

**Research Article**

The relationship between job satisfaction and turnover intention among nurses in federal territory of Labuan: Coworker support as a moderator

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ABSTRACT

With the ongoing worldwide COVID-19 pandemic, nurses have become among the prominent frontliners working together to prevent its pervasiveness and manage the treatment for the infected. The high-pressuring working environment subsequently affects their satisfaction towards their job and eventually influences their decision to stay. Besides, co-worker support has been associated with the enhancement of one's work-life outcomes. This study is conducted to investigate the moderating role of co-worker support in the relationship between job satisfaction and turnover intent among nurses. A sample of 200 nurses working at several health institutions around Labuan FT was involved in this quantitative study. Results from data collected were analysed using Smart-PLS. The findings show that among nurses, co-worker support can help to mitigate the relationship between job satisfaction and intention to leave the profession. According to the study results, improved working conditions for nurses and a focus on their psychological well-being might assist in lowering the retention rate to cope with the lack of nursing professionals.

Keywords: Nurse; Job Satisfaction; Turnover Intention; Coworker Support

1. INTRODUCTION

The nursing profession has been known as one of the most challenging and the world's stressful professions. Some of the elements that may contribute to the stressful environment in which this profession operates might include the work environment itself, a high amount of work, working shift, being exposed to the unpleasant event, the caring role of nurses, lack of support from nursing supervisors, job conflicts, physical factors, expectations of self and colleagues, interpersonal relations, conflict among colleagues, sleeplessness, and so on (Kupcewicz & Jóźwik, 2019; García-Herrero et al., 2017; Chen et al., 2015; Najafi et al., 2014; Moeller & Chung-Yan, 2013; Hamaideh et al., 2008). When the COVID-19 pandemic occurred, nurses are among the frontliners working together to combat its pervasiveness and provide treatment to those affected by the coronavirus. They have to sacrifice their time and energy and keep their distance from their family for health and safety, despite family playing a big part in their emotional support system to get through the difficulties of their work. The daily high-pressuring working environment they have to experience eventually affects their well-being and current mindset. It somehow affects

their satisfaction towards their job and influences their decision whether to switch careers or quit. To add fuel to the fire, the lack of social support has been reportedly happening among nurses. According to Pisarski and Brook (2005), the contributing causes to the greater voluntary turnover rate have been recognised as a lack of support from co-workers or supervisors (Pisarski & Loudoun, 2005; Tri-Council of American Nurses, 2001). Since providing outstanding service and successful treatment in the nursing field necessitates teamwork, study into co-worker cooperation has become increasingly essential.

Historical records indicate that the nursing profession has been practised in Malaysia since 1800, with representatives of the East India Company providing the main function in Penang (Malaysia) and Singapore, which was later supplanted by religious orders. The first medical nurses were trained while on the job in Johor Bahru in 1938, but the programme was suspended in 1942 and not resumed until 1945 owing to World War 2. Under the World Health Organization (WHO) endorsements and the United Nations International Children's Emergency Fund (UNICEF) for personnel and infrastructure, the first nursing schools were founded in 1946 in Johor Bharu, Penang and Kuala Lumpur (Meriati, 2016). The country's health care system was developed in 1951. Since then, nursing has become one of the most sought-after careers in the country under the Ministry of Health Malaysia (MOH) provision. According to Sowtali (2019), the nursing profession in Malaysia has progressed since Islamic history towards the modern era for a better healthcare service for society. Nursing staff are bound to the Nurses Act 1950, the Midwives Act 1966, the Code of Professional Conduct for Nurses, Policies, Rules, and Guidelines, that were created to enhance the healthcare quality as well as the engagement of society, families, and the community in which they work (MOH, 2011). The statistical databases of the MOH Nursing Division reported that as of 2018, more than 30 thousand nurses in Malaysia are certified with post-basic qualifications (Sowtali, 2019). However, accumulatively, there were already over 100,000 nurses in the country, with a nurse to population ratio of 1:415. Labuan is one of the Federal Territories of Malaysia, and MOH (2019) statistics reported that the number of nurses working in the public sector, including government hospitals in Labuan, was 230. In contrast, another nine nurses were working in the private sector.

Considering that this profession is one of the most sought-after careers in the country, the number of nurses could be higher, especially if those working under other health institutions in the state are included. Unfortunately, the number of nurses is not corresponding to the increasing number of patients they need to take care of, which is becoming one of the overwhelming obstacles given the current pandemic situation. The critical shortage of nursing personnel, rooms, and emergency aid include safety gear (PPE), psychological adjustments, and worries of contamination, is now the most critical concern facing healthcare organisations (Al Thobaity & Alshammari, 2020). Nurse deficit has always been one of the nursing-related issues in Malaysia, similar to other countries in the world. Barnett et al. (2010) stated that Malaysia's nurse turnover rate had increased from 400 nurses in 2005 to 1,049 nurses in 2010. In 2017, Professor Zahrah Saad, the dean of MAHSA University, Faculty of Nursing and Midwifery, reportedly mentioned that nurses with specialist skills, such as an oncologist, intensive care, and child nursing staff, are limited supply. More studies on the issues at hand need to be conducted, precisely when nurses

admitted they often have to perform double duty (Pillay, 2017). Thus, the persistent issues have motivated the effort to determine factors associated with nurses' turnover. This study mainly is focusing on job satisfaction and the moderating role of co-worker support.

Nurses' intentions to stay or leave their jobs are correlated with their level of job satisfaction Gebregziabher et al. (2020) as well as individuals in non-specific nursing studies (Kartika & Purba, 2018; Mahdi et al., 2012). While job satisfaction is among the most prominent factors in nurses' turnover, co-worker support is rarely considered in this relationship. Although rarely, co-worker support as a moderator has been discussed in the literature on employee behaviour at the workplace (Ahmad et al., 2016). There is a lack of interest in investigating the moderating effect of co-worker support, especially on the relationship between job satisfaction and turnover intention. Therefore, the current study investigates the moderating role of co-worker support in the relationship between job satisfaction and turnover intention among nurses in the Federal Territory of Labuan. It is anticipated that the outcomes of this study would give some insight into the factors being investigated and how they contribute to nurses' turnover, especially in Labuan. The understanding might help improve their current working conditions and inspire more retention strategies to maintain the workforce availability in the healthcare industry.

2. LITERATURE REVIEW

2.1. JOB SATISFACTION AND TURNOVER INTENTION

In the context of the workplace, job satisfaction is defined as a feeling of pleasure or disappointment which ultimately resulted from either the assessment of someone's task or job perceptions (Dunnette & Locke, 1976). Early-career employees' job satisfaction is defined as a mental and biological element of their reactions to their workplace setting (Vermeeren et al., 2014). It is also considered a positive emotional outcome regarding feelings and behaviour evoked from job-related accomplishments (Cronley & Kim, 2017). Based on various past studies, employment aspects such as kind of work, remuneration, advancement, management or leaders, teammates, natural characteristics, company policy, organisational commitment, persistence, dedication and work engagement can affect job satisfaction (Rahman, 2020; Rahman & Begum, 2017; Alshitri, 2013; Sowmya, 2013; Wu, 2012; Rahman, 2012; Spector, 2006; Lu et al., 2005; Blum & Naylor, 2004; Maghrabi, 1999). Some of these studies also identified that job dissatisfaction can contribute to the increasing rate of turnover (Rahman, 2020; Alshitri, 2013; Muralidharan et al., 2013; Sowmya, 2013; Rahman, 2012; Spector, 2006; Lu et al., 2005; Blum & Naylor., 2004). Job satisfaction reportedly claimed that nurse turnover is influenced by several work-related issues (Al-Maaitah et al., 2018; Al Maqbali, 2015; Fallatah et al., 2017). Low turnover intention is also reportedly found among nurses with higher career fulfilment (Al-Hamdan et al., 2017).

In general, employees' attitudes toward their jobs, such as job satisfaction and intention to leave, are related to a wide range of critical processes and attitudes that might have implications for the organisation as well as their well-being (Mustafa et al., 2020; Alshitri, 2013). Gebregziabher et al. (2020) suggested that turnover can be either voluntary (when individuals quit their job at their resort) or involuntary (the organisation initiated the

turnover) Simon et al. (2010) before it was preceded by turnover intention (Flinkman et al., 2010). The intention to leave refers to conscious and deliberate wilfulness to leave the organisation; the turnover intention was acknowledged as an excellent indicator of actual turnover (Hayes et al., 2012). In addition, turnover has been associated with internal and external factors. Internal factors can include demographic characteristics (age, education, gender, marital status, income, working period), and personalities (Alshammari et al., 2016). Meanwhile, external factors are related to the work-life quality, job attitude, person/organisational fit, perceived organisational support, conflict and role ambiguity, job insecurity, and self-development opportunities (Alshammari et al., 2016; Azeez et al., 2016; Mehmood et al., 2016; Reio & Segredo, 2013). Past studies implied that high nurses' turnover might lead to various negative impacts, such as low patient safety, poor customer service performance, proper nursing interventions and medical administration, all of which can lead to adverse patient satisfaction. Extended operating hours, a greater task, and professional pressure could contribute to burnout and enforce overall turnover rate. Turnover among nurses might even have a negative impact on the profitability of medical institutions due to increased severance and hiring expenses (Richardson, 2019; Duffeld et al., 2014; Li & Jones, 2013; Hayes et al., 2012).

2.2. CO-WORKER SUPPORT AS MODERATOR

Social support from organisations, supervisors, and co-workers is a term that describes "the availability of helping relationships and the quality of those relationships" (Leavy, 1983). Social support is also referred to as interrelated social relations and connections that assist individuals cope and deal with stressful life events (Huang et al., 2009; Albar Marin & Garcia-Ramirez, 2005). According to Pisarski and Brook (2005), social support is classified as the emotional feeling of encouraging sustainable felt (perception assistance), the support received or executed (who helps and what they appear to have done), and the amount of social links an individual has (social networks). Although it is still debatable across previous studies, social support has significantly reduced turnover intention. For instance, Sodeify and Habibpour (2020) stated that perceiving support from co-workers and having a sense of support could boost care quality and encourage better handling of stressful situations among nurses. In contrast, findings from past studies, such as from Feeley et al. (2010), and Senevirathne and Kularathne (2020), which revealed that co-worker support is negatively related to turnover, was only based on several studies and/or relatively small effect sizes. Thus, the lack of studies on co-worker support and its relation to nurses' attitudes at work, especially regarding job satisfaction and turnover intention, warranted more studies to fill the research gap.

2.3. THEORY OF JOB DEMANDS-RESOURCE (JD-R) MODEL

Bakker and Demerouti (2008) have created a model for work demand and work support that could be used in the workplace. Several studies used this theory as their conceptual framework, for analysing problems or as the basis for intervention in organisations (Schaufeli, 2017). According to this theory, when job expectations are high, additional attention should be devoted to achieving work goals and prevent a reduction in work

engagement from occurring. Bakker and Demerouti (2017) defined job demand as the work demands are the physiological, intellectual, interpersonal, and spiritual elements of a job that necessitate efforts to overcome and incur expenses to do the job. On the other hand, job resources can be characterized by cognitive, interpersonal, or organisational factors that influence the achievement of goals, such as lowering work demands and the physical and psychological aspects that accompany it and stimulating the development and learning processes of employees (Bakker & Demerouti, 2014). When it comes to job resources, “those aspects of the job that are functional in achieving work goals and reduce job demands and the associated physiological and psychological costs” (Bakker, Demerouti, & Verbeke, 2004). The term job demand in this theory is correlated with the subject of this study. During the current COVID-19 pandemic situation, health professionals such as nurses are exposed to higher workloads in an extended period, which could cause specific adverse effects on their psychological well-being (Jiang et al., 2020). It is also possible that the condition is connected with emotional fatigue (Bakker & Demerouti, 2017). In addition to increasing workloads, they see a decrease in resources due to a higher number of patients and infected health workers (Moreno-Jiménez et al., 2021). To deal with the emotional turmoil, they need emotional support, especially from their colleagues. According to Adil and Baig (2018), job resources include a variety of elements such as performance management, superiors' criticism, skills enhancement, and independence, all of which are effective in motivating workers and mitigating the negative repercussions of increased work demands (Demerouti & Bakker, 2011).

2.4. HYPOTHESES AND CONCEPTUAL FRAMEWORK

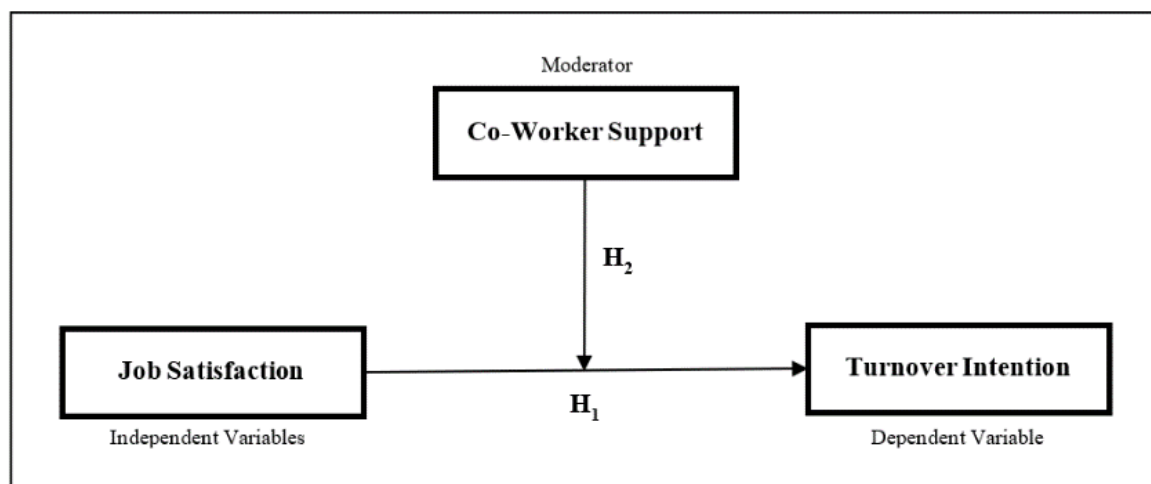


Fig. 1. The Conceptual Framework

Based on Fig. 1, the following hypotheses are proposed:

Hypothesis 1: There is a significant and positive relationship between job satisfaction and turnover intention.

Hypothesis 2: Co-worker support moderates the relationship between job satisfaction and turnover intention.

3. METHODOLOGY

The quantitative research approach was applied to perform the study. The current study focuses on the demographic of nurses working at several health institutions in the Federal Territory of Labuan, Malaysia, located off the coast of Sabah state in East Malaysia. The health institutions include the government hospital, private hospital, university clinic, local clinics, nursing and maternity homes, etc. There is no official record of the exact total number of nurses on the island. However, as of December 2018, the number of nurses working under public and private sectors in Labuan was 231 (MOH, 2019). These nurses worked in one or several units based on speciality. For this study, the speciality of the current unit is divided into five types: Medical/Surgical, Critical Care, Maternal/Child, Mental Health, and Other/Float Resource Unit.

A sample of 200 nurses participated as respondents in this study. An online survey was created using *Google Forms*, and the researcher distributed the link for the survey form to potential respondents through social media such as WhatsApp. The survey was conducted in January 2021. The survey contained questionnaires consisting of four sections (Section A to Section D). Section A is the socio-demographic profile (age, gender, race, religion, marital status, education level, the speciality of the current unit, working experience, and total salary). Section B, C, and D represent the variables being studied, namely job satisfaction (independent variable), turnover intention (dependent variable), and co-worker support (moderator).

The construction of the questionnaire for this study is based on specific past studies related to each variable. The McCloskey Mueller Satisfaction Scale (MMSS) (Section B) is a five-point Likert scale that is used to measure the level of satisfaction of healthcare staff nurses regardless of whether they are potential recruits or seasoned nurses (Mueller & McCloskey, 1990). The scale has 31 items designed to evaluate the respondents' satisfaction in eight areas: extrinsic rewards, scheduling, family/work balance, co-workers, interaction, professional opportunities, praise/recognition, and control/responsibility (Mueller & McCloskey, 1990). The Cronbach's alphas reportedly to be in the range from .52 to .84, and the test-retest correlations are found to be consistent (Mueller & McCloskey, 1990). For turnover intention (Section C), the instrument adapted was from Bothma and Roodt (2013). They shortened the original version into six items from the 15-item scale in a study by Jacobs and Roodt (2008). The Cronbach's alpha coefficient of the instrument was 0.913 (Jacobs & Roodt, 2008) thus, the reliability is considered high and acceptable. It is used to measure individuals' turnover intentions as employees who desire to leave their company. The respondents are required to answer based on their evaluation during the past nine months. The instrument used for co-worker support is Shukla and Srivastava (2016), adapted by O'Driscoll (2000) from the social support scale. This scale has a reliability of .89 (O'Driscoll et al., 2004) and sets into a 5-point Likert scale ranging from 5 (All the time) to 1 (Never). Data for this study were gathered from the online survey and analysed using SmartPLS-Structural Equation Modeling (SEM), a software used in Partial Least Squares (Wong, 2013).

4. RESULTS AND FINDINGS

4.1. DEMOGRAPHIC PROFILE

Several discoveries were made from the demographic profile based on data gathered in this research. Demographic Profile of the Respondents (n =200)

Table 1. Demographics

Demographic Factors	Category	Frequency	Percentage (%)
Age	18-29	28	14.000
	30-39	114	57.000
	40-49	52	26.000
	50-59	6	3.000
Gender	Female	200	100.000
Race	Malay	109	54.500
	Sino-Kadazan	34	17.000
	Others	57	28.500
Religion	Islam	161	80.500
	Christian	39	19.500
Marital Status	Single	26	13.000
	Married	168	84.000
	Divorced or Separated	6	3.000
Education Level	SPM/STPM	12	6.000
	Diploma	34	17.000
	Bachelor Degree	154	77.000
Speciality of Current Unit	Medical/Surgical	39	19.500
	Critical Care	56	28.000
	Maternal/Child	29	14.500
	Mental Health	16	8.000
	Other/Float Resource Unit	60	30.000
Working Experience	6 years and below	33	16.500
	10 years and below	66	33.000
	More than 10 years	101	50.500
Total Monthly Salary	RM2,501-RM3,500	125	62.500
	RM3,501-RM4,500	60	30.000
	RM4,501 and above	15	7.500

Due to a scarcity of male nurses in the nation, only female nurses were recruited to take part in this research. The bulk of them was between the ages of 30 and 39 years old (57.0%), Malay (54.5%), and Muslim (54.5%). (80.5 per cent). Most of the respondents, or 168 nurses (84.0%), were married. The majority of nurses were graduated with bachelor's degree, or 154 nurses (77.0%). In terms of the speciality of the current unit, nurses working under the Other/Float Resource Unit were 60 (30.0%) out of 200 participants of this study, followed by nurses working under the Critical Care unit (28.0%) and Medical-Surgical unit (19.5%), Maternal/Child unit (14.5%), and Mental Health unit (8.0%). Most of them have been in service for more than a decade, or 101 nurses (50.5%). Meanwhile, 125 nurses (62.5%) received a salary of over RM2,500 monthly. The descriptive information is summarised in Table 1.

4.2. ASSESSMENT OF MEASUREMENT MODEL

For the analysis of the data obtained for this study, a convergent validity assessment is required. Convergent validity is considered present if the standardised path loading coefficient for the structural arrow to the reflective factor is high; Chin (1998) suggested a cut-off of .90 or at least .80. After the calculation of the PLS algorithm was conducted, several items were determined for elimination because their outer loading value was low (< 0.6) and ensured that there would be three items left to be measured. The analysis results in Table 2 show that the scores for composite reliabilities (CR) (job satisfaction = 0.957, turnover intention = 0.888, and co-worker support = 0.974) exceeded the recommended criterion of 0.7, indicating a high internal consistency of the scales used in this study. The factor loadings and average variance extracted (AVE) were then assessed to evaluate the convergent validity of the constructs. The analysis shows that the factor loading of each item was higher than the acceptable value of 0.7 or 0.708 (Hair et al., 2011). Thus, the overall constructs of the study are acceptable, with the AVE scores of all constructs (job satisfaction = 0.855; turnover intention = 0.748; co-worker support = 0.950) exceeded the recommended threshold of 0.5 (Fornell & Larcker, 1981).

Table 2. Convergent Validity Analysis (Factor Loadings, Composite Reliability, and Average Variance Extracted of Latent Variable)

Construct	Items	Loadings	CR	AVE	Convergent Validity
Job Satisfaction	jobsat_02	0.956	0.957	0.855	Yes
	jobsat_12	0.965			
	jobsat_20	0.840			
	jobsat_24	0.958			
	jobsat_31	0.898			
Turnover Intention	intent_01	0.869	0.888	0.748	Yes
	intent_04	0.824			
	intent_05	0.907			
	intent_06	0.857			
Co-Worker Support	support_01	0.986	0.974	0.950	Yes
	support_02	0.980			
	support_04	0.959			

Following that, the discriminant validity of the latent constructs was determined by examining the correlation between them and the square root of AVE (Duarte & Raposo, 2010). The values of the diagonal (square root of AVE of the corresponding constructs) are larger than the values of each section and column in which they are organised, which supports the discriminant validity of the outer model, as shown in Table 3 (Hair et al., 2010).

Table 3. The Square Root of AVE and The Correlations of The Latent Variables

Construct	Variables		
	Coworker Support	Job Satisfaction	Turnover Intention
Coworker Support	0.975		
Job Satisfaction	0.033	0.924	
Turnover Intention	0.272	-0.882	0.865

4.3. ASSESSMENT OF STRUCTURAL MODEL

To investigate the connections between job satisfaction, turnover intention, and co-worker support, the structural equation modelling (SEM) method is used as a method of analysis. To determine how effectively the study's data supported the hypothesised correlations, the coefficients of determination (R^2 values) and path coefficients (beta values) were used as variables to evaluate the study's results (Hair et al., 2017). The bootstrapping approach is employed when conducting statistical analysis, with 5,000 bootstraps being utilised to test the structural model. Because the findings of the study reveal a statistically significant but negative relationship between job satisfaction and turnover intention ($r = -0.909$; $p = 0.00$), H1 is only partially supported. Meanwhile, the product indicator method (Helm et al., 2010) is being used to investigate the moderating influence of co-workers' support on the connection between job satisfaction and turnover intention. Job satisfaction and turnover intention are shown to be considerably moderated by co-worker's support in Table 4, which indicates that co-worker support significantly moderates the connection between job satisfaction and turnover intention ($p=0.041$; $p0.012$).

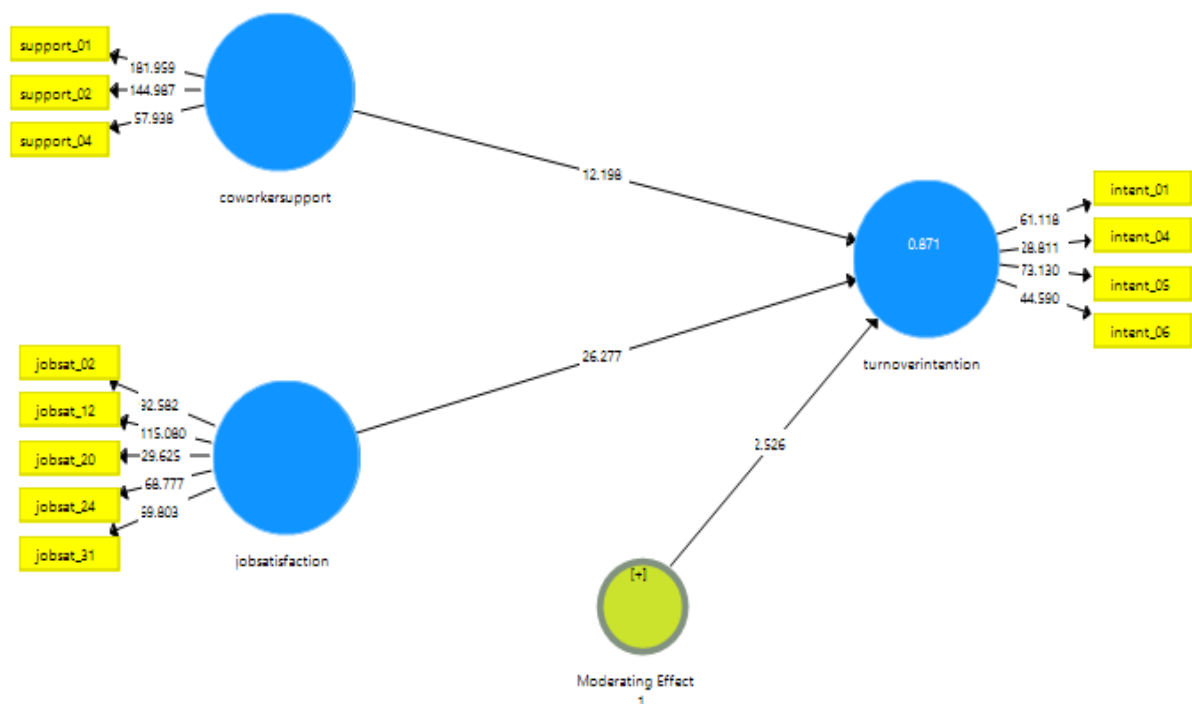


Fig. 2. Structural Model with Moderator

As a result, H2 is supported. Fig. 2 depicts the findings, while Table 4 provides a summary of the findings.

Table 4. The Results of Structural Model

Hypothesis	Relationship	Beta (β)	Standard Error (STERR)	T-Statistics	P-values	Result
H1	Job Satisfaction $\rightarrow$ Turnover Intention	-0.909	-0.909	26.277	0.000	Yes
H2	Job Satisfaction * Co-Worker Support $\rightarrow$ Turnover Intention	-0.041	-0.040	2.526	0.012	Yes

5. DISCUSSION AND CONCLUSION

The major objective of the research is to investigate the moderating impact of co-worker support in the connection between job satisfaction and intention to leave among nurses who work in various health facilities within the Federal Territory of Labuan. Key findings from the study reveal a statistically significant link between job satisfaction and turnover intention among nurses; however, the relationship is inverted, suggesting that lower job satisfaction may be associated with higher turnover intention in this population. This significant discovery has been confirmed (Gebregziabher et al., 2020; Medina, 2012; Jacobs, 2012). According to the results of this study, nurses who are pleased with their jobs will be less likely to leave their organisations or profession.

Furthermore, the PLS structural modelling study results show that co-worker support substantially impacts the relationship between job satisfaction and intention to leave the organisation. Even though this conclusion is not supported by previous research, the moderating influence of co-worker support on employees' workplace attitudes has been examined. The current study adds to the body of knowledge by providing new references to previous research. Besides, this finding also emphasises the importance of employees' relationships and efforts in recognising the sources of support needed by nurses to continue working at their respective organisations. Furthermore, the fact that nurse turnover can be costly should not be ignored. The cost could be manifested in various areas, including recruitment, selection, training, and implicit knowledge (Dysvik & Kuvaas, 2013). It might also contribute to the difficulty of building trust and support Senevirathne & Kularathne (2020) subsequently affecting the dynamic of teamwork required in the line of work among nurses.

The findings of this study might have implications for nursing research and practice. First, the gap in previous literature on the topic being studied is resolved, especially regarding job satisfaction effect on turnover intention and the moderator role of co-worker support in the nursing profession. Second, this study urges the administration of health institutions and policymakers to improve the working conditions and give due attention to nurses' psychological well-being, motivating them to maintain their commitment and loyalty to the organisation. Eventually, the efforts might help to reduce the turnover rate and tackling the shortage issue in nursing professionals.

This study had encountered several limitations. First, specific questionnaires can be used for nurse job satisfaction; however, only a few resources were found for turnover intention and co-worker support. Having a nurse-specific questionnaire is vital for this study to gain more substantial and reliable findings that can be applied in future research. Furthermore, the results of this study are deemed limited for the nursing profession only; further investigations are needed to ensure their suitability for other healthcare workers.

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