

Impact of Job Demand and Control on Nurses Intention To leave Obstetrics and Gynecology Department

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Abstract: Turnover and leaving jobs has a significant impact on the performance, productivity and profitability of healthcare organizations. This study was conducted to assess the relation between job workload and control on nurses' intention to leave Obstetrics and Gynecology department. A cross-sectional analytical design was used in carrying out this study at the Obstetrics and Gynecology departments of Zagazig and Sohag University Hospitals. It included 56 nurses from Zagazig and 37 from Sohag hospitals. A self-administered questionnaire was used to collect data that include job scale measuring job demand "workload" and job control. The fieldwork was from March to June 2012. The results showed high nurses' willingness to retain their job in their units and in the nursing profession, But it was higher in the Zagazig hospital than Sohag hospital ($p < 0.001$). The scores of job control and demand were lower in both hospitals, and significantly higher job control in Zagazig than Sohag ($p < 0.001$). Multivariate analysis identified nurse's age and hospital as positive independent predictors of the scores of unit job retention and profession retention. Meanwhile, the unit job retention is predicted by job demand, while profession retention is predicted by job control. The study concludes that the nurses' intentions to leave and turnover are low in the study sample. Higher job demands predict more retention of the current job, whereas a higher feeling of control of work predicts more retention of the nursing profession. Hence, improvement of the work environment is needed. The administration of hospitals should identify the intentions to leave at an early phase and take effective actions that motivate the nurses to retain their jobs.

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1. Introduction

In the history of the nursing profession, turnover and job and or professional quitting remain a serious problem associated with crises. It is defined as the loss of an employee due to transfer, termination, or resignation (Huber, 2006). Meanwhile, turnover intention has been defined as the individual's own estimated probability of permanently leaving the organization at some point in the near future (McCarthy *et al.*, 2007), or the expressed inclination and deliberate willingness quit one's profession (Pomaki *et al.*, 2010).

Turnover has a significant impact on the performance, productivity and profitability of healthcare organizations, and thus has received considerable attention worldwide (AbuAiRub & Al-Zaru, 2008 and Beecroft *et al.*, 2008). It negatively affects their stability, and deprives them from highly trained and committed nursing staff that provides effective levels of patient care. The problem is likely to worsen over the coming years with the growing shortage of qualified nurses and the growth of the healthcare industry which continues to outstrip the available supply of nurses (Hunt, 2009). Nonetheless, turnover may be beneficial to the employee in terms of getting a better job opportunity, as well as the employer in the sense of infusing the organization with "fresh blood" (Gargle, 2009).

The research identified several factors underlying high turnover rates among nurses. These

include lack of career development and lack of support from supervisors with less autonomy in decision making (Gardulf *et al.*, 2005), poor communication within the organization, role ambiguity, low self-esteem, and low income (Fochsen *et al.*, 2005), exposure to injuries whether physical or psychological (Chiu *et al.*, 2009), high job demands (Lynn, 2008), and job stress (Brnn & Taylor, 2006). These factors have been classified into personal causes, avoidable causes which include all the foregoing factors, and unavoidable causes such as quitting due to disablement, disciplinary action, inefficiency, and dishonesty (Assar, 2010). Turnover is also affected by labor market conditions and human resource practices (Jackson *et al.*, 2009).

Job control, formerly known as decision latitude, is another factor that may influence the turnover rates in nursing. It is often conceptualized as the sum of two components, namely skill discretion and decision authority (Brnn & Taylor, 2006). It refers to the extent the employees feel they have of control over their tasks and behaviors in performing their daily work (Schmidt & Diestel, 2010). A feeling of lack of control often leads to job dissatisfaction, which is often undervalued in the study of the factors that make highly employable nursing voluntarily leave the profession (Huston, 2010). The Job Demand-Control (JDC) model identifies two crucial job aspects: job demand and job control (Hansen *et al.*, 2010).

Turnover is not a sudden event (Branham, 2005), but rather a process that goes through a number of phases. It starts with an initial conflict phase with feelings of unhappiness, and tension, followed by the intensifying phase where emotions reach to a peak point with minimal self-control. The next phase is that of separation when the only option is when and how to leave employment even without employment opportunities at hand. The last phase is that of resolution of negative emotions and feelings about job termination (Bouma, 2002). The role of good management is to intervene at the early phases.

The significance of the study: Nursing turnover is a major issue impacting the performance and profitability of health care organizations as the latter needs stable, highly trained, and fully engaged nursing staff to provide effective levels of patient care. Retention of nursing staff is a challenge given higher job demand in this profession. This study attempts to identify the effect of job demands and control on obstetrics and gynecology nurse turnover.

The aim of this study was conducted to assess the impact of job demands and control on nurses' intention to turnover in Obstetrics and Gynecology departments. The researchers set the hypothesis that higher job demands and control predict more retention of the nursing staff.

2. Subjects and Methods

Research design and setting:

A cross-sectional analytic design was used in this study which was carried out at the Obstetrics and Gynecology departments of the university hospitals at Zagazig and Sohag. Zagazig University has three hospitals, namely the New Surgical Hospital, El-Salam Hospital, and the Gynecology and Obstetrics Hospital, while Sohag University has only one hospital, namely Sohag University Hospital.

Subjects and sample:

All available nurses, the first line managers, those working on the inpatient units, outpatient clinics, obstetric operations and emergency obstetric care units of the Obstetrics and Gynecology departments in the above mentioned settings at the time of the study were eligible for inclusion in the sample. The only inclusion criterion was an experience of at least one year in this workplace. Accordingly, the eligible subjects were 93 nurses: 56 from Zagazig hospitals and 37 from Sohag hospital. This sample size was large enough to demonstrate a correlation coefficient of 0.3 or higher with 80% power and at a 95% level of confidence between the score of job control and demand and the turnover intention using the sample size equation for correlation (Stanton and Glantz, 1992).

Tools of data collection:

The researchers designed a self-administered questionnaire that consisted of three parts: The first part was for nurse's personal characteristics such as age, nursing qualification, years of experience, department, etc. The second part consisted of the Intention to leave tool (Peterson, 2009). The tool has two sections. The intention to leave section is a three-item scale asking respondents how likely they are to stay in their current position or leave, e.g. as how long would you like to stay in this hospital? The second section asks the respondent about the propensity to leave the profession using the same three items. The responses are on a 3-point Likert scale: Yes, Uncertain, and No scored 0, 1, and 2 respectively so that a higher score means lower intention to quit. These scores were converted into percent scores, and means, standard deviations and medians were computed.

The third part of the questionnaire consisted of the job content scale, developed by Karasek *et al.*, (1998) based on the job demand control (JDC) model. The scale is widely used with a new modified version that has shown high degrees of reliability and validity (Peterson, 2009). The researchers used this version which consists of two parts. The job demands part consists of a seven-item scale measuring quantitative workload. This scale captures nurses' perception of the quantity of work assigned, such as how much workload you have? What quantity of work to others expects you to do? The second part measured job control through 20 items reflecting workers' perceptions of control over a number of aspects of work environments including variety, order, and pacing of tasks, and scheduling break. The responses are on a 3-point Likert scale: Yes, Uncertain, and No scored 0, 1, and 2 respectively so that a higher score means more demand or better control. These scores were converted into percent scores, and means, standard deviations and medians were computed.

The tools were face and content validated through the opinions of five experts from nursing and medical Obstetrics and Gynecology. The panel reviewed the tools for comprehensiveness, relevance, and clarity. The tools were modified according to the panels' recommendations. As for the reliability, the job control and job demand scales' internal consistency was measured. They proved to be of good reliability with Cronbach alpha coefficients 0.6 and 0.8, respectively.

Pilot study:

A pilot study was carried out on 10 nurses prior to initiation of the main work to ensure the clarity and coherence of the items and determine the length of time required to complete the questionnaire. The necessary modifications were done according to the answers and comments made by the respondents. The pilot study participants

were not included in the main study sample due to the modifications done in the tool.

Fieldwork:

The fieldwork of this study lasted for four months from the beginning of March to the end of May 2012. The first phase of the work was the preparatory phase where meetings with units' heads were done to clarify the objective of the study and the applied methodology. The second phase was the actual data collection through meeting the participants, explaining the aim and procedures to them and giving them the instructions for filling out the forms. Each subject took 10-15 minutes to complete the questionnaire. The researchers were present for any clarifications needed.

Ethical considerations:

The study protocol was approved by the pertinent committees in Zagazig and Sohag Universities. Official permissions were secured before the start of the work. Participants were informed about the study aim and procedures, and about their rights to refuse or withdraw before giving their verbal consent. Total confidentiality was ensured and any information obtained was only used for research purposes.

Statistical analysis:

Data entry and statistical analysis were done using SPSS 16.0 statistical software package. Quantitative continuous data were compared using the non-parametric Mann-Whitney test. Pearson correlation analysis was used for assessment of the interrelationships among quantitative variables. In order to identify the independent predictors of the scores of job and profession retention multiple linear regression analysis was used after testing for normal distribution, and homoscedasticity and analysis of variance for the full regression models were done. Statistical significance was considered at p -value <0.05 .

3. Results

The study sample included 93 nurses, with about two-thirds of Zagazig hospital (60.2%) as shown in Table 1. Their ages are ranging between 20 and 58 years, with mean experience years 16.4. The majority of nurses had diploma qualification (82.8%), with (68.8%) nurses who are married.

Table 2 demonstrates high scores of nurses' willingness to retain their job in their units and in the nursing profession in general. The scores are significantly higher among nurses in Zagazig hospital compared to Sohag hospital ($p < 0.001$). The scores of job control and workload are lower, around 50%, with a significantly higher mean of job control in Zagazig hospital compared to Sohag hospital ($p < 0.001$). Meanwhile, the two hospitals have no difference in the job demand score.

Examination of the correlations among the different scores (Table 3) shows a strong statistically significant positive correlation between

the unit job retention and profession retention scores ($r = 0.815$). Moreover, the job control score has moderate statistically significant positive correlations with the unit job retention and profession retention scores. Meanwhile, the job demand has no correlation with any of the other three scores.

Concerning the relations with nurse's characteristics, Table, 4 demonstrates weak statistically significant positive correlations between nurse's age and experience and each of the scores of unit job retention, profession retention, and job control. On the other hand, nurse's qualification has no correlation with any of the four scores. Also, job demand is not correlated with any of the nurse's characteristics.

Multivariate analysis (Table, 5) indicates that the nurse's age; and hospital are the statistically significant positive independent predictors of the scores of unit job retention and profession retention. It is evident that the older age and working in Zagazig hospital predict higher retention scores. Meanwhile, the unit job retention is predicted by the job demand score, while the profession retention is predicted by the job control score. Other nurse's characteristics have no independent effect on nurses' retention of their work.

4. Discussion

The present study findings indicate that the participant nurses have generally high scores of intention to retain their work and remain in the profession despite having low scores of control over their work. The job demand score seems to influence the unit job retention whereas the profession retention is more influenced by the job control.

According to the current study, the job demand had no significant correlation with the scores of retention of job or profession. However, in multivariate analysis it turned to be a positive predictor of job retention. The finding is in agreement with a study done in Malaysia; which found that job demand had a significant effect on the intention to stay (**Mustapha et al., 2010**). This paradoxical relation might be explained by the fact that staff nurses are willing to bear high job demands (workload) and work overtime to satisfy their own and families' needs for money, as mentioned by many staff nurses during data collection. Additionally, nurses may look at challenging tasks in their profession. In congruence with this, **Fochsen et al., (2005)** found a high rate of turnover in job with less professional growth opportunities.

Concerning job control, the current study demonstrated positive correlations between its score and the scores of retention of work and profession. However, in multivariate analysis it was only related to retention of the nursing profession.

Table 1: Socio-demographic characteristics of nurses in the study sample (n=93)

	Frequency	Percent
Age (years):		
<40	61	65.6
40+	32	34.4
Range	20-58	
Mean±SD	35.8±10.0	
University Hospital:		
Sohag	37	39.8
Zagazig	56	60.2
Department:		
Outpatient	37	39.8
Theater	27	29.0
Emergency	29	31.2
Experience (years):		
<10	28	30.1
10+	65	69.9
Range	<1-40	
Mean±SD	16.4±9.3	
Nursing qualification:		
Diploma	77	82.8
Bachelor	16	17.2
Marital status:		
Unmarried	29	31.2
Married	64	68.8

Table 2: Job retention, demand, and control among nurses in the study sample and by hospitals

Scores (%)	Total		Sohag Hospital (n=37)		Zagazig Hospital (n=56)		Mann Whitney Z	P-value
	Mean	SD	Mean	SD	Mean	SD		
Unit job retention	75.8	29.1	57.7	31.1	87.8	20.5	-5.044	<0.001*
Profession retention	72.6	30.7	57.2	32.0	82.7	25.2	-4.076	<0.001*
Job control	53.3	19.4	42.1	17.6	60.7	16.9	-4.307	<0.001*
Job workload	46.7	13.0	48.3	11.2	45.7	14.1	-1.352	0.176

(*) Statistically significant at $p < 0.05$ **Table 3:** Correlation matrix of nurses' scores of intentions to quit and feeling of control over work and job requirements

	Pearson correlation coefficient			
	Unit job retention	Profession retention	Job Control	Job Demand
Unit job retention				
Profession retention	.815**			
Job control	.403**	.386**		
Job demand	.123	.032	-.025	

(**) Statistically significant at $p < 0.01$ **Table 4:** Correlation between nurses' scores of intentions to quit and feeling of control over work and job requirements and their characteristics

	Pearson correlation coefficient		
	Age	Experience	Qualification [@]
Unit job retention	.305**	.275**	-.046
Profession retention	.285**	.317**	-.109
Control over work	.220*	.285**	-.090
Job demand	-.165	-.118	.045

(*) Statistically significant at $p < 0.05$ (**) Statistically significant at $p < 0.01$

(@) Spearman rank correlation coefficient

Table 5: Best fitting multiple linear regression model for the score of not quitting department (unit job retention)

	Unstandardized Coefficients		Standardized Coefficients	t-test	P-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Unit job retention							
Constant	-20.70	15.896		1.302	.196	-52.28	10.89
Age	.77	.254	.265	3.039	.003	.27	1.28
Hospital (Reference: Sohag)	28.97	5.108	.489	5.672	.000	18.82	39.12
Job workload score	.48	.194	.215	2.483	.015	.10	.87
r-square = 0.34 Model ANOVA: F=16.43, p<0.001 The variables entered and excluded: qualification, experience, marital status, department, control score							
Nursing profession retention							
Constant	5.44	13.192		.413	.681	-20.77	31.65
Age	.60	.289	.195	2.074	.041	.03	1.17
Hospital (Reference: Zagazig)	17.45	6.493	.280	2.687	.009	4.55	30.35
Job control scores	.33	.167	.211	1.999	.049	.002	.665
r-square = 0.23 Model ANOVA: F=9.99, p<0.001 The variables entered and excluded: qualification, experience, marital status, department, job workload score							

This means that the nurse feeling control over work is more motivated to pursue her/his nursing career, which might be explained by the higher feeling of recognition and self-esteem associated with the feeling of authority at work. The finding is in agreement with **Hunt (2009)** who mentioned that a low sense of control over job is among the driving factors for nursing turnover. On the same line, **De Milt et al., (2010)**, in an American study revealed that the most common reason cited for turnover was the little control over practice.

The workplace in the current study was shown to be an independent predictor of the scores of retention of jobs and profession, with less turnover intention among the nurses working in Zagazig Hospitals compared with those in Sohag hospital. The difference between the two settings might be attributed to more shortage of nurses and a higher workload in the latter setting. Additionally, Zagazig University Hospitals are much older in comparison with Sohag, and thus the nurses in Zagazig might be more acquainted with their work environment, with more adaptable and more commitment, and consequently lower turnover. This is evidenced by the higher scores of control at Zagazig setting. On the contrary, the job demand score was lower in Sohag setting, which may mean less challenging work with an associated higher tendency to leave.

According to the study findings, age is positively correlated with the scores of retention of current work and profession. Moreover, it proved to be a positive independent predictor of both scores, meaning that the nurse is more willing to pursue

work and profession with increasing age. This might be explained by the status gained as the nurse gets older as this is often associated with promotion and more authorities. This is further confirmed by the positive correlation between age and the score of control over the work. Additionally, young age nurses may seek better opportunities in other workplaces or even in other professions, while older ones often look at stability. Another reason could be the adaptation to the work environment as age advances, while at a younger age the nurse may be faced with conflicts that she/she cannot cope with.

The foregoing present study finding is in agreement with previous studies in Saudi Arabia (**Zaghloul et al., 2008**) and Lebanon (**El-Jardali et al., 2009**), and Egypt (**Ahmed, 2010**). Furthermore, studies have demonstrated a negative relation between age and turnover intention (**Clark, 2005, Samad, 2006 and Flinkmana et al., 2008**). On the contrary, **Yildiz et al., (2009)** who conducted a study on nurses' intention to quit their current job in Turkey, could not show any significant relation between ages and intend to turn over. This has been attributed to the fact that the responsibilities and duties of nurses in Turkey at different levels are the same.

Regarding the years of nursing experience, the current study showed significant positive correlations with the scores of retention of job and profession. This is expected given the gains the nurse acquires with long experience, and for the association between age and experience. However, in multivariate analysis experience was not an

independent predictor of the scores of retention. This means that the correlation between experience and retention scores was confounded by age, and thus it disappeared upon adjustment by multivariate analysis. Moreover, the nurse who accumulates experience may look at better job offers with higher salaries and thus tends to quit. This explanation is in line with the findings of a Japanese study which revealed that nurse turnover was associated with their working years in a nursing (Shimizu *et al.*, 2005).

Conclusion and Recommendations

The study concludes that the job and profession turnover intentions are low in the study sample, especially among those working in Zagazig University Hospitals. Higher job demands predict more retention of the current job, whereas a higher feeling of control of work predicts more retention of the nursing profession. While age positively predicts both retention types, job experience has no independent effect on either of them.

The study recommends improvement of the work environment, especially in the Sohag University Hospitals, to foster nurses' feeling of control over their work through more participation in decision making. The administration of hospitals should identify the intentions to leave at its early phases and take effective actions that motivate the nurses to retain their jobs. Further research is needed to evaluate the effectiveness of such actions on the nurse turnover rates.

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