Ilkogretim Online - Elementary Education Online, 2021; Vol 20 (Issue 5): pp. 7662-7680
http://ilkogretim-online.org
doi: 10.17051/ilkonline.2021.05.870

The Role of Job Satisfaction and Job Stress on Registered Nurses' Turnover Intentions Directly and Indirectly through Affective Commitment in Healthcare Industry of Twin Cities of Pakistan

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ABSTRACT- The purpose of this study to explore the direct relationship of job satisfaction and job stress on registered nurses' turnover intentions and indirect association through affective commitment. This study was conducted on registered nurses' of healthcare industry of twin cities of Pakistan. The interesting findings of direct and indirect relationship were revealed by performing regression analysis. Findings of this study revealed that job satisfaction has significant negative association with turnover intentions and job stress has significant positive association with turnover intentions and affective acts as a mediator between job satisfaction and turnover intentions and job stress and turnover intentions.

This study used multi-theoretical approach, which provides the better understanding of this phenomenon in terms of assessing employees' related outcomes from various theoretical lens. This study provides enrichment to SET regarding job satisfaction, affective commitment and turnover intentions and job stress, affective commitment and turnover intentions. Top management and HR practitioners can recognize the importance of nurses' retention in healthcare industry. They can acknowledge the importance of job satisfaction and job stress. These variables have direct as well as indirect impact on turnover intentions through affective commitment. This paper explores the influence of job satisfaction on turnover intentions and job stress on turnover intentions in the presence of affective commitment as a mediating variable in a single framework.

Keywords: Job Satisfaction, Job Stress, Affective Commitment, Turnover Intentions, Registered Nurses and Regression Analysis.

I. INTRODUCTION

Number of hospitals and quality services with equipment and other facilities denote the kind of care for its citizens. Experienced and qualified nurses are equally important for the success of healthcare industry (Rafiq et al., 2020). Nurses are the professionals who provide care to the injured and sick people in hospitals as well as health maintenance of the healthy people (Farman et al., 2017; Nosheen et al., 2020). Nurses' turnover is the severe problem facing by healthcare industry (Heinen et al., 2013; Shah et al., 2021; Hayes et al., 2006). Healthcare organizations where nurses' turnover intentions are high failed to provide quality services to their patients (Hayes et al., 2012; Flinkman et al., 2010; Shah et al., 2020; Shah et al., 2016; Shah et al., 2018; Shah et al., 2017). In Pakistan, nurses' turnover intention is extensively high (Naz & Gul, 2014). According to the needs of this era, more registered nurses are needed to treat people from aging population who have health problems.

Japan is also facing nurses turnover issue and annual turnover rate of nurses is 11.0% in 2014 (Japan Nursing Association., 2015). Shortage of nurses is predicted from 30,000 to 130,000 in 2025 due to the aging of population (Ministry of Health, Labour and Welfare. , 2010). According to Survey of Registered Nurses (2017), majority of the registred nurses believes that nurses shortage reached to its extreme level in last 05 years. 48% registred nurses believed nurses shortage become worst over the last 05 years while

only 22% registred believed that this shortage is not bad as compare to five years ago. This report indicated that healthcare facilities and other health systems impact nurses decisions to leave on daily basis. As time is passing this global phenomenon is becoming adverse which needs grave attention.

In healthcare industry, job satisfaction is an important variable which predicts turnover intentions of nurses (Coomber & Barriball, 2007; Nosheen et al., 2020; Shah et al., 2021). According to them, job satisafction is the major factor which determines nurses' intention to stay or leave in hospitals. Antecedents of job satisfaction includes supervisory support, recognition, relationship with peers, working conditions staff productivity and communication (Hayes et al., 2010; Lu et al., 2012). According to the study of Shah et al., (2018), job satisfaction is the strong predictor of intention to stay in healthcare organizations. According to another study job satisfaction is negatively correlated to intention to leave the job (Galletta et al., 2016). According to Gardner et al., (2007) turnover intentions can be predicted by affective commitment. Affective commitment has inverse relationship with turnover intentions (Shah et al., 2016; Shah et al., 2016; Allen & Meyer, 1996; Shah et al., 2021; Shah et al., 2021; Hartmann & Bambacas, 2000; Shah et al., 2020). Previous studies found strong relationship among affective commitment and intentions to leave (Flinkman et al., 2010). According to (Hackett et al., 1994) affective commitmnet is a strong predictors of turnover intentions. To check the relation between job satisfaction and affective commitment, a study was conducted in which it is seen that there is positive association between job satisfaction and affective commitment of nurses (Galletta et al., 2016). Withey (1988) mentioned a strong association between job satisfaction and affective commitment in his study. Cavanagh and Coffin (1992) and Steel and Lounsbury (2009) showed job satisfaction predicts turnover intentions. Yücel (2012) proved a positive relatioship between job satisfaction and affective commitment and negative relationship between job satisfaction and turnover intentions.

Job stress is another important variable which predicts turnover intentions. Association between job stress and turnover intentions of nurses is supported by a study which advocated a direct relationship was found between job stress and intentions to leave nursing (Applebaum et al., 2010S; Shah et al., 2021; Khan et al., 2020; Shah et al., 2018; Shah et al., 2018; Shah et al., 2021; Shah et al., 2021; Anser et al., 2021). Stress may occur due to work load, negative relationship with colleagues, bad working conditions etc. which create mental disturbance that leads to stress. Stress becomes the reason to make the intention to leave the job. According to the study (Chiang & Chang, 2012), there is significant positive relationship between job stress and nurses' turnover intentions. Many studies suggested an association between job stress and organizational commitment (Khatibi et al., 2009) and turnover intentions (Cartledge, 2001; Chiu et al., 2005). Chiang & Chang, (2012), Kuo et al., (2013), Lo et al. (2017) and Labrague et al., (2018) showed a relationship between job stress and turnover intentions. Yang et al., (2017) showed affective commitment mediated the relationship between job stress and presenteeism. Iqbal et al. (2014) found a significant relationship between job stress and turnover intentions and significant association was found between organizational commitment and turnover intentions.

In western perspective, numerous studies have been conducted on nurses' turnover intentions. However, in Pakistan, limited researches have been conducted to measure registered nurses' turnover intentions (Rafiq et al., 2020). This study fills the gap by conducting the study on job satisfaction, job stress and turnover intentions on registered nurses of twin cities of Pakistan by taking affective commitment as a mediating variable which is previously neglected in terms of empirical evidence. All these variables are not discussed in a single framework so this study is an important contribution in the field of healthcare industry by investigating all these variables in a single framework.

II. LITERATURE REVIEW

2.1 Job satisfaction (JSA) and Turnover Intentions (TOIs)

Curently, researchers are investing the impact of JSA on nurses' TOIs (Malik et al., 2010). JSA is defined as the positive emotional orientation of an individual towards his job (Price, 2001). JSA is important factor for a worker to retain his position in workplace for long time period. It shows an employee's enthusiasm towards his work (Agho et al., 1993). JSA can be seen in an employee by seeing his passionate behavior towards his job (Greenberg & Baron, 1997). JSA referred to the attitudes and feelings of employees about

their job. Positive and favourable attitudes and feelings about job indicate that JSA while negative and unfavourable feelings about job indicate job dissatisfaction (Armstrong, 2006).

Turnover among employees creates devastating influence on the performance of an industry. It is very important to control turnover in all industries who are becoming victim of it. TOIs are defined as the intention to leave the current jobs (Tett & Meyer, 1993). It is the measurement of TOIs of employees who want to leave existing job voluntarily or involuntarily. When alternative for job is not accessible, employees still leave that job due to psychological stress (Takase, 2010). Numerous researchers write on TOIs and the reasons which cause TOIs among nurses.

In healthcare industry, importance to control turnover increases. Nurses play the role of foundation for any hospital. They are the experts who provide health facilities to sick and injured people (Farman et al., 2017). This study focuses on TOIs among registered nurses of twin cities of Pakistan as TOIs is a deleterious problem among newly graduated nurses which results in increased cost of the healthcare institute and it impacts healthcare institute negatively in fulfilling patients need (Hayes et al., 2006). Turnover causes a huge cost which impacts the overall profitability of healthcare organizations. Chen et al., (2018) showed that turnover rate in hospitals of Jiangsu (province of China) is low as compare to other general level hospitals in China and other countries. Implementation of fair remuneration, performance evaluation, career planning and increase in the workforce of nurses are the positive measures which are taken to decrease turnover rate among nurses. In secondary hospitals turnover rate was high as compare to territory hospitals. In territory hospitals, nurses were given good income, career development and good work environment.

The rst of these studies, which began in the summer of 1932, used semistructured interviews to examine job sasfacon among 40 employed and 40 unemployed adults (the unemployed parcipants were asked to rect on their most recent job). Among other things, these parcipants were asked to note the things they liked and the things they disliked about their work. In addion, parcipants completed self-report measures of overall job sasfacon and sasfacon with specic aspects of their job, such as supervision, coworkers, and pay. The results of that study iden ed several potenal causes of job sasfacon, including amount of social status conferred by one's work, job autonomy, and interpersonal relaonships with one's supervisors and coworkers.

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with one's supervisors and coworkers.

Li et al., (2018) investigated in their study that JSA significantly and negatively impacts TOIs among emergency nurses. They found low level of JSA and high level of TOIs turnover among nurses. Applebaum et al., (2010) showed a direct and significant association between JSA and TOIs. They highlighted TOIs arises with the level of JSA and satisfaction with one's personal life. Labrague et al., (2018) conducted a study among registered nurses and discussed the factors influencing TOIs in Samar Philippines. They showed that that JSA has significant and negative association with TOIs. Cai and Zhou (2009) found that JSA strongly and negatively related with TOIs among staff nurses of central China. Javed et al., (2014) showed in their study that JSA has significant and negative association with their TOIs among school, university and bank employees. Han et al., (2015) conducted a study on JSA, work related factors and nurses TOIs. Findings of this study showed those nurses who are satisfied with their jobs did not show intentions to leave their current job. Demographics and background variables of nurses do not impact JSA except workplace type. Nurses who work in hospice or home health agencies etc. are more satisfied with their jobs when comparison is made with the nurses who work in hospitals. Male nurses with high educations were more intended to leave the job as compare to female nurses.

Alam and Asim (2019) investigated the relationship between JSA and TOIs among nurses in Karachi. According to them, JSA significantly and negatively impacts TOIs. They found that satisfaction with organizational policies and strategies, supervision, compensasion levels, task clarity and career development negatively and significantly effects turnover intentions. Galletta et al., (2011) conducted a study on Italian nurses and showed that there is negative association between JSA and TOIs. Kuo et al., (2013) also found that JSA has moderate and negative association with TOIs among nurses in Taiwan. This study proposes the following hypothesis:

H1: JSA has a negative association with TOIs.

2.2 Job Satisfaction (JSA) and Turnover Intentions (TOIs) with Mediating Effect of Affective Commitment (ACO)

JSA has a significant role to decrease TOIs of nurses by focusing on their commitment levels. Current researches have shown the association between JSA and organizational commitment in hospitals (Alsaraireh et al., 2014). Kim and Kao (2014) conducted a study on child welfare workers and showed that JSA and organizational commitment have significant and strong negative association with TOIs. Moreover, they showed that TOIs reduce when individuals have JSA and commitment with their jobs. Irvine and Evans (1992) showed there is significant and negative correlation between JSA and intention to leave the job and JSA has positive relationship with organizational commitment. There are strong evidence that JSA positively impacts organizational commitment (Brown & Peterson, 1993; Dubinsky & Hartley, 1986). Leong et al., (1996) also showed a postive association between organizational commitment and JSA. However limited studies examined the association between different facets of JSA and three components of organizational commitment that were proposed by Meyer and Allen (1991). According to Allen and Meyer (1996), found consistent and high positive correlation between JSA and ACO. A meta-analysis conducted and it is found that ACO has strongest positive correlation with work behaviours (Meyer et al., 2002).

Many researches have been conducted on ACO. According to Withey (1988), ACO is strongly associated with JSA. Mosadeghrad et al., (2008) conducted a study among hospital employees and found that more satisfied employees have more organizational commitments. He showed JSA and organizational commitment are significantly and positively with each other. Positive correlation is found between intention to leave and organizational commitment and positive correlation is found between organizational commitment and JSA. Factors that have significant influence on intention to leave are ACO and JSA. Galletta et al., (2016) conduced a study and showed JSA is negatively associated with TOIs turnover intentions and positively associated with ACO . Moreover, ACO mediates the relationship between JSA and intention to leave at individual level. Mehmood et al., (2016) conducted a study among front desk staff as customer service representatives in Pakistani banks and investigated that JSA has negative and significant influenece on TOIs. They also found negative relationship between ACO and TOIs. Yücel (2012) conducted an empirical study on employees of manufacturing company. Findings of this study suggested that JSA has positive association with ACO. It is also investigated the negative association between JSA and TOIs. It is also found that JSA is one of the important antecedents of organizational commitment and TOIs.

There are some studies which show contrary results. Parasuraman examined that there was no association between job satisfaction and actual turnover. Parasuraman (1982) suggested that satisfaction impacts voluntary job termination indirectly only through its impact on behavioural intentions. Some studies do not support the direct association between job satisfaction and turnover intentions (Lum et al., 1998; Elangovan, 2001). Lum et al., (1998) found that job satisfaction does not influence turnover intentions directly among staff nurses but it mediates the association between job satisfaction and turnover intentions through commitment while pay satisfaction has significant and direct and indirect influence on turnover intentions. Elangovan (2001) found that commitment strongly, directly, significantly and negatively influences turnover intentions. He also found an indirect association between satisfaction and turnover intentions through commitment among graduated business students. Following hypothesis is proposed as:

H2: ACO meadites the relationship between JSA and TOIs.

2.3 Job Stress (JST) and Turnover Intentions (TOIs)

Job stress (JST) is seen commonly in nursing profession and it affects individuals and overall organizational level performances (Trybou et al., 2014). Nurses' TOIs are a withdrawal process from workplace (Morrell, 2005). Researchers suggested that intention to leave is associated with stress (Zeytinoglu et al., 2006; Collins et al., 2000). Literature highlighted that stress leads to high turnover and absenteeism and low retention of nurses which impacts the quality of care provided (Chang et al., 2005).

Nurses are the professionals who remain at high risk of stressful workplaces and they face stress related problems and high rates of turnover (Kirkcaldy & Martin, 2000; Nassani et al., 2020). There are multiple definitions of stress that are found in previous literature; all that definitions may fall into one or two categories: it can be defined as 'stimulus or a response' (Matteson & Ivancevich, 1987). Griffin, (1999) and Lambert et al., (2005) highlighted job stressors such as role overload, dangerousness, role ambiguity and role conflict. Ball et al., (2002) showed bullying and shift working are stressors in nursing and both effect extensively on mental health. According to another definition, JST is also described as an individual's response to such stressors. Feelings of an employee about tensions related to job, anxiety, emotional exhaustion, frustration, worries, and distress (Voorhis et al., 1991; Grossi et al., 1996). According to Isaak and Paterson (1996) JST leads to death, anger, guilt, resentment, frustration, sorrow, helplessness, personal and professional loss. There are numerous factors have been identified which causes JST i.e. interpersonal relationships with physicians, and facets of patient care (Murphy, 2004) and abuse and violence of patients (Brokalaki et al., 2001).

Lambert et al., (2004) showed in his study that most of the researches have been conducted in United Kingdom and United States on stress while eastern countries are also suffering with stress and mental illness. According to Ogin'ska-Bulik (2006) when demand of work increases as compare to an individual's capabilities, stress occurs. It is the result of discrepancies between actual demand and an individual's abilities. Hamaideh and Ammouri (2011) examined JST is influenced by personal and environmental factors. Personal factors are marital status, age, individual's personality and past experiences while environmental factors include role conflicts, severity of patient illness, overloading and working hours. According to another study conducted by Calnan et al., (2011), General Health Questionnaire is administered for healthcare service employees and it is found that 27% staff is suffering with mental illness and stress as compared to 18% and 14% of the general population. According to Kirkcaldy and Martin (2000), physical illness, psychiatric problems and mortality rates are higher in nurses when comparison made with others. Physical and mental illness increases absenteeism among nurses. It is found that absence due to sickness in hospitals is 04% (Health Survey for England Health- Social Care and Lifestyles, 2011). According to Boorman, (2009) direct cost of staff sickness is £ 1.7 billion in a health study.

Currie and Hill (2012) highlighted JST as a reason of turnover among nurses. Coomber and Barriball (2007) investigated a study and showed that stress influences TOIs among hospital-based nurses. According to the study of Yin and Yang (2002), JST is significantly correlated with turnover among nurses in Taiwan. Cole et al., (2001) conducted a study in which they developed an instrument to measure post-code stress among nurses who work in critical care and to examine the psychometric properties. According to them, internal and external sources become the reason of stress. Internal sources are feeling discomposed, morally conflicted and uncertain while external sources of stress are feeling burdened and

oppressed. JST undoubtedly has negative consequences on nurses who work in critical care. According to Applebaum et al., (2010) a direct association is found between perceived stress and TOIs among nurses. Missing lunch, over time and other physical symptoms become the reasons that create stress and ultimately lead to turnover intentions. Chiang and Chang (2012) conduced a study in which they found a significant and positive association between JST and intention to leave the job among nurses. Laeeque et al., (2017) conducted a study on Pakistani nurses of public hospitals and found that JST s significantly and positively associated with TOIs. Zahra et al., (2018) also found a significant and positive influence between JST and TOIs among the employees of pesticide sector of Pakistan. Malik et al., (2017) conducted a study and showed that JST has positive and significant association with TOIs among Pakistani nurses. He indicated that personal bullying as a source of JST among nurses. Hong and Lee (2016) found that job stress has direct impact on turnover intentions of nurses.

Literature also showed contrary results among the association between JST and TOIs (Tziner et al., 2015; Bedeian & Armenakis, 1981; Elangovan, 2001). Tziner et al., (2015) conducted a study on hospital employed physicians and showed that there is not a significant association between JST nad TOIs. Bedeian and Armenakis (1981) conducted a study on Veterans Administration Medical Center and found a weak association between JST and TOIs. Elangovan (2001) examined a study on graduated business students and revealed that commitment strongly, directly, significantly and negatively influences TOIs and there is no direct association between JST and TOIs but JST impacts TOIs through commitment. This study proposes the following hypothesis:

H3: JST has a positive relationship with TOIs.

2.4 Job Stress (JST) and Turnover Intentions (TOIs) with Mediating Effect of Affective Commitment (ACO)

Researchers suggested that intention to leave is associated with stress (Collins et al., 2000; Zeytinoglu et al., 2006) and organizational commitment (Chang et al., 2006; Lina et al., 2007). Cai et al., (2008) conducted a study showed that death is the most frequent job stressor for psychiatric nurses. Pinikahana and Happell (2004) found that workload is the most frequent job stressor among psychiatric nurses. They also found that inadequate preparation is the second most frequent job stressor. Lambert et al., (2004) conducted a study among hospital nurses in Japan, South Korea, Thailand and USA (Hawaii) and found that workload and dealing with death are the highly ranked two work stressors. This study also suggested highest ranked four ways of coping stress i.e. seeking social support, self control, planful problem solving and positive reappraisal. Cai et al., (2008) suggested stress coping strategies. Chinese psychiatric nurses use positive strategies than negative strategies to overcome JST. Positive stress coping strategies include: to see the positive aspects of situation, discussing problems with others, participation in activities and hobbies and considering cognitively what is important in life.

Previous research studies also indicated that there is a strong correlation between JST and TOIs of nurses (Chiang & Chang, 2012; Kuo et al., 2013). Growing body of research suggest that TOIs among nurses is associated with many factors including JST (Zeytinoglu et al., 2006), low JSA (Collins et al., 2000) and organziational commitment (Labatmediene et al., 2007). JST causes high absenteeism among nurses (Danna & Griffin, 1999). Moreover, JST causes depressed moods among nurses (Lu et al., 2012; Flinkman & Salantera, 2015) which ultimately make nurses' intentions to leave the hospital (Chiang & Chang, 2012; Kuo et al., 2013; Flinkman & Salantera, 2015). Many studies showed a positive direct and significant impact of JST on TOIs (Hong & Lee, 2016; Lo et al., 2017; Labrague et al., 2018). Yang et al., (2017) conducted a study and showed that ACO mediates the relationship between JST (measured by challenge stress and hindrance stress) and presenteeism. Iqbal et al., (2014) showed that JST has significant and positive association with TOIs and significant and negative association is found between organziational commitment andTOIs.

Malik et al., (2010) conducted a study and showed that role overload and role conflict are negatively associated with ACO which shows less willingness to remain in the organization among managers. Low JST has positive consequences on ACO. Iqbal et al., (2014) investigated a study on employees of educational institutes and showed relationship between organizational commitment, JST and TOIs. They found that organizational commitment has significant negative relationship with TOIs. JST and TOIs is positively correlated with each other. Yang et al., (2017) investigated a study among healthcare workers and showed effects of two types of stress on ACO and presenteeism. This study showed hindrance stress

significantly and inversely impacts ACO and significantly and positively impacts presenteeism while challenge stress creates significant and positive effect on ACO but not on presenteeism. Yeh et al., (2007) conducted a study on temporarey and permanently employed nurses in northern Taiwan and showed that permanent nurses have low level of JST and high level of ACO than temporary nurses. Elangovan (2001) examined a study on graduated business students and revealed that commitment strongly, directly, significantly and negatively influences TOIs and there is no direct association between JST and TOIs but JST impacts TOIs through commitment. Following hypothesis is proposed as:

H4: ACO mediates the association between JST and TOIs.

III. Foundation for Research Framework

After a through literature review, framework of this study is developed. JSA and JST are independent variables, TOIs is dependent variable and ACO is mediating variable. Social exchange theory (SET) provides theoretical foundation to this study.

SET provides a base for the framework of this study. SET deals with sociological and psychological perspectives that describe about social exchange as a process of negotiation between parties. This theory says human relations are formed by analyzing cost versus benefit and comparison of alternatives. Two types of relationships occur between employer and employee; social emotional relationship and economic relationship. This theory indicates that employees who receive socio-emotional resources from the organization tend to repay in the form of better performance, organizational citizenship behaviour and loyalty (Saks, 2006). Those employees who receive benefits from organization in tangible form such as bonuses, perks and allowances, they repay it in the form of increased productivity rate and high profit margins etc. According to this theory, individual receives motivation through the exchange process between two parties (Cropanzano & Mitchell, 2005). In this study, SET elaborates that JSA enhances ACO which consequently decreases nurses' TOIs. In the same way, JST decreases ACO which ultimately decreases nurses' TOIs.

IV. Theoretical Framework

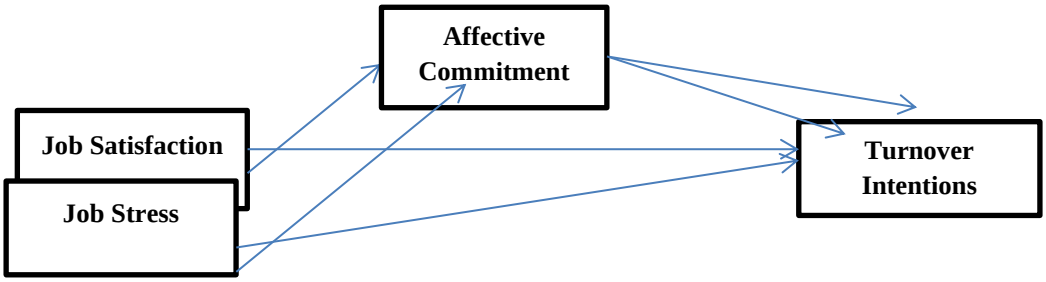

Fig 1: Theoretical Framework

V. Research Methodology

Focus of this study is those nurses who are registered with Pakistan Nursing Council. 02 stratas are formed of public and private hospitals of twin cities of Pakistan. There are approximately 30 healthcare organizations with 7047 registered nurses (100% of total population of registered nurses of twin cities of Pakistan); 19 public healthcare organizations with 4465 registered nurses (63% of total population of registered nurses of twin cities of Pakistan) and 11 private healthcare organizations with 2582 registered nurses (37% of total population of registered nurses of twin cities of Pakistan). Sample size of each strata has been taken on the basis of their ratio in the total population and then registered nurses were taken randomly. Total of 600 questionnaires were distributed among Human Resource Department of these healthcare organizations. 528 questionnaires were received back after filling and 490 questionaires were usable. Therefore, the overall response rate was 88% (Table 1).

Table 1: Respondents' Response Rate

Type of Hospitals	No. of Registered Nurses working in Hospitals of Twin Cities of Pakistan	Questionnaires Sent	Questionnaires Received	Response Rate
Public	4,465	378	333	88%
Private	2,582	222	195	88%
Total	7,047	600	528	88%

VI. Data Collection and Measurement of Variables

This study consists of 04 variables i.e. JSA, JST as independent variables, ACO as mediator and TOIs as dependent variable. JSA is adopted from the scale developed by Ivancevich and Matteson (2002) consists of 04 items. Kuo (2015) used this scale in his study. JST is adopted from the scale developed by Crank et al., (1995) consists of 05 items. This scale has been used in different previous studies (Griffin et al., 2010; Lambert et al., 2015). ACO is adopted from the scale developed by Allen et al., (1993) consists on 06 items. This scale has been used in different studies (Vandenberghe & Bentein, 2009; Clarke & Mahadi, 2017). TOIs is adopted from the scale developed by Farh et al. (1998) consists of 04 items. This scale has been previously used in different studies (Jehanzeb et al., 2015; Shah & Beh, 2016). Total numbers of items are 19. All these items are measured on Likert Scale ranges from 1= strongly disagree to 5= strongly agree.

VII. Results and Discussions

7.1 Reliability Analysis

Cronbach alpha for JSA, JST, ACO and TOIs are given in table 2. Cronbach alpha value of JSA is 0.809, JST is 0.762, ACO is 0.766 and TOIs is 0.805 which are more than 0.7 (Tavakol & Dennick, 2011; Hair et al., 2006). It showed that all the items of a variable are internally consistent with each other.

Table 2: Reliability Statistics of JSA, JST, TOIs and ACO

Variable's Name	N of Items	Cronbach's Alpha
JSA	04	0.809
JST	05	0.762
ACO	06	0.766
TOIs	04	0.805

7.2 Descriptive Statistics

All descriptives are given as table 3. Range value of JSA, JST, ACO and TOIs are 4.00, 3.80, 3.67 and 3.75 respectively. In the same way, minimum values of JSA, JST, ACO and TOIs are 1.00, 1.00, 1.17 and 1.25 respectively. Maximum values of JSA, JST, ACO and TOIs are 5.00, 4.80, 4.83 and 5.00 respectively. Mean values of JSA, JST, ACO and TOIs are 2.828, 3.169, 2.821 and 3.155 respectively. Standard deviation of JSA, JST, ACO, and TOIs are 1.083, 1.060, 0.909 and 1.162 respectively. Variance of JSA is 1.174, JST is 1.125, ACO is 0.827 and TOIs is 1.352.

Table 3: Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
JSATotal	490	4.00	1.00	5.00	2.8274	.05267	1.08335	1.174
JSTTotal	490	3.80	1.00	4.80	3.1688	.05156	1.06043	1.125
ACOTotal	490	3.67	1.17	4.83	2.8215	.04421	.90925	.827
TOIsTotal	490	3.75	1.25	5.00	3.1548	.05653	1.16257	1.352

Valid N (listwise)	490							

7.3 Correlation

Correlation among all variables is shown in table 4. Results show that JSA is strongly, negatively and significantly correlated with TOIs as r= -0.725 (Ratner, 2009) and p=0.000 (Sellke et al., 2001) which is consistent with the previous research studies (Labrague et al., 2018; Kuo et al., 2013; Galletta et al., 2016; Galletta et al., 2011). JST is also investigated with TOIs and is observed a moderate, positive and significant association with TOIs as r= 0.697 (Ratner, 2009) and p= 0.000 (Sellke et al., 2001) which is in accordance with the previous findings (Labrague et al., 2018; Kuo et al., 2013; Chiang & Chang, 2012; Yim et al., 2017). ACO as a mediator is investigated with other variables and it is observed that ACO is strongly, negatively and significantly associated with TOIs r= -0.702 (Ratner, 2009), p=0.000 (Sellke et al., 2001). Other studies supported the same findings (Perreira et al., 2018; Galletta et al., 2016). JSA is moderately, positively and significantly correlated with ACO as r=0.520 (Ratner, 2009), p=0.000 (Sellke et al., 2001). These results are supported by different studies (Ahmad & Oranye, 2010; Galletta et al., 2016; Mosadeghrad et al., 2008). JST is moderately, significantly and negatively associated with ACO r=0.-527 (Ratner, 2009), p=0.000 (Sellke et al., 2001). Same results are found by other studies (Khatibi et al., 2009; Iqbal et al., 2014; Yang et al., 2017). Correlations among all the variables indicated that all variables have significant association with each other.

Table 4: Correlation

		JSATotal	JSTTotal	ACOTotal	TOIsTotal
JSATotal	Pearson Correlation	1	-.651**	.520**	-.725**
	Sig. (2-tailed)		.000	.000	.000
	N	490	490	490	490
JSTTotal	Pearson Correlation	-.651**	1	-.527**	.697**
	Sig. (2-tailed)	.000		.000	.000
	N	490	490	490	490
ACOTotal	Pearson Correlation	.520**	-.527**	1	-.702**
	Sig. (2-tailed)	.000	.000		.000
	N	490	490	490	490
TOIsTotal	Pearson Correlation	-.725**	.697**	-.702**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	490	490	490	490

7.4 Regression

According to the findings of table 5, model 1 showed the value of R square= 0.526 which indicated 52% variance in TOIs is explained by JSA. Model 2 showed an increase in R square value= 0.671 which indicated 67% variance in TOIs is explained by JSA in the presence of ACO as a mediator.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725[a]	.526	.525	.80126
2	.819[b]	.671	.669	.66865

a. Predictors: (Constant), JSATotal
b. Predictors: (Constant), JSATotal, ACOTotal

ANOVA table as 6 showed a relationship between JSA and TOIs. JSA and TOIs has significant association with each other in model 1 as p=0.000. Model 2 displayed a significant association between JSA and TOIs when ACO acted as a mediator as it indicated p=0.000.

Table 6: ANOVA

Model		Sum of Squares	Mean Square	F	Sig.
1	Regression	300.068	300.068	467.384	.000[b]
	Residual	270.289	.642		
	Total	570.358			
2	Regression	382.581	191.290	427.859	.000[c]
	Residual	187.777	.447		
	Total	570.358			

Coefficient table as 7 showed a strong, significant and negative association between JSA and TOIs because β= -0.725, p=0.000 in model 1 so hypothesis 1 is accepted. Findings of this study are consistent with the studies conducted by Labrague et al., (2018), Kuo et al., (2013) and Galletta et al., (2016). Labrague et al., (2018)indicated moderate, significant and negative association between JSA and TOIs among registered nurses in Samar Philippines. According to them, registered nurses of Samar Philippines consider JSA as an important variable which impacts their intentions to leave the job. Kuo et al., (2013) also depicted moderate, significant and negative association between JSA and TOIs among nurses in Taiwan. According to them, nurses in Taiwan give importance to JSA and they make their intentions to stay at the job or leave the job on the basis of JSA. Galletta et al., (2016) showed that JSA is moderately, significantly and negatively associated with TOIs among nurses. Their study also showed JSA is an important predictor of TOIs among nurses. Galletta et al., (2011) conducted a study on Italian nurses and showed a weak, significant and negative association between JSA and TOIs. They showed in their study that job satisfaction is not an important variable in determining their turnover intentions due to weak association between them.

In model 2, it is found that JSA and TOIs are mediated by ACO. Direct relationship between JSA and TOIs is moderate, significant and negative after mediation β= -0.494, p=0.000. ACO impacted TOIs indirectly, moderately, significantly and negatively β= -0.445, p=0.000. Results showed that value of β coefficient reduced from -0.725 to -0.494. According to Baron and Kenny (1986) it is partial mediation because the direct association between JSA and TOIs is significant and indirect association still remain significant between ACO and TOIs. Results of this study showed a significant, direct and negative association between JSA and TOIs. Furthermore, relationship between JSA and TOIs is still significant in the presence of ACO affective commitment as a partial mediator so hypothesis 2 is accepted. These results are supported by past studies (Galletta et al., 2016; Gieter et al., 2011; Yücel, 2012; Luz et al., 2018). Galletta et al., (2016) found that ACO partially mediates the relationship between JSA and intentions to leave at individual level among nurses. Gieter et al., (2011) found that JSA and organizational commitment both are predictors of TOIs. Yücel (2012) showed a positive association between JSA and ACO and negative association between JSA and TOIs. Luz et al., (2018) examined that ACO is negatively associated with TOIs and JSA and TOIs are negatively and significantly related with each other among employees of information technology and communication located in Porto Digital in the Northeast of Brazil. Parasuraman (1982) conducted a study and investigated that JSA impacts TOIs but it does not have significant influence on actual turnover. While literature suggested that there is positive association between TOIs and actual turnover (Heijden et al., 2018; Cohen et al., 2015; Beecroft et al., 2008). To measure actual turnover, researchers measure TOIs because it get difficult to locate those nurses who left their job but Parasuraman examined that there is no association between JSA and actual turnover. Parasuraman (1982) suggested that JSA indirectly impacts voluntary job termination only through its impact on behavioural intentions. Some studies showed that there is no direct association between JSA and TOIs (Lum et al., 1998; Elangovan, 2001). Lum et al., (1998) conducted a study on staff nurses and showed that JSA does not influence TOIs directly but it mediates their relationship through commitment while pay satsifaction has significant, direct and indirect influence on TOIs.

Table 7: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.356	.109		49.135	.000

	JSATotal	-.778	.036	-.725	-21.619	.000
	(Constant)	6.260	.113		55.543	.000
2	JSATotal	-.530	.035	-.494	-15.069	.000
	ACOTotal	-.569	.042	-.445	-13.585	.000

a. Dependent Variable: TOITotal

According to the table of model summary as 8, model 1 indicated the value of R square= 0.486 which showed 48% variance in TOIs is explained by JST. Model 2 showed an increase in the value as R square= 0.641 which indicated 64% variance in TOIs is explained by JST after mediation of ACO.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.697[a]	.486	.485	.83446
2	.801[b]	.641	.639	.69834

a. Predictors: (Constant), JSTTotal
b. Predictors: (Constant), JSTTotal, ACOTotal

ANOVA table as 9 showed an association between JST and TOIs. Model 1 presented a significant association between JST and TOIs as p=0.000. Model 2 indicated a significant relationship between JST and TOIs when ACO acted as mediator as it showed p=0.000.

Table 9: ANOVA

Model		Sum of Squares	Mean Square	F	Sig.
	Regression	277.205	277.205	398.096	.000[b]
1	Residual	293.153	.696		
	Total	570.358			
	Regression	365.534	182.767	374.772	.000[c]
2	Residual	204.824	.488		
	Total	570.358			

According to the coefficient table as 10, it showed moderate, significant and positive relationship between JST and TOIs as β= 0.697, p=0.000 in model 1 so hypothesis 3 is accepted. These findings are in accordance with the previous studies (Labrague et al., 2018; Kuo et al., 2013; Laeeque et al., 2017; Chiang & Chang 2012). Labrague et al., (2018) revealed that JST has a moderate, significant and positive influence on TOIs among registered nurses in Samar Philippines. According to their study, JST is another important predictor of TOIs because JST inculcates TOIs among registered nurses of Samar Philippines. Kuo et al., (2013) also displayed a positive, moderate and significant association between JST and TOIs among nurses in Taiwan. This study also showed that JST imfluences TOIs among nurses. Laeeque et al., (2017) showed a moderate, significant and positive association between JST and TOIs among Pakistani nurses of public hospitals. They found in their study, JST as important variable which influences TOIs among Pakistani nurses. Chiang and Chang (2012) also showed a moderate, significant and positive association between JST and TOIs among clinical nurses in Taiwan. They also showed JST as an important variable to predict TOIs among nurses. Some studies do not support these findings (Tziner et al., 2015; Bedeian & Armenakis, 1981; Elangovan, 2001). Tziner et al., (2015) conducted a study and showed that there is not significant relationship between JST and TOIs turnover intentions but JSA mediates the association between JST and TOIs. Bedeian and Armenakis (1981) conducted a study and found a weak association between JST and TOIs. Elangovan (2001) found that JST does not directly impact TOIs but JST impacts TOIs through commitment among graduated business students.

When ACO played as a mediator role between JST and TOIs in model 2, this association is still significant. Direct relationship between JST and TOIs is moderate, significant and positive as β= 0.453, p=0.000. ACO showed indirect, moderate, significant and negative impact on turnover intentions as β= -0.463, p=0.000. Results showed that value of β coefficient reduced from 0.697 to 0.453. According to Baron and Kenny (1986), it is partial mediation because the direct association between JST and TOIs is significant and indirect association still remain significant between ACO and TOIs. Findings of the current study showed

that JST is directly, positively and significantly associated with TOIs. When ACO acted as a partial mediator, JST is significantly associated with TOIs so hypothesis 4 is accepted. Many studies provided support for these findings (Yang et al., 2017; Khatibi et al., 2009; Iqbal et al., 2014; Elangovan, 2001). Yang et al., (2017) investigated a study in which they showed that ACO mediates the relationship between JST (measured by challenge stress and hindrance stress) and presenteeism among healthcare workers. There is lack of studies on JST, ACO and TOIs. Khatibi et al., (2009) also indicated a significant and negative association between JST and ACO among employees of National Olympic and Paralympic Academy. Iqbal et al., (2014) showed a significant and positive association between JST and TOIs and significant and negative association between organizational commitment and TOIs among employees of educational institutes. Elangovan (2001) conducted a study on graduated business students and found that commitment strongly, directly, significantly and negatively influences TOIs. He also found that stress does not directly impact TOIs but stress impacts TOIs through commitment.

Table 10: Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	.733	.128		5.727	.000
	JSTTotal	.764	.038	.697	19.952	.000
2	(Constant)	3.252	.216		15.080	.000
	JSTTotal	.497	.038	.453	13.161	.000
	ACOTotal	-.592	.044	-.463	-13.458	.000

a. Dependent Variable: TOIsTotal

VIII. Discussion and Conclusion

The contribution of this study is to enhance the better understanding of influence of job satisfaction and job stress on nurses' turnover intentions in order to reduce their turnover in healthcare industry. Affective commitment also plays its role to reduce nurses' turnover intentions. Healthcare organizations do not lose their talented, skilled and competitive nurses but it also costs huge to the healthcare organizations in case of turnover. Rafiq et al., (2020) showed in their study that experiences nurses' turnover proves harmful for the growth, productivity and success of healthcare organization. Results of this study showed that JSA negatively impacts nurses' TOIs which is consistent with the findings of Labrague et al., (2018), Kuo et al., (2013) and Galletta et al., (2016). This study also revealed that ACO mediates the relationship between JSA and TOIs. These findings are consistent with the studies conducted by Galletta et al., (2016), Gieter et al., (2011), Shah et al., (2016), Shah et al., (2018), Yücel, (2012), Shah et al., 2020, Shah et al., (2017), Luz et al., (2018) Shah et al., (2020), Shah et al., 2021, Shah et al., (2021), Shah et al., (2021), Shah et al., (2018), Shah et al., (2016), Shah et al., (2020). Current study also showed that JST has a positive association with TOIs which is consisitent with the results of Labrague et al., (2018), Kuo et al., (2013), Laeeque et al., (2017), Chiang and Chang, (2012). Findings of current study also exhibited that ACO mediates the association betwenn JST and TOIs Yang et al., (2017), Khatibi et al., (2009), Iqbal et al., (2014), Elangovan, (2001). This study suggest top management and HR practitioners to retain nurses in helathcare oragznaitions by providing them JSA and reducing their JST by enhancing their ACO in healthcare organizations. Nurses who are satisfied with their jobs and their jobs are stress free are more likely to stay at their organziations. Therefore, findings of this study are important for top managers and HR practitioners who are responsible for the success and failure of the organziation.

IX. Limitations and Future Recommendations

This study has some limitations but these limitations can come up as a unique way for future research. In current study only registered nurses from healthcare industry are taken as a population for this study. Findings of this study can not be implemented on other parts of healthcare industry e.g. doctors, administration etc. Futures studies can be conducetd on other industries such as education, telecom and on other components such as teachers, doctors, engineers etc in order to see the difference in result

findings. The sample size of current study does not represent the overall population of Pakistan. Large sample size can be taken for future studies. This study is conducted only on twin cities of Pakistan due to the limited resources and time period so findings of this study cannot be generalized on other geographic regions of Pakistan and different countries of the world. Therefore, for more generalized study, more resources and time is required. Cross sectional study design is used to collect data. This study used quantitive approach and questionaire method is used in this study. For futre studies research design can be changed in order to analyze difference in result findings.

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