

Assessing the effects of job satisfaction, organizational commitment and transformational leadership on turnover intention among newly recruited nurses in Chinese hospitals

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Abstract: Newly recruited nurses are perceived to enter the health profession with considerable enthusiasm and optimism. Sometimes, these green nurses wish to quit their jobs for a new or better one. This cross-sectional study investigated the complex relationships among job satisfaction, organizational commitment, transformational leadership, and turnover intention among newly recruited nurses in Chinese hospitals. Responses were gathered from 654 newly recruited nurses using an online survey questionnaire. Two statistical tools, namely structural equation model (SEM) and hierarchical regression analysis, were used to analyze the hypothesized relationships. The SEM analysis results revealed that job satisfaction directly influences organizational commitment and turnover intention. The findings also revealed that organizational commitment has a substantial direct impact on turnover intention. Furthermore, the SEM results showed that organizational commitment acts as a partial mediator in the relationship between job satisfaction and turnover intention. Besides, the hierarchical regression analysis outcomes revealed that transformational leadership moderated the relationship between job satisfaction and turnover but could not moderate that of organizational commitment and turnover intention. This research's findings are a signpost for managers to help beginner nurses adapt to their new working milieu and stay in their job.

Keywords: Job satisfaction; organizational commitment; transformational leadership; turnover intention.

I. INTRODUCTION

Globally, the public health sector is among the few jobs perceived to be offering employees an appreciable amount of job satisfaction due to the job security it provides. Employees who work for organizations that reward them with some high level of job satisfaction seem to show greater commitment to their employers [1]. Turnover intention is generally unavoidable for most highly experienced professionals. However, it becomes threatening and uncomfortable when newly recruited employees with little to no experience also embark on that same tangent [2]. In 2008, a study found that freshly recruited nurses are prone to leave their jobs in their first eighteenth month of employment, compared to newly recruited employees of other professions [3]. More recently, another study showed that freshly recruited nurses have a high tendency to quit their jobs in the first year of employment [4]. Nurses' continuous leaving poses a severe threat to the overall general health care system because it creates nurses' shortages in hospitals [5]. This penury of nurses has a higher tendency of spurring high turnover intentions among nurses [6]. Actual turnover happens when a compensated staff rescinds his or her contract with an employer [7]. Actual turnovers have a negative financial impact, such as the wasteful expenditure of the money allocated for training and talent acquisition [8]. A study conducted on 96 registered nurses who left the health profession during the survey revealed a cost ranging from \$62,100 to \$67,100 incurred by the hospital on each nurse who quitted her job [9]. This amount is enormous and can render any health facility incapable of developing.

Hence, it is imperative to investigate some possible factors that may account for newly recruited nurses' turnover intention and suggest appropriate measures to control them.

Low job satisfaction is one of the principal reasons that account for nursing turnover intention [10]. Job satisfaction refers to the level of satisfaction or dissatisfaction one has with their organization [11]. As job satisfaction goes high, so does the level of performance increases [12]. Lack of job satisfaction may result in higher absenteeism, low productivity, low organizational commitment, higher turnover intention, and more grievances [10], [13], [14]. Employees who perceive a mismatch between their work and the benefits they receive may experience lower job satisfaction [15] and consequently seek a new job that will reward them according to the value they create.

Organizational commitment refers to an employee's work allegiance, psychological attachment, or a feeling of connection to an organization [16]. When employees such as nurses are committed to their organization, they efficiently contribute to help the hospitals achieve their purpose of existence. However, nurses' shortage dampens organizational commitment and makes it difficult for hospitals to meet their goals due to low efficiency [17]. As nurses' engagement towards their respective hospitals reduces, they may seriously consider quitting their jobs and consequently increase turnover intention at the hospitals.

Previous studies have also established a significant positive relationship between job satisfaction and organizational commitment [18–20]. The link between organizational commitment and job satisfaction is complicated. The complication stems from the difficulty involved in determining which is the antecedent of the other. The prevalent and authoritative opinion in the extant literature proves that job satisfaction has predictive power over organizational commitment [18], [21]. Additionally, other studies concluded that an increased degree of loyalty towards an organization leads to job satisfaction [22], [23]. Many other research works have highlighted a reciprocal effect between satisfaction and commitment [24], [25]. A study found no significant relationship to exist between organizational satisfaction and commitment [26]. Several works have acknowledged that turnover intention is inversely related to job satisfaction [27], [28], and organizational commitment [20], [29]. Some other studies also concluded that organizational commitment and job satisfaction have different uniqueness; hence, each contributes to turnover in different manners [30–32]. Since in most of the literature, job satisfaction and organizational commitment have a significant negative influence on turnover intention, it is essential for management in organizations to put in mechanisms to help mitigate these negative impacts.

One suitable strategy for managing any organization, especially hospitals, is practicing a leadership style perceived by employees as caring, motivating, and supportive [33]. This kind of leadership has been referred to as transformational leadership. Transformational leadership is viewed in this study as an approach to leadership that brings about improvement in people and social structures. It induces a meaningful and constructive change in the employees, with the end goal of turning them into leaders. Delivered in its genuine form, transformational leadership strengthens employees' inspiration, confidence, and success through several mechanisms. These include linking the employee's sense of belonging with the organization's purpose and collective identity, being a role model for employees, encouraging employees to assert full control of their roles, and recognizing employees' potentials and weaknesses. The leader can then match employees with assignments that improve their efficiency. It is possible that when newly recruited nurses encounter this kind of leadership during their first few weeks or months of employment, they may develop high job satisfaction and commitment to their organizations, with no intention to quit their job. Most studies concluded that transformational leadership could improve job satisfaction [34–36], organizational commitment [37–39], and reduce turnovers [40–42] among employees. However, most of these studies estimated transformational leadership's direct path on either job satisfaction or organizational commitment or turnover intention. Research that seeks to assess the moderating role transformational leadership can play in the relationship between professional satisfaction, organizational commitment, and turnover intention would be interesting, particularly among newly recruited nurses.

Therefore, this current study has developed a conceptual framework that seeks to achieve the following objectives: (1) investigating the effect of job satisfaction and organizational commitment on turnover intention; (2) examining the mediating role of organizational commitment in job satisfaction and turnover intention relationship; and (3) examining the moderating effect of transformational leadership on the relationship between job satisfaction and turnover intention, as well as on organizational commitment and turnover intention [33], [41]. That is, this current paper is limited to the following hypotheses, as presented in Figure 1.

H1: Job satisfaction has a significant negative influence on turnover intention.

H2: Job satisfaction has a significant positive influence on organizational commitment.

H3: Organizational commitment has a significant negative influence on turnover intention.

H4: Organizational commitment will mediate the relationship between job satisfaction and turnover intention.

H5: Transformational leadership will have a moderating effect on the relationship between job satisfaction and turnover intention.

H6: Transformational leadership will have a moderating effect on the relationship between organizational commitment and turnover intention.

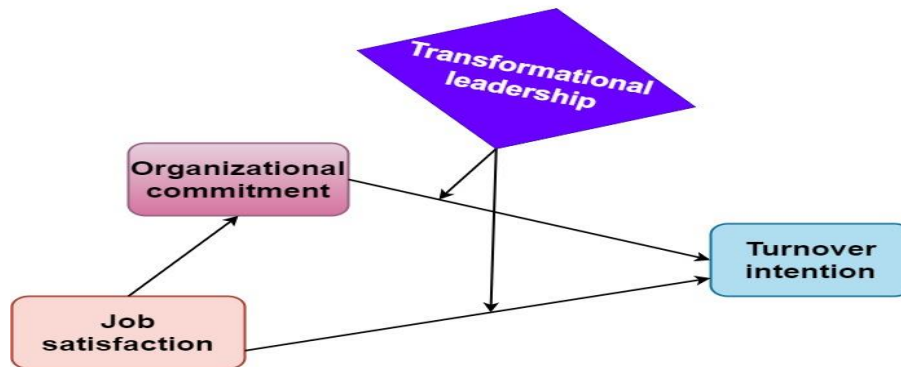


Fig. 1: A structural model linking job satisfaction, organizational commitment, transformational leadership, and turnover intention

II. MATERIALS AND METHODS

A. Research study design, setting, and participants

This research applied a cross-sectional study design based on STROBE guidelines. The study is based on primary data derived from newly recruited nurses working in county hospitals in Jiangsu province, China. During the research, a questionnaire form was published online on the 1st of August 2019 and collected back at the end of that same month. The questionnaire was translated from English to Chinese to avoid communicational issues. Ensuring the validity and the reliability of the measurement items was necessary; that is why face validity and pilot testing were first conducted, and the results were convincing to reach the targeted population. A purposive sampling approach was used to select 20 county hospitals across Jiangsu Province and recruit 700 beginner nurses working in those hospitals. County hospitals are medium-sized hospitals (100-500 beds), also known as second-level hospitals, offering comprehensive medical and healthcare services in small cities at the county or district level [43]. The eligible nurses were those in their first year of work, and ensuring to get only their responses required them to answer an open-ended item included in the questionnaire such as “How long have you been working in this hospital?”. Nurses’ administrators helped share the online questionnaire link with their respective professional networking groups of nurses. Newly recruited nurses in the various groups could then easily access and fill the survey questionnaire on their mobile. A total of 660 responses were received from fresh nurses, representing 94.3% of the response rate. Only six participants were male, and because of their low representativity (0.009%), they were excluded from the study. The dropping of the male respondents is in accordance with some other previous studies [44–46]. Finally, the study only dealt with a total sample, $N = 654$ of newly recruited female nurses.

B. Survey Instruments

We employed a quantitative research design to administer questionnaires and analyze the complicated relationship between job satisfaction, organizational commitment, transformational leadership, and turnover intention among newly recruited nurses. The questionnaire contained two main parts. The first part had information on the respondents’ demographic characteristics (e.g., age, marital status, employment type, salary, etc.). The second part contained information on job satisfaction, organizational commitment, transformational leadership, and turnover intention. Job satisfaction and organizational commitment were measured with five items each adopted from [1]. Transformational leadership was measured with 15 items adopted from [37], and turnover intention was measured with three items borrowed from [47]. The study established the validity and reliability of these variables before using them for the survey analysis.

All items were measured on a 7-point Likert ranging from “1 = never”, “2 = rarely”, “3 = seldom”, “4 = sometime”, “5 = frequently”, “6 = often” to “7 = always”.

C. Ethical consideration

For the conduction of this study, approval was obtained both from the Ethical Review Committee in charge with the approval number JU-ERC: 07/05/19, and the authorities of the concerned hospitals to whom a formal letter was sent to seek their permission and support for the data collection. All the respondents were informed about the aim of the study, assured of its anonymity, and they voluntarily participated. Their participation thus implied their consent.

D. Data Analysis

This research work utilized SPSS version 26 software as well as structural equation model (SEM) in AMOS version 26 software in analyzing the data. In analyzing the descriptive aspect of the data, SPSS was employed by the researcher. SEM was used to analyze the relationships between job satisfaction, organizational commitment, and turnover intention among newly recruited nurses. Hierarchical regression analysis in SPSS was used to analyze the moderating effect of transformational leadership on professional satisfaction and turnover intention, as well as on organizational commitment and turnover intention.

In performing the exploratory factor analysis (EFA) to know the measurement items’ actual loadings, SPSS was used. The Kaiser–Meyer–Olkin measure of sampling adequacy (KMO-MSA) and Bartlett’s Test of Sphericity (BTS) for the data was 0.913 and significant at 0.001 (Table 1). This implies that our data were suitable for factor analysis [48]. The factor analysis results led to dropping three items from the transformational leadership scale for further analysis (see appendix A). The items were deleted for lower loadings of less than 0.50. The four factors had a total eigenvalue of 16.33, accounting for 65.33 of the total variances explained (see Table 2). The EFA loadings, as shown in Table 3, were also satisfactory high and above 0.60.

Additionally, to establish validity and reliability of factors through only exploratory factor analysis may sometimes not be enough. Scales that were deemed suitable after the EFA process was rendered futile after subjected to confirmatory factor analysis [49]. Hence, an additional factor analysis called confirmatory factor analysis (CFA) was performed for the scales. Particular attention was given to the factor loadings (see Table 4), model fit measures (Figure 2), validity (average variance extracted and discriminant validity), and the reliabilities (composite reliabilities and Cronbach alphas) (see Table 5).

TABLE 1: KMO AND BARTLETT’S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.878
Bartlett’s Test of Sphericity	Approx. Chi-Square	13548.36
	df	465
	Sig.	0

III. RESULTS

A. Descriptive characteristics of respondents

The average age of the 654 respondents was 21.88. Regarding the respondents’ educational level, 157 (24.0%) graduated from professional nursing school, while 497 (76%) were university graduates. Regarding the monthly salaries of the respondents, 37 (5.66%) received less than 3000 RMB, 88 (13.46%) of the participants received between 3001 and 4000 RMB, 96 (14.68%) received salaries ranging from 4001 to 5000 RMB, and 433 (66.21%) respondents received wages greater than 5000 RMB. There were 147 (22.48%) of married respondents, while 507 (77.52%) were single. Also, 386(59.0%) of the respondents had been employed on a contract basis, while 268 (41.0%) were formally employed.

B. Reliability, validity, and inter-factor correlation analysis

During the process of confirmatory factor analysis, it was revealed that the scales had good validity and reliability. The confirmatory factor analysis revealed that the model fit the data well (Chi-square (X²) = 690.684, normed Chi-square = 2.568, standardized root mean residual (SRMR) = 0.033, Tucker-Lewis fit index (TLI) = 0.955, comparative fit index (CFI) = 0.960 and root mean square error of approximation (RMSEA) = 0.049). The confirmatory factor analysis revealed that all the scales chosen for the study had factor loadings greater than 0.50, and they were all significant at 0.001 (see Table 4). Table 5 also presented the results for the average variance extracted (AVE). Each of the scales had a composite reliability value greater than the 0.70 thresholds suggested in [50], and they ranged from 0.85 to 0.937, hence shows high internal consistency. Each of the scales also had an AVE greater than the 0.50 threshold, as recommended in

[50], and they ranged from 0.558 to 0.659, hence, showing high convergent validity. The AVE's square root representing the discriminant validity values was also greater than their corresponding factor correlations, implying that the variables are unique and distinct from each other.

TABLE 2: TOTAL VARIANCE EXPLAINED BY THE FOUR FACTORS

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.839	35.358	35.358	8.839	35.358	35.358	7.076	28.303	28.303
2	3.469	13.875	49.233	3.469	13.875	49.233	3.512	14.049	42.352
3	2.400	9.600	58.833	2.400	9.600	58.833	3.467	13.868	56.221
4	1.625	6.500	65.333	1.625	6.500	65.333	2.278	9.112	65.333

TABLE 3: ROTATED COMPONENT MATRIX

		1	2	3	4
Transformational leadership (TL)	TL8	0.938			
	TL11	0.789			
	TL9	0.777			
	TL5	0.776			
	TL2	0.754			
	TL14	0.748			
	TL3	0.732			
	TL6	0.73			
	TL15	0.72			
	TL1	0.717			
	TL12	0.679			
TL13	0.647				
Job satisfaction (JS)	JS4		0.906		
	JS3		0.803		
	JS5		0.777		
	JS2		0.768		
	JS1		0.768		
Organizational commitment (OC)	OC1			0.829	
	OC4			0.826	
	OC2			0.783	
	OC5			0.782	
	OC3			0.743	
Turnover intention (TI)	TI2				0.85
	TI3				0.828
	TI1				0.826

Note: TL4, TL7, and TL10 were deleted for loading under different components

TABLE 4: RESULTS OF STANDARDIZED FACTOR LOADINGS OF CONFIRMATORY FACTOR ANALYSIS

Variables	Item code	Factor loadings	SE.	CR.	P
Job satisfaction (JS)	JS1	0.728			
	JS2	0.67	0.052	17.563	***
	JS3	0.806	0.053	21.385	***
	JS4	1	0.051	25.712	***
	JS5	0.725	0.053	19.101	***
Organizational commitment (OC)	OC1	0.863			
	OC2	0.753	0.04	22.042	***
	OC3	0.688	0.043	19.458	***

Transformational leadership (TL)	OC4	0.794	0.039	23.76	***
	OC5	0.761	0.041	22.343	***
	TL1	0.698			
	TL2	0.754	0.057	18.853	***
	TL3	0.736	0.06	18.425	***
	TL5	0.786	0.059	19.625	***
	TL6	0.714	0.055	17.895	***
	TL8	0.993	0.056	24.403	***
	TL9	0.77	0.06	19.253	***
	TL11	0.77	0.058	19.249	***
	TL12	0.624	0.057	15.687	***
	TL13	0.632	0.061	15.875	***
	TL14	0.721	0.059	18.059	***
	TL15	0.696	0.058	17.449	***
	Turnover intention (TI)	TI1	0.733		
TI2		0.966	0.055	20.599	***
TI3		0.711	0.054	18.231	***

Note: *** p < 0.001; JS1, OC1, TL1, TI1 were constrained.

TABLE 5: VALIDITY AND RELIABILITY AND INTER-FACTOR CORRELATION ANALYSIS

	CR	AVE	JS	OC	TL	TI
JS	0.893	0.631	0.794			
OC	0.881	0.599	0.367***	0.774		
TL	0.937	0.558	-0.358***	-0.352***	0.747	
TI	0.85	0.659	-0.318***	-0.465***	0.299***	0.812

Note: *** p < 0.001, CR = composite reliability, AVE = average variance extracted, bolded values represent the discriminant validity. Abbreviation: JS = job satisfaction, OC = organizational commitment, TL = transformational leadership, TI = turnover intention.

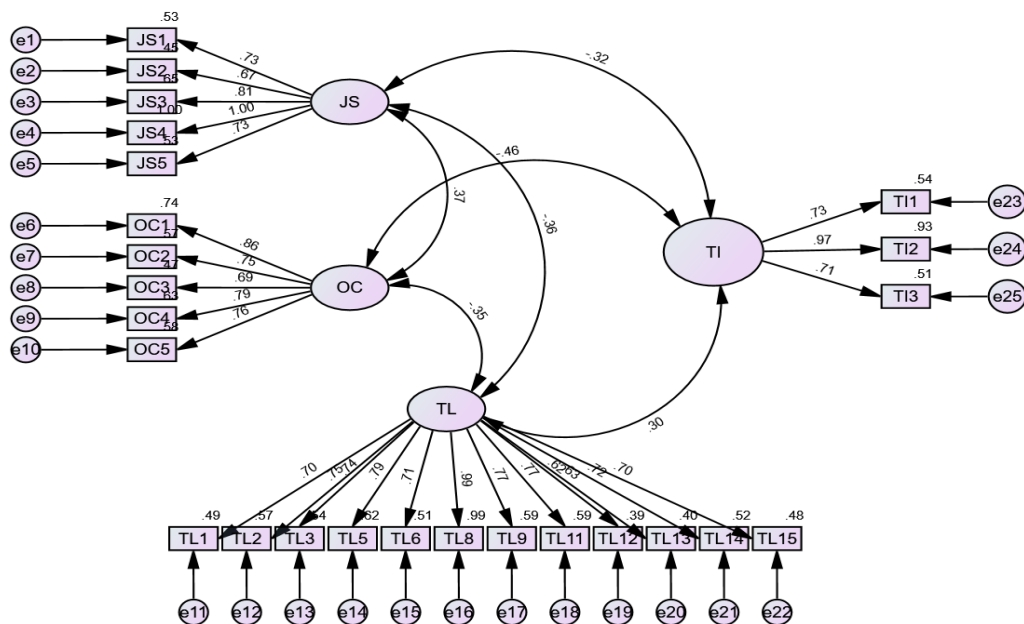


Fig 2: CFA measurement model. Model fit: Chi-square (χ^2) = 690.684, df = 269, χ^2/df = 2.568, SRMR = 0.033, CFI = 0.960, RMSEA = 0.049, TLI = 0.955, PClose = 0.636

C. Hypotheses testing

C1. Main effect

For testing the hypothesized relationships, as stated in H1, H2, H3, and H4, structural equation modeling was performed using Amos version 26.0. The study first tested the main effect, which involves the relationship between job satisfaction and turnover intention among newly recruited nurses (Figure 3). The results of the main effect as shown in Table 6 had a good model fit to the data (Chi-square (χ^2) = 54.301, df = 37, χ^2/df = 1.468, SRMR = 0.026, CFI = 0.995, RMSEA = 0.027, TLI = 0.992, Pclose = 0.997). The findings showed that job satisfaction has a significant influence on turnover intention, thereby supporting H1.

TABLE 6: RELATIONSHIP BETWEEN JOB SATISFACTION AND TURNOVER INTENTION

	Estimate	SE.	CR.	P	Comment
JS → TI	-0.326	0.048	-7.632	***	Accepted
Control variables					
Employment status → TI	-0.064	0.117	-1.485	0.137	
Marital status → TI	-0.141	0.139	-3.271	0.001	
Salary → TI	-0.094	0.062	-2.19	0.029	

Note: *** p < 0.001. Abbreviations: JS = job satisfaction, TI = turnover intention.

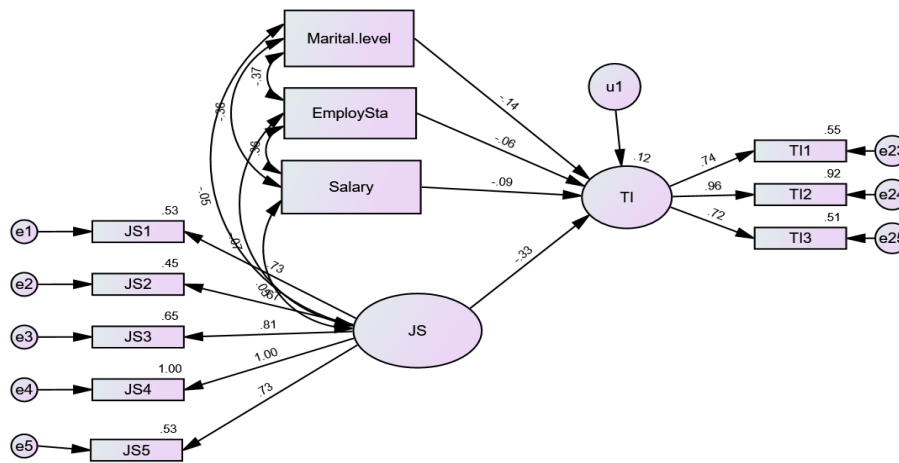


Fig. 3: Main effect model. Model fit: Chi-square (χ^2) = 54.301, df = 37, χ^2/df = 1.468, SRMR = 0.026, CFI = 0.995, RMSEA = 0.027, TLI = 0.992, Pclose = 0.997. Abbreviations: JS = job satisfaction, TI = turnover intention.

C2. Mediation effect

After estimating the main effect model and establishing that job satisfaction has a significant negative influence on turnover intention, we then tested the entire structural mediation model with a bootstrapping sample of 5000 and a 95% confidence interval. According to the rule of thumb for the bootstrapping method, if zero does not fall within the lower and the upper bound limit, it implies a significant relationship. On the other hand, if zero falls within the lower and upper bound limit, it implies a non-statistically significant effect. In doing this, we added the organizational commitment variable to the main model to form the structural mediation model (Figure 4). The results showed interesting revelations (see Table 7). The structural mediation model fit the data well (Chi-square (χ^2) = 135.403, df = 95, χ^2/df = 1.425, SRMR = 0.029 CFI = 0.992, RMSEA = 0.026, TLI = 0.99). It was revealed that job satisfaction had a significant positive influence on organizational commitment, hence supports H2. It was also revealed that organizational commitment had a significant negative influence on turnover intention, hence support H3. Furthermore, it was revealed that the indirect effect of job satisfaction on turnover intention through the mediating role organizational commitment was significant with a standardized coefficient of $\beta = -0.148$ and at a 95% confidence interval of [-0.233, -0.117], hence supports H4.

TABLE 7: DIRECT, INDIRECT AND TOTAL EFFECT ANALYSIS

Direct path	Estimate	SE.	CR.	P	Comment
JS→OC	0.367***	0.051	8.765	***	Accepted
JS→TI	-0.178***	0.045	-4.426	***	Accepted
OC→TI	-0.403***	0.042	-8.878	***	Accepted
Employment status →TI	-0.049**	0.108	-1.226	0.22	
Marital status →TI	-0.145***	0.129	-3.6	***	
Salary →TI	-0.088*	0.058	-2.211	0.027	
Indirect path	Standardized β	95%CI		SE.	
		Lower bound	Upper bound		
JS→OC→TI	-0.148 ***	-0.233	-0.117	0.029	Accepted
Total effect	-0.325***	-0.41	-0.242	0.043	

Abbreviations: JS = job satisfaction, OC = organizational commitment, TI = turnover intention

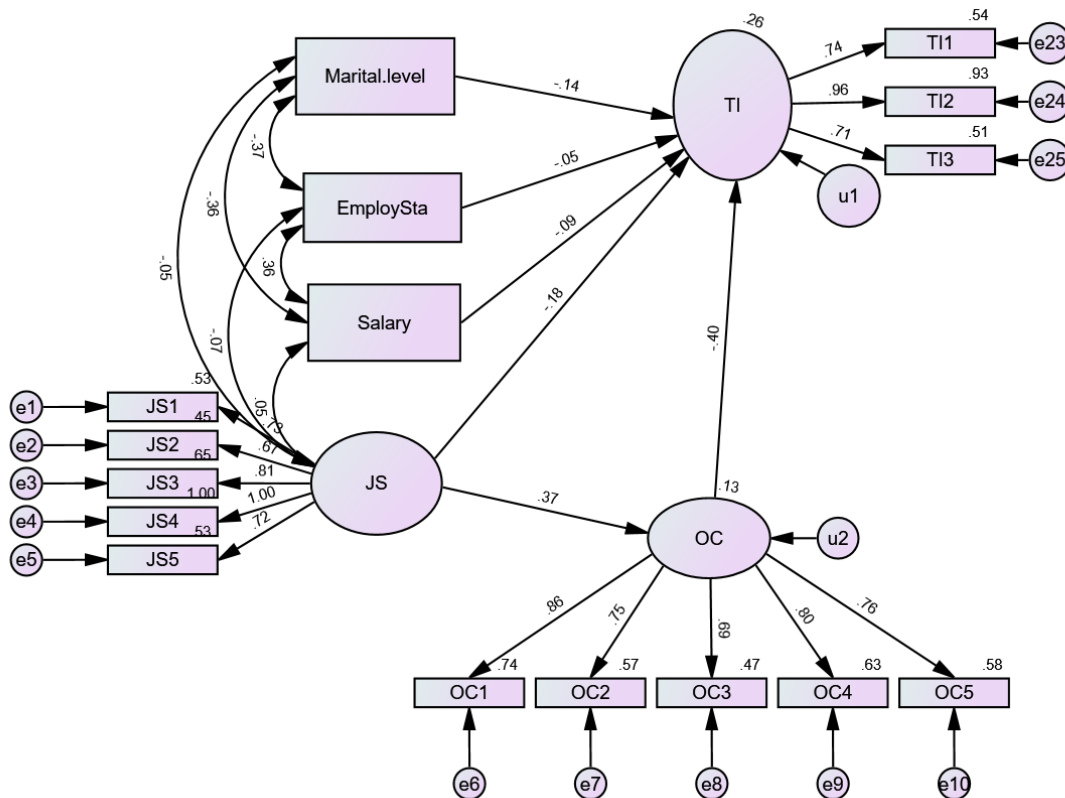


Fig. 4: Mediation effect model. Fit indexes: Chi-square (χ^2) = 135.403, df = 95, χ^2/df = 1.425, SRMR = 0.029 CFI = 0.992, RMSEA = 0.026, TLI = 0.99, Pclose = 1. Abbreviations: JS = job satisfaction, OC = organizational commitment, TI = turnover intention.

C3. Moderation effect

The study also tested the moderating role transformational leadership could play on the relationship between job satisfaction and intention to leave, as well as the relationship between organizational commitment and turnover intention by employing hierarchical regression analysis and centralizing the predictive and the moderating variables. The results are presented in Tables 8 and 9. From Tables 8 and 9, it can be noticed that job satisfaction and organizational commitment still exhibited a significant effect on turnover intentions after being centralized, hence provide additional support for H1 and H3. Transformational leadership also demonstrated a significant influence on turnover intention in all the models.

Regarding whether transformational leadership could moderate the relationship between job satisfaction and turnover intention, the results, as estimated in model 3 (see Table 8), showed that the product of job satisfaction and transformational leadership had a significant influence on turnover intention. This implies that transformational leadership has a moderating effect on the relationship between job satisfaction and turnover intention, supporting H5. Surprisingly,

the product of organizational commitment and transformational leadership, as estimated in model 3 in Table 9, revealed no significant effect on turnover intention. This implies that transformational leadership could not moderate the relationship between organizational commitment and turnover intention. Hence, H6 was not supported.

TABLE 8: MODERATING EFFECT OF TRANSFORMATIONAL LEADERSHIP ON JOB SATISFACTION AND TURNOVER INTENTION

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.166***	.393		15.707	.000		
	E.S.	-.085	.133	-.028	-.642	.521	.806	1.240
	Salary	-.237***	.071	-.145	-3.357	.001	.808	1.238
	MS	-.375*	.157	-.104	-2.397	.017	.803	1.245
	R2 = .022; ΔR2 = 0.022; F = 4.950**							
2	(Constant)	6.301***	.467		13.484	.000		
	E.S.	-.225	.126	-.073	-1.782	.075	.794	1.259
	Salary	-.200**	.067	-.122	-2.994	.003	.803	1.245
	MS	-.460***	.148	-.127	-3.104	.002	.799	1.252
	JS	-.230***	.044	-.206	-5.276	.000	.879	1.137
	TL	.232***	.044	.204	5.243	.000	.886	1.128
R2 = 0.132; ΔR2 = 0.110; F = 19.714***								
3	(Constant)	6.387***	.464		13.753	.000		
	E.S.	-.204	.125	-.067	-1.631	.103	.792	1.262
	Salary	-.203**	.066	-.124	-3.054	.002	.803	1.245
	MS	-.450**	.147	-.124	-3.063	.002	.799	1.252
	JS	-.234***	.043	-.210	-5.424	.000	.878	1.138
	TL	.221***	.044	.194	5.018	.000	.881	1.135
	JS*TL	.092***	.028	.122	3.333	.001	.992	1.008
R2 = 0.147; ΔR2 = 0.015; F = 18.536***								

Note: * p < 0.05; ** p < 0.01; *** p < 0.001. Abbreviation: ES =employment status, MS =marital status, JS = job satisfaction, TL = transformational leadership, JS*TL = Interaction term, TI = turnover intention

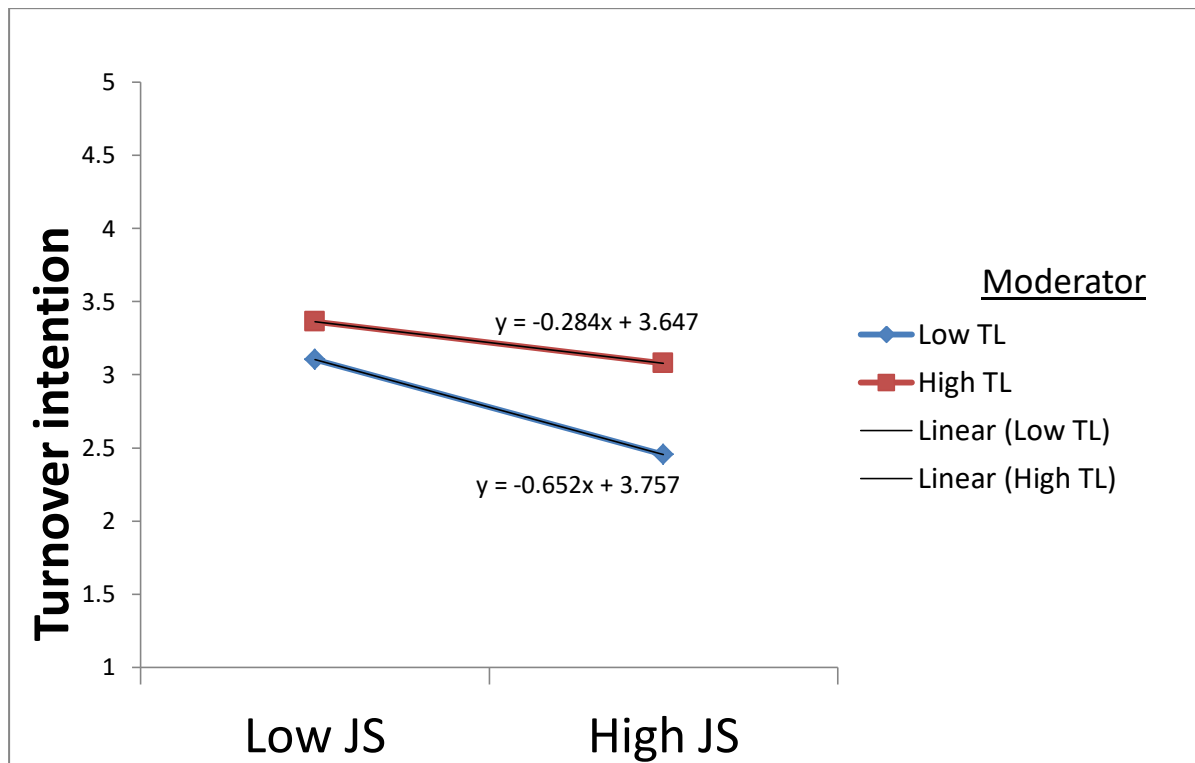


Fig. 5: A moderating graph showing that transformational leadership weakens the negative influence job satisfaction has on turnover intention

IV. DISCUSSION

We started this study with an engrossing aim, which is to connect job satisfaction, organizational commitment, and transformational leadership to turnover intention. Some studies have been done on the detrimental effects of turnover intention in most hospitals [8], [9]. In an attempt to identify some possible factors that could account for nursing turnover intention, some studies have started to assess the antecedents of nursing turnover intention. This study specifically examined job satisfaction and organizational commitment and has demonstrated that either job satisfaction or organizational commitment is a crucial direct predictor of turnover intention among newly recruited nurses. Job satisfaction also has an indirect influence on turnover intention through the mediating role of organizational commitment.

Additionally, in an attempt to examine the role management could play in mitigating the negative effect of job satisfaction and organizational commitment on the intention to leave among newly recruited nurses, transformational leadership was introduced as a moderating variable. Findings from the results revealed that transformational leadership could moderate the relationship between job satisfaction and turnover intention but could not moderate that of organizational commitment and turnover intention. The findings of this study have some theoretical and practical implications.

Regarding the results of this study, it has been demonstrated that job satisfaction had a negative influence on turnover intention among newly recruited nurses because when one’s feels disappointed in his/her job, dissatisfaction can set in, and employees may choose the option to quit [51–53]. Another possible reason for the negative impact of job satisfaction on turnover intention could be attributed to the fact that newly recruited nurses may be less satisfied with the benefits they receive from the hospitals. They may experience meager job satisfaction if they compare their reward with that of their peers working in different sectors, and the eventuality could be that they are leaving their job [54]. Job satisfaction affected significantly and positively organizational commitment because it causes employees to be fulfilled and, in turn, show commitment towards their organization as a form of reciprocity [30]. It confirms findings in previous studies, according to which nurses highly satisfied with their job also seem to exhibit high organizational commitment [19], [21], [55]. Again, the study found that organizational commitment had a significant adverse effect on turnover intention confirming findings in some previous studies [20], [56]. Nurses who have low organizational commitment may show weak allegiance, flawed psychological contract, or a feeling of disconnect to their organization, thereby resulting in higher turnover intention [16].

TABLE 9: MODERATING EFFECT OF TRANSFORMATIONAL LEADERSHIP ON ORGANIZATIONAL COMMITMENT AND TURNOVER INTENTION

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.166***	.393		15.707	.000		
	E.S.	-.085	.133	-.028	-.642	.521	.806	1.240
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	MS	-.375*	.157	-.104	-2.397	.017	.803	1.245
	R2 = .022; ΔR2 = 0.022; F = 4.950**							
2	(Constant)	6.882***	.436		15.770	.000		
	E.S.	-.140	.121	-.045	-1.153	.249	.798	1.253
	Salary	-.208***	.064	-.127	-3.245	.001	.806	1.240
	MS	-.430**	.142	-.119	-3.024	.003	.802	1.246
	OC	-.363***	.040	-.336	-9.060	.000	.902	1.109
	TL	.189***	.042	.166	4.465	.000	.896	1.116
R2 = .197; ΔR2 = 0.174; F = 31.698***								
3	(Constant)	6.884***	.437		15.758	.000		
	E.S.	-.138	.122	-.045	-1.133	.257	.791	1.264
	Salary	-.209***	.064	-.127	-3.245	.001	.806	1.240
	MS	-.429**	.143	-.119	-3.009	.003	.800	1.250
	OC	-.363***	.040	-.336	-9.054	.000	.902	1.109
	TL_	.189***	.043	.166	4.434	.000	.890	1.124
	OC*TL	.004	.026	.006	.157	.875	.985	1.015
R2 = .197; ΔR2 = 0.000; F = 26.379***								

Note: * p < 0.05; ** p < 0.01; *** p < 0.001. Abbreviation: ES =employment status, MS = marital status, OC = organizational commitment, TL = transformational leadership, OC*TL = Interaction term, TI = turnover intention

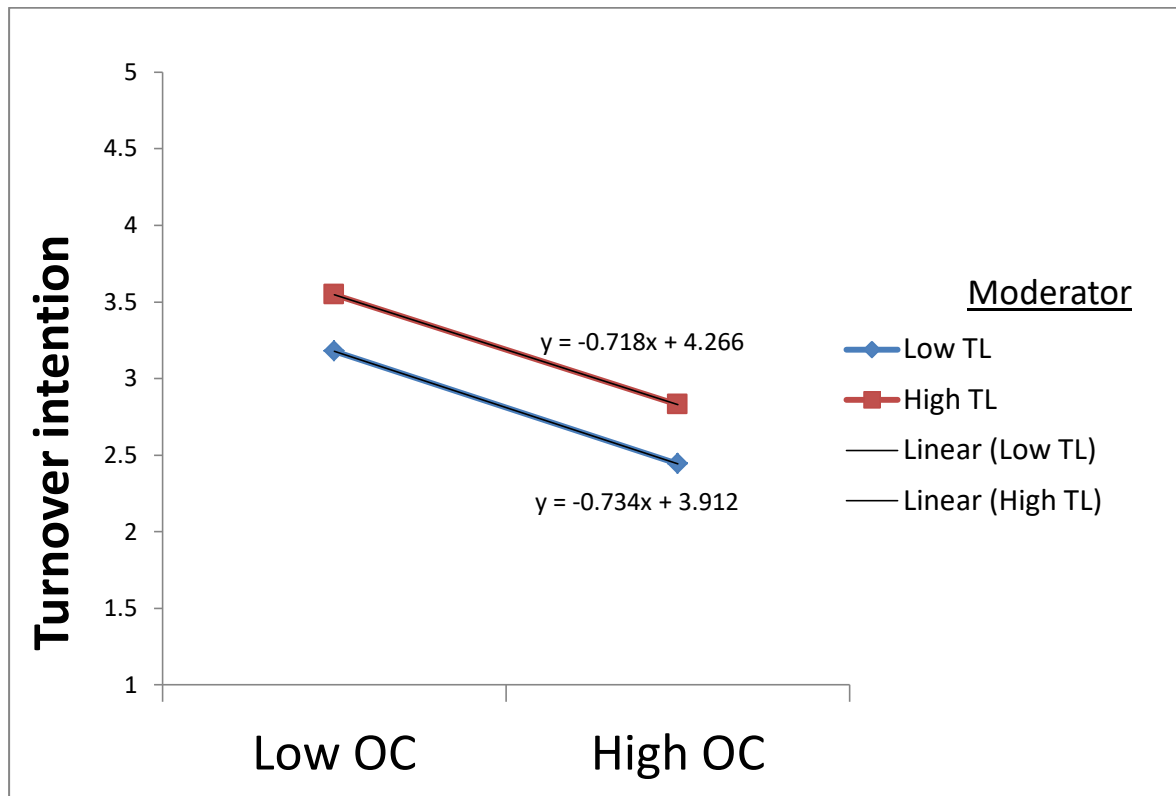


Fig. 6: A moderating graph showing that transformational leadership weakens the negative influence organizational commitment has on turnover intention

Regarding the mediation analysis, job satisfaction influenced organizational commitment, and organizational commitment, in turn, influenced turnover intention. As newly recruited nurses experience increasing dissatisfaction, they will also show shallow commitment towards organizations, and their allegiance, psychological attachment, and feeling of connection to their organizations will diminish, hence, result in a higher turnover intention [16], [30].

Another finding of this study is the moderating effect of transformational leadership. Transformational leadership was found to have a moderating impact on the relationship between job satisfaction and turnover intention. As job satisfaction could be enhanced by the leadership practices in the health profession, newly recruited nurses who benefit from transformational leadership could show satisfaction and may reconsider their intention to leave the nursing profession [33]. Newly recruited nurses who encounter leadership practices that are proactive, transformative and can motivate them to outflank conventional rules to address problems flexibly may have high job satisfaction and eventually have a second thought before deciding to quit [57], [58]. Surprisingly, the findings from the results of the study suggested no moderation effect for transformational leadership in the relationship between organizational commitment. This implies that even when newly recruited nurses experience transformational leadership practices in their respective hospitals, the influence of transformational leadership on how organization commitment affects turnover intention will still be minimal.

V. LIMITATIONS AND SUGGESTIONS FOR FUTURE STUDIES

There are some limitations pertaining to this paper. One limit is that we considered single-source data; that is, only newly recruited nurses were considered for the study. Our study could have done a comparative analysis by including freshly recruited staff in other professions such as education, mining, construction, etc., to be able to draw a better conclusion. An additional limitation of this study is the absence of factors that contribute to job satisfaction to spur organizational commitment and then turnover intention. Identifying these factors and building a more complex model might help explain better the actual antecedents of turnover intention. Transformational leadership could not moderate the relationship between organizational commitment and turnover intention. This outcome is surprising because, with the right kind of leadership practices in place, it should be able to influence the commitment level of employees towards their organization [39]. Future research could consider investigating this relationship to establish the extent to which organizational commitment is affected by transformational leadership in influencing turnover intention.

VI. IMPLICATIONS

This present study also provides both theoretical and practical contributions. Theoretically, this study has responded to the call of Mosadeghrad and his co-authors [30]. They found in their research that job satisfaction and organizational commitment had a significant positive effect on turnover intention among nurses. Their finding was surprising to them mostly as they were inconsistent with several research findings in extant literature. Therefore, they called for further investigation using job satisfaction, organizational commitment, and turnover intention variables to establish their authentic relationships among nursing professionals. This study has responded to that call and demonstrated that job satisfaction and organizational commitment significantly influence turnover intention. Our research has also shown that job satisfaction has an indirect considerable negative effect on quitting intention through the mediating role of organizational commitment. The study also has focused on newly recruited nurses who have had their first job after graduating from college. Furthermore, the study also tested transformational leadership as a moderator on the relationship between job satisfaction and turnover intention. The study again tested transformational leadership on the relationship between organizational commitment and turnover intention

Practically, this study highlighted the need for health sectors to have employee survey policy. Having regular employee survey programs will help managers identify possible problems that may negatively affect and reduce job satisfaction and organizational commitment. Identifying and solving these problems will help the hospitals reduce turnover intention among newly recruited nurses. Furthermore, management must continue to strengthen their transformational leadership practices because it reduces the undesirable effect job satisfaction could have on turnover intention, as illustrated in Figure 5. Although transformational leadership had an insignificant impact on the negative effect of organizational commitment on turnover, it is still essential for organizations to show care, love and help employees solve their problems. Doing this can compel the newly recruited nurses to reciprocate this kind gesture by showing more commitment towards the hospital and having little to no desire to quit.

VII. CONCLUSION

A complex environment and constant transformations increasingly characterize healthcare organizations; thus, workers need to adapt fast to avoid significant consequences. Newly recruited nurses need to adapt to their working milieu even more since their retention depends on reducing the current nursing shortage and the continuity of a good quality of patient care delivery. The findings of this research constitute a signpost for managers to facilitate beginner nurses' insertion in their new working environment, improve their well-being, and ensure their retention.

APPENDIX A: QUESTIONNAIRE

Variables		Items
Job satisfaction	JS1	I am satisfied with my overall job
	JS2	I am satisfied with my fellow workers
	JS3	I am satisfied with my supervisor
	JS4	I am satisfied with the hospital's policy
	JS5	I am satisfied with the support provided by this hospital
Organizational commitment	OC1	I would be very happy to spend the rest of my career with this hospital
	OC2	I do not feel like part of the family at my hospital R
	OC3	I feel as if this hospital's problems are my own
	OC4	I do not feel emotionally attached to this hospital R
	OC5	This hospital has a great deal of personal meaning for me
Transformational leadership	TL1	My manager goes beyond self-interest for the good of the group
	TL2	My manager acts in ways that build my respect
	TL3	My manager displays a sense of power and confidence
	TL4	<i>My manager specifies the importance of having a strong sense of decisions</i>
	TL5	My manager emphasizes the importance of a collective sense of mission
	TL6	My manager talks optimistically about the future
	TL7	<i>My manager talks enthusiastically about what needs to be done</i>
	TL8	My manager expresses a compelling vision of the future
	TL9	My manager expresses confidence that goals will be achieved

	<i>TL10</i>	<i>My manager re-examines critical assumptions to questions whether they are okay</i>
	TL11	My manager seeks differing perspectives when solving problems
	TL12	My manager gets me to look at problems from many different angles
	TL13	My manager suggests new ways of looking at how to complete assignments
	TL14	My manager spends time teaching and coaching
	TL15	My manager helps me to develop strengths
Turnover intention	TI1	Likely, I will actively look for a new job next year
	TI2	I often think about quitting
	TI3	I will look for a new job next year

Note: Items in italics were deleted from the survey analysis

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