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Nurse's Job Satisfaction and Intention to Leave Their Job and Associated Factors in Selected Public and Private Healthcare Facilities in Dar Es Salaam, Tanzania

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Abstract: *Background*: Job dissatisfaction and nurses' intention to leave are an increasing problem that threatens the function of the health care sector worldwide, especially in developing countries, including Tanzania. The aim of this study was to determine and compare nurses' job satisfaction and intention to leave their job and the associated factors in public and private healthcare facilities in Dar es Salaam, Tanzania. *Methods*: This was a cross-sectional survey that was conducted from January to August 2023 to determine nurses' job satisfaction and intention to leave their job and associated factors in public and private healthcare facilities in Dar es Salaam, Tanzania. A multistage cluster sampling technique was employed to obtain the required number of the study population. *Results*: A total of 222 respondents were studied. Of these, 126(56.8%) were satisfied with their job and the remaining 96(43.2%) were not satisfied. Additionally, out of 222 respondents, 132(59.5%) were intended to leave their job and the remaining 90(40.5%) were not intended to leave their job. Nurses aged >50 years were 3.54 more likely to be satisfied with their job (AOR: 3.54, 95% CI (2.44-8.55), p= 0.002) compared to nurses less than 30 years of age and were less likely intended to leave their nursing profession (AOR: 9.22, 95% CI (2.32-14.33), p<0.001). Bachelor or master's degree holder nurses were found to be satisfied with their job (AOR: 4.77, 95% CI (2.61-12.43), p= 0.001) and were less likely intended to leave their job (AOR: 4.83, 95% CI (1.73-13.50), p= 0.002) compared with certificate and diploma holder nurses. Nurses working in private facilities showed higher level of job satisfaction (AOR: 3.11, 95% CI (2.38-8.14), p<0.001) and were less likely intend to leave their job (AOR: 9.76, 95% CI (3.44-23.11), p=0.001) compared to nurses working in public health facilities. Nurses with work experience of 10 years and above were found to be satisfied with their job (AOR: 3.46, 95% CI (2.71-9.44), p= 0.002) and were less likely intended to leave their nursing profession (AOR: 8.21, 95% CI (1.96-14.21), p=0.013) compared to nurses with work experience of 5 years and below. High nurse's monthly income was significantly associated with higher nurses' job satisfaction (AOR: 5.88, 95% CI (2.55-14.67), p=0.001) and lower intention to leave nursing profession (AOR: 6.51, 95% CI (2.33-11.98), 0.014). Additionally, nurses who were satisfied with their job were 5.1 times less likely intended to leave nursing profession compared with nurses who were not satisfied with the job (AOR: 5.11, 95% CI (2.36-12.87), p=0.001). *Conclusion*: Findings from this study demonstrated that more than half of nurses were satisfied with their job but majority expressed higher intention to leave nursing profession. Nurse's age, education level, type of facility, work experience and monthly income were found to be important factors associated with nurses' job satisfaction and intention to leave their current job. Addressing these factors enables to tackle nurse's intention of leaving nursing profession and prevent the shortage of nurses which affects the quality of health care.
Keywords: Nurses, Job Satisfaction, Intention to Leave, Healthcare Facilities, Dar Es Salaam, Tanzania.

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INTRODUCTION

Nursing is a healthcare profession that focuses on the care of individuals and their families to help them recover from illness and maintain optimal health and quality of life [1]. Nurses are essential workforce and form the largest professional group, which comprises healthcare workforce within the healthcare system in contributing significantly in delivering quality healthcare services, and assisting in the improvement of health outcomes for individuals, families and communities either through preventative and curative measures [1, 2].Nurses play an integral role in promoting health, preventing illness, and caring for all individuals, including those who are disabled or are physically or mentally ill [2]. Having an adequate number of nurses with the necessary skill sets and adequate motivation to deliver outstanding care is essential for the success of any health system [3, 4].

Despite the fact that nursing profession is a vital in delivering healthcare services, one of the main challenges faced today is the shortage of nursing workforce, which causes severe compromise on the quality of healthcare services, and in improving the well-being of the global population and in achieving universal health coverage [5]. Globally, the present shortage of nurses is a problematic agenda among the health care sectors. Consequently, the quality of patient care services has decreased [4, 5]. Thus, ensuring a high level of job satisfaction among nurses and taking proper precautions to avoid their intention to quit are prime concerns [2-6]. The globally shortage of nurses continues to be a significant obstacle to achieving global health care objectives [6], such as the Millennium Development Goals [7], and the execution of numerous health programs [8]. Tanzania, like many other low-income countries, is experiencing severe shortages of nurses. The current number of nurses in Tanzania is significantly lower than the international average and below the country's own staffing needs [9-11]. This shortage is predicted to worsen in the near future, owing to the increased demands of the healthcare sector (e.g. HIV/AIDS care and treatment) as well as the higher rate of retirement amongst the existing workforce [12]. Health systems organizations both in the private and public sectors across the globe rely on their nurses for optimum productivity which will in turn result in organizational efficiency. In this case, the need for ensuring nurses' job satisfaction and retention becomes a matter of necessity [13-15]. Job satisfaction among nurses is increasingly being recognized as a measure that should be included in quality improvement programs. Job satisfaction is an important determinant of nurses' motivation, retention, and performance, all of which are critical to improving the functioning of health systems in Tanzania [9, 10]. Many studies have shown that nurses who are dissatisfied with their jobs are more prone to turnover, absenteeism, stress, and reduced performance [16-18]. Moreover, nurses' higher levels of dissatisfaction leads to turnover from the nursing profession, which generally creates staff shortage, increases overtime and job stress, increases burnout, longer patient waiting lists, and finally, as a consequence increased displeasure among patients [5, 6].

Several studies have been conducted to investigate the determinants of nurses' job satisfaction and intention to leave [14-16]. Previous study from Tanzania, Kenya, and Uganda found lower levels of job satisfaction when compared with a European reference group and also that satisfaction was lower among public hospital nurses than those working in the private sector [19]. Similarly, another study conducted in Tanzania, Malawi and South Africa revealed that nurses had a high level of intention to leave their profession [11]. However, in these studies, factors associated with job satisfaction and the intention to leave were not evaluated and this calls for a study to determine these factors. Despite the fact that these previous studies which were done more than a decade ago in our setting indicate low levels of job satisfaction compared to their European counterparts, the author still believe that 10-14 years is long time, many changes have been done in our health system which may have affected the level of nurse's job satisfaction. Besides, previous studies did not compare the level of nurses' job satisfaction between public & private health facilities. It has been documented in one study by Pillay *et al.,* [20], that nurses in private hospitals are more satisfied with their job than in public hospitals. As a result, nurses in public hospitals move into private hospitals due to the availability of modern types of equipment good working conditions, recognition, and challenging work and chances of advancement. This observation has not yet been evaluated in our setting. Furthermore, even though nurses are the backbone of patients caring, there is a paucity of published data describing the nurses' job satisfaction and intention to leave their job and associated factors in public and private healthcare facilities in Dar es Salaam, Tanzania.

METHODS AND PATIENTS

Study Design

This study utilized a cross-sectional design to assess the job satisfaction and intention to leave among nurses working in public and private healthcare facilities in Dar es Salaam. A quantitative technique using structured questions having closed-ended questions was used.

Study Setting

The study was conducted in public and private health facilities in five districts in Dar es Salaam. Dar-es-Salaam is the largest city and former capital of Tanzania. It is the largest city in East Africa and the seventh-largest in Africa, with a population of 7,775,865 [21]. The city consists of five districts namely: Kinondoni in the north, Ilala in the center, Ubungo and Temeke in the south, and Kigamboni in the East.

Target Population

The study included nurses working in both public and private health facilities in Dar es Salaam during the period of study. The list of nurses of each hospital were obtained from the human resource managers, and the human resource managers were also asked to indicate whether an employee is on leave, in education, in or long-term training during the data collection.

Selection Criteria
Inclusion Criteria

The study included nurses working in both public and private health facilities in Dar es Salaam during the study period and who were willing to participate in the study after signing an informed consent form.

Exclusion Criteria

If a respondent is not available during the period of data collection and it was not possible to make arrangements to meet him/her later, were excluded from the study.

Sample Size Estimation

A single population proportion formula was used to calculate the required minimum sample size by considering the following assumptions: n is required sample size, Z is the standard normal deviation of 1.96 corresponding to 95% CI, P is the proportion of respondents who were satisfied with their jobs in one study in Tanzania [11], and ε is the margin of error which is 5%.

$$n = \frac{Z^2 P(1 - P)}{\varepsilon^2}$$

Z= 1.96
P= 82.3%
ε = 5%
Therefore: n = $\frac{1.96 \times 1.96 \times 82.3(100-82.3)}{5^2}$

n = 224
The minimum sample size was **224** respondents.

Sampling Procedure

Multistage cluster sampling technique was employed to obtain a required number of the study population. The study was based in five districts of Dar es Salaam. Two healthcare facilities (both public and private) from each district were selected through a simple random sampling. In each of the selected facilities, a simple random sampling was used to pick the study participants from the predetermined categories present on the day of the study until the required sample of 224 respondents is obtained.

Study Instrument

A self-administered structured questionnaire was used for data collection. The questionnaire consists of three parts:

Part A of the questionnaire recorded the participant's personal details, such as age, gender, marital status, educational level, occupation, length of time in their current role, type of health care facility, the field of practice, salary, and hours worked per week, employer status, and a number of years working as a nurse.

Part B of the questionnaire measured the nurses' job satisfaction utilizing a single-item job satisfaction scale. Job satisfaction was measured using a single question 'How satisfied are you with your current job?' using a 4-point response scale (very satisfied to very dissatisfied). Scores were dichotomized as follows: (0) very satisfied, somewhat satisfied and (1) somewhat dissatisfied or very dissatisfied. Single-item measures are commonly used, are considered valid, and have acceptable levels of reliability for assessing job satisfaction in organizational research [22, 23]. Strength of the single-item measure of job satisfaction is that it allows each individual to rate their job satisfaction based on job-related factors that are important to the individual [24].

The reliability of this scale was established using Cronbach's alpha as a measure of internal consistency. Cronbatch's Alpha was calculated by using SPSS window version 21.0 (IBM Co., Armonk NY, USA) to test internal consistency (reliability) of the scale, and Cronbatch's Alpha greater than 0.77 was considered as reliable.

Part C of the questionnaire assessed nurse's inclination to leave their current job using the single-item Intention to leave scale (ILS-1). To assess intention to leave, we used a single-item measure commonly used in nursing research [25]. Participants were asked, 'Would you leave your current job within the next year as a result of job dissatisfaction?' with the response options of yes or no. The shortened version of the ILS-1 has reported a turnover reliability score of α = 0.80, which suggests good reliability. To guarantee semantic equivalence, the questionnaire was first be translated into Swahili and then back into English. It was preliminarily tested on 5% of the study population in one health facility prior to data collection, with the results excluded from the final analysis.

Study Variables

Independent variables included socio-demographic characteristics (age, sex, marital status, education level) and work-related characteristics (Nurse categories, total years of experience at the current hospital (in years), type of health facility, area of practice, salary (Tsh), working hours per week, total years of experience, institutional status). Nurse's job satisfaction and intention to leave the job were dependent variables.

Data Collection Procedure

Two health professionals trained in using the instruments and techniques for obtaining consent gathered the data using a self-administered questionnaire. The questionnaire was written in English. A minimum of 15-20 minutes was taken to fill out each questionnaire. To maintain confidentiality, the names on the questionnaires were replaced with codes, and the participants were informed of this so that they have their own code to easily keep track of when their questionnaires were completed. The supervisors and the principal investigator were responsible for checking on the completeness of the data on-site. Incomplete questionnaires were put in offices arranged for this purpose so that participants could complete their own questionnaires.

Statistical Data Analysis

Data will be entered using epi-Data version 3.1(Atlanta, US) and analyzed using computer SPSS software version 21(IBM Co., Armonk NY, USA) or STATA version 13 (Collage Station. The median (+IQR) and ranges were calculated for continuous variables, whereas proportions, frequent tables, bars, and pie charts were used for categorical variables. The association between independent and dependent variables were assessed by using univariate and multivariate logistic regression model. In this model, the odds ratio with a 95% confidence interval was used to determine the strength of the association between dependent and independent variables. A p-value of < 0.05 was considered to constitute a statistically significant difference.

RESULTS

Socio-Demographic and Work-Related Characteristics

A total of 228 respondents were approached to participate in the study. Of these, 222 respondents returned the questionnaire giving a response rate of 97.4%. More than two third (69.8%) of respondents were females and others were males. Majority, 152(68.5%) were married and more than half (52.3%) of them were diploma holder. The age of the study respondents ranged from 20 to 57 years with mean (±SD) age of 28.0 (±4.21) years. Table 1 shows socio-demographic profile and work-related characteristics of respondents.

Table 1: Socio-demographic profile and work-related characteristics of respondents (N=222)

Variables	Number of respondents	Percentage (%)
Age (in years)		
≤30	126	56.8
31-40	50	22.5
41-50	34	15.3
>50	12	5.4
Sex		
Male	67	30.2
Female	155	69.8
Marital status		
Single	62	27.9
Married	152	68.5
Divorced/widowed/separated	5	3.7
Education level		
Certificate	70	31.5
Diploma /advanced diploma	116	52.3
Degree	28	12.6
Masters /PhD	8	3.6
Institutional status		
Hospital	142	64.0
Health centre	55	24.8
Dispensary	13	5.8
Clinic	12	5.4
Type of health facility		
Public	122	55.0
Private	100	45.0
Nurse categories		
Enrolled	109	49.1
Registered	113	50.9
Working experience (in years)		
<5	37	16.7
5-10	75	33.8
>10	110	49.5

Area of practice		
Emergency department	45	20.3
Operating theatre	24	10.8
Medical/surgical/pediatric wards	75	33.8
Obstetrics/gynecology wards/labor ward	72	32.4
Others	6	2.7
Salary (TSh)		
<500,000	79	35.6
500,000-1,000,000	122	55.0
>1,000,000	21	9.4

Level of Nurses' Job Satisfaction and Intention to Leave Their Job

Overall, out of the total study respondents, 126(56.8%) were satisfied with their job and the remaining 96(43.2%) were not satisfied. Additionally, out of 222 respondents, 132(59.5%) were intended to leave their job and the remaining 90(40.5%) were not intended to leave their job.

Factors Associated with Nurses' Job Satisfaction and Intention to Leave Their Job

Tables 4a and 4b below shows factors associated with nurses' job satisfaction and intention to leave their job. After application of multivariate logistic regression model, nurse's age, education level, type of facility, work experience and monthly income were found to be associated with nurses' job satisfaction and intention to leave their job. Nurses aged >50 years were 3.54 more likely to be satisfied with their job (AOR: 3.54, 95% CI (2.44-8.55), p= 0.002) and were less likely intend to leave their job compared with nurses less than 30 years of age (AOR: 9.22, 95% CI (2.32-14.33), p<0.001). Bachelor or master's degree holder nurses were found to be satisfied with their job (AOR: 4.77, 95% CI (2.61-12.43), p= 0.001) and were less likely intended to leave their nursing profession (AOR: 4.83, 95% CI (1.73-13.50), p= 0.002) compared with certificate and diploma holder nurses. Nurses working in private facilities showed higher level of job satisfaction (AOR: 3.11, 95% CI (2.38-8.14), p<0.001) and were less likely intend to leave their job (AOR: 9.76, 95% CI (3.44-23.11), p=0.001) compared to nurses working in public health facilities. Nurses with work experience of 10 years and above were found to be satisfied with their job (AOR: 3.46, 95% CI (2.71-9.44), p= 0.002) and were less likely intended to leave their nursing profession (AOR: 8.21, 95% CI (1.96-14.21), p=0.013) compared to nurses with work experience of 5 years and below. High nurse's monthly income was significantly associated with higher nurses' job satisfaction (AOR: 5.88, 95% CI (2.55-14.67), p=0.001) and lower intention to leave nursing profession (AOR: 6.51, 95% CI (2.33-11.98), 0.014). Finally, nurses who were satisfied with their job were 5.1 times less likely intended to leave nursing profession compared with nurses who were not satisfied with the job (AOR: 5.11, 95% CI (2.36-12.87), p=0.001).

Table 2a: Factors associated with nurses' job satisfaction in selected public and private healthcare facilities in Dar es Salaam, Tanzania

Variables	Level of job satisfaction		OR (95% CI)	
	Satisfied N (%) n=126	Not satisfied N (%) (n=96)	COR (95%CI), *p*-value	AOR (95%CI), *p*-value
Age (in years)				
≤30	68 (54.0)	55(46.0)	1	**3.54(2.44-8.55), 0.002**
31-40	28 (56.0)	22(44.0	0.61(0.34-1.58), 0.654	
41-50	20 (58.8)	14(41.2)	0.82(0.26-2.77), 0.911	
>50	10 (83.3)	2(16.7)	2.21(1.43-7.88), 0.012	
Sex				
Male	38 (56.7)	29(38.8)	1	
Female	88(56. 8)	67(43.2)	1.25(0.55-2.55), 0.547	
Marital status				
Single	29 (46.8)	33(53.2)	1	
Married	95(62.5)	57(37.5)	1.33(0.89-3.87), 0.978	
Divorced/widowed/separated	2 (40.0)	3(60.0)	0.89(0.34-1.99), 0.782	
Education level				
Certificate	28 (40.0)	42(60.0)	1	0.98(0.43-2.62), 0.065
Diploma /advanced diploma	70 (60.3)	46(39.7)	1.44(0.32-2.77), 0.064	**2.11(1.51-5.33), 0.024**
Degree	21(75.0)	7 (25.0)	2.83(1.34-7.33), 0.015	**4.77(2.61-12.43),0.001**
Masters /PhD	7 (87.5)	1 (12.5)	3.32(1.98-9.22), 0.004	

Institutional status				
Hospital	80 (56.3)	62(43.7)	1	
Health centre	32(58.2)	23(41.8)	1.54(0.88-2.82), 0.423	
Dispensary	7(53.8)	6(46.2)	1.22(0.33-1.66), 0.981	
Clinic	7(58.2)	5(41.7)	1.41(0.11-2.66), 0.324	
Type of health facility				
Public	45(36.9)	77(63.1)	1	**3.11(2.38-8.14),**
Private	81(81.0)	19(19.0)	2.33(1.17-6.44), 0.021	**<0.001**
Nurse categories				
Enrolled	59 (54.1)	50(45.9)	1	
Registered	67 (59.3)	46(40.7)	1.12(0.86-3.11), 0.985	
Working experience (in years)				
<5	12 (32.4)	25(67.6)	1	**3.46(2.71-9.44),**
5-10	28 (37.3)	47(62.7)	0.34(0.13-1.96)	**0.002**
>10	86 (78.2)	24(21.8)	2.11(1.22-5.33), 0.012	
Area of practice				
Emergency department	28 (62.2)	17(37.8)	1	
Operating theatre	14 (58.3)	10(41.7)	1.44(0.32-2.66), 0.112	
Medical/surgical/pediatric wards	42 (56.0)	33(44.0)	1.34(0.56-3.11), 0.435	
Obstetrics/gynecology wards/labor ward	39 (54.2)	33(45.8)	0.98(0.22-1.98),0.218	
Others	3 50.0	3(50.0)	1.11(0.43-2.94), 0.432	
Salary (TSh)				
<500,000	41 (51.9)	38(48.1)	1	**5.88(2.55-14.67),**
500,000-1,000,000	67 (54.9)	55(45.1)	1.22(0.23-2.66), 0.098	**0.001**
>1,000,000	18 (85.7)	3(14.3)	3.62(2.21-9.66), 0.015	

Keys: COR=Crude odds ratio, AOR=Adjusted Odds ratio, CI = Confidence interval

Table 2b: Factors associated with nurses' intention to leave their job in selected public and private healthcare facilities in Dar es Salaam, Tanzania

Variables	Intention to leave		OR (95% CI)	
	Yes N (%); n= 132	No N (%);n = 90	COR (95% CI), p-value	AOR (95% CI), p-value
Age (in years)				
≤30	108 (87.7)	18(14.3)	6.35(3.11-9.76), 0.022	**9.22(2.32-14.33),**
31-40	12 (24.0)	38 (76.0)	2.87(1.65-8.07), 0.014	**<0.001**
41-50	8 (23.5)	26(76.5)	1.55(0.22-2.77), 0.069	1.32(0.99-2.54), 0.076
>50	4 (33.3)	8 (66.7)	1	0.74(0.11-1.44), 0.061
Sex				
Male	40(59.7)	27(40.3)	1.88(0.54-3.11), 0.067	
Female	92 (59.4)	63(40.6)	1	
Marital status				
Single	40(64.5)	22(35.5)	1.28(0.48,3.40), 0.112	
Married	89 (58.6)	63(41.4)	1.82(0.79-4.18), 0.833	
Divorced/widowed/separated	3 (60.0)	2(40.0)	1	
Education level				
Certificate	43(61.4)	27(38.6)	3.54(1.72-7.25), 0.012	4.83(1.73,13.50, 0.002
Diploma/advanced diploma	78(67.2)	38(32.8)	1.32(1.11-4.33), 0.002	2.59(1.36,4.59), 0.010
Degree	10(35.7)	18(64.3)	0.54(0.05-5.48), 0.221	1.48(0.79-2.80), 0.843
Masters /PhD	1(12.5)	7(87.5)	1	1
Institutional status				
Hospital	82 (57.7)	60(42.3)	1.52 (0.82-2.86), 0.439	
Health centre	35 (63.6)	20(36.4)	1.88 (0.75-4.98), 0.743	
Dispensary	8 (61.5)	5(38.5)	1.29 (0.73-2.24), 0.867	

Clinic	7 (58.3)	5(41.7)	1	
Type of health facility				
Public	92 (75.4)	30(24.6)	5.11(2.77-9.34), 0.011	**9.76(3.44-23.11), 0.001**
Private	40 (40.0)	60 (60.0)	1	
Nurse categories				
Enrolled	64 (58.7)	45(41.3)	0.99(0.43,2.29), 0.437	
Registered	68 (60.2)	45(39.8)	1	
Working experience (in years)				
<5	32 (86.5)	5 (13.5)	7.71(2.11-12.72), 0.003	**8.21(1.96-14.21), 0.013**
5-10	40 (53.3)	35 (46.7)	1.77(0.85-2.33), 0.952	
>10	60 (54.5)	50 (45.5)	1	0.55(0.11-1.22), 0.087
Area of practice				
Emergency department	28 (62.2)	17(37.8)	1.44(0.56-2.49), 0.872	
Operating theatre	17 (70.8)	7(29.2)	1.3(0.72-2.36), 0.897	
Medical/surgical/pediatric wards	43 (57.3)	32 (42.7)	1.45(0.66-3.18), 0.981	
Obstetrics/gynecology wards/labor ward	40 (55.6)	32 (44.4)	1.10(0.41-2.45), 0.457	
Others	4 (66.7)	2(33.3)	1	
Monthly salary (Tsh)				
<500,000	70(88.6)	9(11.4)	5.88(2.43-12.43), 0.011	**6.51(2.33-11.98), 0.014**
500,000-1,000,000	52 (42.6)	70 (57.4)	0.45(0.11-0.97), 0.032	1.64(0.85-1.98), 0.078
>1,000,000	10(47.6)	11(52.4)	1	
Job satisfaction				
Satisfied	45(35.7)	81(64.3)	3.45(1.33-6.77), 0.013	**5.11(2.36-12.87), 0.001**
Not satisfied	87 (90.6)	9 (9.4)	1	

Keys: COR=Crude odds ratio, AOR=Adjusted Odds ratio, CI = Confidence interval

DISCUSSION

This study aimed to assess nurses' job satisfaction and intention to leave their job and associated factors in selected public and private healthcare facilities in Dar es Salaam, Tanzania, employing a cross-sectional survey method. In this study, the level of nurses' job satisfaction was found to be 56.8%. This finding is consistent to the studies conducted in Turkey (58.0%) [26], Nepal (54.3%) [27], and South Africa (52.1%) [11]. Conversely, the result of the current study is much lower than the result of a study performed in a tertiary care hospital in Nigeria, in which the level of satisfaction of nurses with their jobs was 90.4% [24]. The result of the current study is also lower than the result of a study performed in Australia among nurses which showed that 67% of nurses were very satisfied with their present job and 71.7% of nurses were even very satisfied with being a nurse [24]. The difference might be due to variation in the data collection tools, use of different cutoff points, sample size, sampling methods, study setting and study participant variation. In addition, 59.5% of nurses in the present study reported their strong intention to leave their job, a finding which is similar with a study conducted in Ethiopia where 60.2% of nurses were intended to leave nursing profession [28]. However, low levels of intention to leave the nursing profession was reported in studies carried out in Tanzania, Malawi and South Africa which indicated that 18.8%, 26.5% and 41.4% of health workers including nurses had the intention to leave their job to seek employment elsewhere respectively [11]. Our findings in this study also showed that the overall level of nurse's intention to leave their job was high compared to the previous studies done in Saudi Arabia (40%) [29], and South Africa (44.3%) [20]. This difference might be due to study setting variation stating that the current study included both the hospital and health center nurses, but only hospital nurses were participated in Saudi Arabia and South Africa. The intention to leave the nursing profession is of great concern, and several studies have explored this topic and provided statistics on nurses' intention to leave [28].

Several studies have been conducted to investigate the determinants of nurses' job satisfaction and intention to leave their job [14-16]. It is well documented that nurses' job satisfaction and their intention to quit the present workplace are significantly influenced by personal characteristics of nurses [14-18]. In this study, job satisfaction was significantly lower in the age group less than 30 years of age compared to those over 50 years. Additionally, younger nurses less than 30 years of age demonstrated higher intention to leave their job compared to those over 50 years. The finding in our study that younger nurses have lower levels of job satisfaction and higher intention to leave has been confirmed in a number of previous studies [30, 31], and in a meta-analysis of variables related to job satisfaction [32]. One possible explanation for this finding might be

that older nurses have more of a desire for stability as they approach their retirement age; the prospect of a retirement income is important to improving their quality of life. Also be that nurses over 50 years are more likely to have a family and therefore job stability is important.

It is well known that nurses' educational level is positively correlated to their job satisfaction and intention to leave nursing profession [26]. This correlation agrees with the current study and other studies [26-33], which demonstrated that nurses with certificate and diploma had lower levels of job satisfaction and higher intention to leave their job compared with nurses with a bachelor or master's degree. This finding is inconsistent with previous studies, which found that nurses with a higher educational level were less likely to be satisfied with their job and expressed higher intention to leave their job [34]. In the same way, one study by Liu *et al.,* [14], did not find any strong relation between nurses' job satisfaction and their educational qualification. The finding that nurses with certificate and diploma had lower levels of job satisfaction and expressed higher intention to leave their job than nurses with a bachelor or master's degree in the present study can be explained by the fact that as the level of education increases, the salary, money from working in leadership position and other fringe benefits increases making them highly satisfied and less likely to intend to leave their job.

Numerous studies have investigated the relationship between job satisfaction or the intention to leave and type of health facility [11-20]. In the present study, nurses working in private facilities showed higher level of job satisfaction and were less likely intend to leave their job compared to nurses working in public health facilities. This finding is consistent with findings reported from studies conducted among nurses in other countries [11-36]. A cross-sectional survey of nurses from Tanzania, Kenya, and Uganda found lower levels of job satisfaction when compared with a European reference group and also that satisfaction was lower among public hospital nurses than those working the private sector [37]. In these countries, it was found that low monthly salaries forced many nurses in public sector to seek new jobs and more attractive working conditions in the private sector or in other countries offering higher salaries and more benefits to nurses [35, 36]. On the contrary, other authors have found higher job satisfaction and lower intention to leave among nurses working in public healthcare facilities compared to nurses in the private hospital [38], attributing this to the fact that the monthly salaries of nurses in the private hospitals in these studies were typically lower compared to the salaries of nurses working in the public hospitals.

It is well documented in several studies that nurse's monthly income is significantly associated with nurses' job satisfaction and intention to leave nursing profession [38, 39]. In the current study, nurse's monthly income was significantly associated with nurses' job satisfaction and intention to leave nursing profession in which nurses with low income were found to have lower job satisfaction and were more likely intend to leave the profession comparing with nurses high income. The finding of this study is in line with the finding of a study conducted in other studies [11-39]. This finding may indicate that an income may be one of the reasons for seeking an alternative job opportunity where employees with low income search for other alternatives where they can earn a relative favorable income. This may inform hospitals and the health care system to consider means of increasing the income of the employees specially nurses, in their staff retention strategies and policies. This study suggests that efforts should be made to gradually raise the salary of nurses, especially in the public sector to address the growing needs of nurses.

The association between nurses' experience and job satisfaction or intention to leave nursing profession is well documented in a number of previous studies [26-33]. It is reported that the experienced nurses (more than 10 years) showed a positive correlation to their job satisfaction and conveyed less intention to quit from the existing workplace compared with less experienced nurses [11-33]. The findings of the present study indicated that more nurses with low experiences were found to have lower job satisfaction and were more likely to leave nursing profession when compared with nurses with work experience of 10 years and above. This finding is in keeping with a study conducted in 10 European countries which showed that nurse with less years of working experiences had lower job satisfaction and were more likely intended to quite their profession [40]. One possible explanation for this finding might be that the more experienced nurses may have invested more of themselves in the organization, making leaving impractical for them. Nurses with fewer years of experience are more likely to disclose intent to leave their positions. This may reflect a normal tendency for newer employees, after working a certain period in the nursing profession, to start reevaluating their lives in terms of future career paths.

It has been documented in several studies that job satisfaction is significantly associated with nurse intention to leave their profession, suggesting that nurses who are not satisfied with the job are more likely intend to leave nursing profession compared with nurses who satisfied with the job [11-16]. In the present study, nurses who were satisfied with their job were 5.1 times less likely intended to leave nursing profession compared with nurses who were not satisfied with the job. This finding is in line with one study conducted in Turkey which found a negative correlation between job satisfaction and intention to quit among nurses [26]. This study suggests that the likelihood of nurses leaving their current employment increases as job satisfaction decreases. Previous studies have documented the importance of job satisfaction as a mediating factor in the

relationship between work context and intention to leave nursing [16-26]. This implies that job satisfaction plays an important role in mediating the impact of work context on nurses' intention to leave. It has also been identified as a strong predictor of nurses' intention to leave their current job, explaining a significant portion of the variance in intention to leave [11-26].

This study has several limitations that should be considered. First, the fact that a self-reported questionnaire was used to collect data for this study, this may lead to possible response bias from each responder. Second, the data obtained might not be representative of the country, since this study was conducted in only five districts in Dar es Salaam and therefore limits generalizability to other areas of the country due to the limited variability of the study population and study sites. Third, the fact that this study employed a cross-sectional study design, the cause and effect among the study variables cannot be inferred and likewise it cannot track temporal changes hence results can be limited or potentially biased. Therefore, future studies using mixed methods or qualitative designs are recommended to gain a comprehensive understanding of the issues and problems causing nurses' intention to leave. Despite these limitations, our study contributed to a better understanding of nurses' job satisfaction and intention to stay in the local setting.

CONCLUSION

Findings from this study demonstrated that more than half of nurses were satisfied with their job and expressed higher intention to leave nursing profession. Nurse's age, education level, type of facility, work experience and monthly income were found to be associated with nurses' job satisfaction and intention to leave their current job. It is recommended in this study that steps should be made in developing strategies to improve nurses' job satisfaction and to encourage nurses to remain in their current workplace. Paying attention to issues pertaining to nurses' job satisfaction, addressing nurses' needs, and increasing their salary along with the other facets of job satisfaction are focal points of action to ensure the adequate supply of nurses. The result of this study also calls for more attention to be given to increasing the salary of nurses particularly in the public sector to help halt the loss of skilled nurses in the country.

Ethical Consideration

Ethical clearance to conduct the study will be sought from the Institutional Ethical Review Board of the Hubert Kairuki Memorial University (HKMU). Permission to conduct the study was sought from the Regional Administrative Secretary (RAS) of Dar es Salaam as well as the District Executive Director (DED) of respective districts through the Medical Officer in-charge (MO i/c) of respective health facilities (HF). Study participants were informed on the study purpose as well as rationale, risks, benefits and the right to withdrawal from the study and that, participation was voluntary, hence only those who were willing to participate in the study had to sign in the consent form. Names of the study participants were not written on the consent forms and questionnaires; only the identification number was recorded to ensure confidentiality. Participants who agree to participate will be requested to sign a written consent.

Conflict of Interest: The authors declare no conflicts of interest.

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