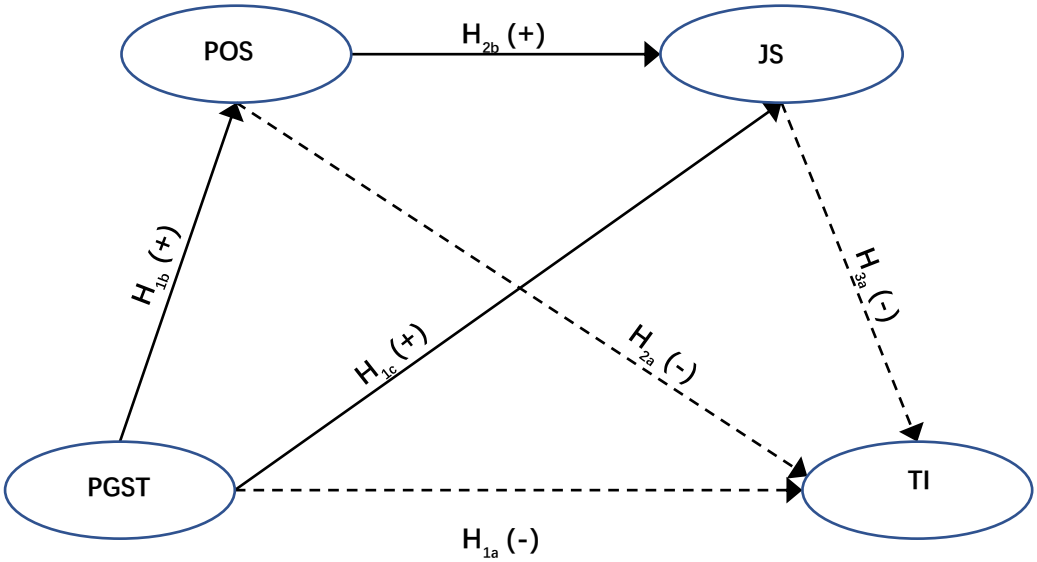
Constructs and items		
Participation in general skills training (PGST) (Authors' own work)		
PGST1	How many general skills training courses does the organization offer each year?	○0 ○1-2 ○3-4 ○5-6 ○ more than 6
PGST2	What is the total length of each general skills course offered by the organization?	○0 hours ○1-4 hours ○5-8 hours ○9-12 hours ○more than 12 hours
PGST3	How many different subject areas are covered by the organization's general skills training courses? (e.g. art, management, psychology, literature, etc.)	○0 ○1-2 ○3-4 ○5-6 ○more than 6
PGST4	How often do you participate in general skills training in this organization?	○Never participated ○Only participated once or twice ○Occasionally participated ○Participated frequently ○Participated every time
PGST5	What is the total time you spend each year on general skills training held by the organization?	○0 hours ○1-8 hours ○9-16 hours ○17-24 hours ○more than 24 hours
PGST6	What is the total number of generic skills you have acquired in generic skills training during your time at the organization?*	○0 ○1-2 ○3-4 ○5-6 ○more than 6
Perceived organizational support (POS). Eisenberger. et al. (2001)		
POS1	The organization values your contributions?	1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree
POS2	This organization cares about your personal well-being?	
POS3	The organization places special emphasis on your personal goals and values?	
POS4	The organization pays little attention to you? (R)	
POS5	The organization will be proud of your achievements?	
POS6	The organization is willing to help when you need special assistance?	
Job Satisfaction (JS) Spector (1997)		
JS1	You are satisfied with your salary and opportunities for salary increases while working with the organization?	1=Strongly disagree; 2=Disagree; 3=Neither agree nor disagree; 4=Agree; 5=Strongly agree
JS2	The interpersonal communication within the organization looks good?	
JS3	You like the people you work with in this job?	
JS4	Your superiors have no interest in what their subordinates think? (R)	
JS5	You think you have too much work to do? (R)	

JS6	You like what you do at work?	
JS7	You are satisfied with the opportunity for advancement in this job?	
JS8	When you perform well at work, you get the rewards you deserve?	
Turnover Intention (TI) Roodt (2004)		
TI1	How satisfying is your job in fulfilling your personal needs? (R)	1 =Totally dissatisfying; 2=Dissatisfying; 3=Neither dissatisfying nor satisfying; 4=Satisfying; 5=Very satisfying
TI2	How often do you look forward to another day at work? (R)	1=Never; 2=Only once or twice; 3=Occasionally; 4=Often; 5=Always
TI3	How often are you frustrated when not given the opportunity at work to achieve your personal work-related goals?	1=Never; 2=Only once or twice; 3=Occasionally; 4=Often; 5=Always
TI4	How often have you considered leaving your job?	1=Never; 2=Only once or twice; 3=Occasionally; 4=Often; 5=Always
TI5	How often do you dream about getting another job that will better suit your personal needs?	1=Never; 2=Only once or twice; 3=Occasionally; 4=Often; 5=Always
TI6	How likely are you to accept another job at the same compensation level should it be offered to you?	1=Highly unlikely; 2=Unlikely; 3=Not sure; 4=Likely; 5=Highly likely

(R) Reverse coded

** Reflective item used for redundancy analysis*

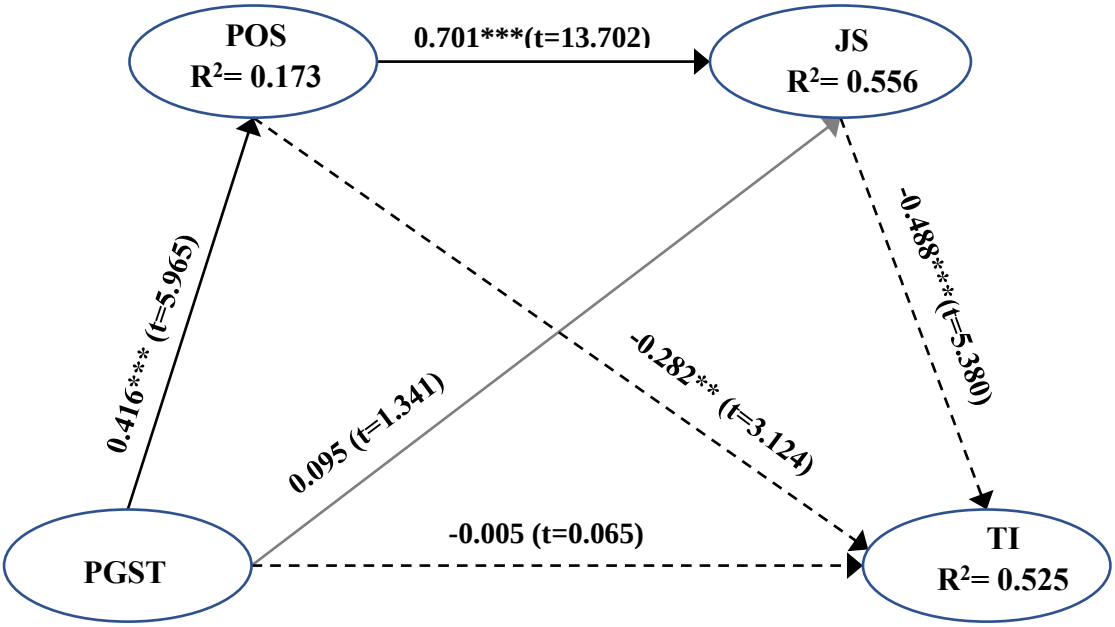
Source: *Sources of all questionnaire scales are mentioned in the table.*



Note: Negative relationships shown as dotted lines

Figure 1: Conceptual Model

Source: Authors' own work



Note: Negative relationships shown as dotted lines

Figure 2: Structural Model Results

Source: Authors' own work

Table 1: Evaluation of reflective constructs and corresponding items

Constructs and items	Outer loadings	t values
Perceived Organizational Support (POS) (AVE= 0.631, CR= 0.911, CA = 0.881)		
POS1	0.768	16.391
POS2	0.836	31.910
POS3	0.863	40.644
POS4	0.650	5.755
POS5	0.807	22.266
POS6	0.823	27.575
Job Satisfaction (JS) (AVE= 0.503, CR= 0.858, CA = 0.803)		
JS1	0.693	12.798
JS2	0.745	16.975
JS3	0.693	14.830
JS6	0.763	19.695
JS7	0.742	11.031
JS8	0.607	6.341
Turnover Intention (TI) (AVE= 0.543, CR= 0.824, CA = 0.721)		
TI1	0.858	36.658
TI2	0.745	15.442
TI4	0.694	8.315
TI6	0.632	7.640

Source: Authors' own work

Table 2: HTMT discriminant validity test

	JS	POS
POS	0.865	
TI	0.855	0.787

Source: Authors' own work

Table 3: Multicollinearity diagnostics and path weights for PGST

	Weights [a]	Loadings [a]	Outer VIF
PGST1	0.058	0.652***	1.835
PGST2	0.176	0.784***	2.196
PGST3	0.589*	0.911***	2.340
PGST4	-0.178	0.594***	2.027
PGST5	0.463	0.850***	2.529

[a] **Significant at p < 0.05; **significant at p < 0.01; ***significant at p < 0.001).*

Source: Authors' own work

Table 4: Structural model results

		Effect	**t-value[a]**	**f^2**	**Conclusion**
H_{1a}	PGST → TI (-)	-0.005	0.065 (ns)	0.000	Not supported
H_{1b}	PGST → POS (+)	0.416	5.965***	0.209	Supported
H_{1c}	PGST → JS (+)	0.095	1.341 (ns)	0.017	Not Supported
H_{2a}	POS → TI (-)	-0.282	3.124**	0.073	Supported
H_{2b}	POS → JS (+)	0.701	13.702***	0.915	Supported
H_{2c}	PGST → POS → TI	-0.117	2.496*		Supported
	Total PGST → TI	-0.311	3.991***		
H_{2d}	PGST → POS→ JS	0.291	5.241***		Supported
H_{3a}	JS → TI (-)	-0.488	5.380***	0.219	Supported
H_{3b}	PGST → JS → TI	-0.046	1.210 (ns)		Not supported
H_{3c}	POS → JS → TI	-0.342	5.056***		Supported
	Total POS → TI	-0.625	10.300***		
H_{4a}	PGST → POS → JS → TI	-0.142	3.889***		Supported
	Total JS → TI	-0.488	5.380***		
	Total PGST → JS	0.386	5.615***		
	Total PGST → POS	0.416	5.965***		
	Total POS → JS	0.701	13.702***		

[a]*Significant at $p < 0.05$; **significant at $p < 0.01$; ***significant at $p < 0.001$; ns (non-significant)

Source: Authors' own work