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FACTORS INFLUENCING ATTRITION OF NURSES IN ROYAL VICTORIA TEACHNG HOSPITAL, THE GAMBIA

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ABSTRACT

Background: Human resources are the foundation of a health system and a key prerequisite for improving health outcomes. In recent years, there is a crisis in human resources for health in The Gambia due to high attrition rate of trained health care professionals. As employees leave an organization, they take with them much-needed skills and qualifications that they developed during their tenure. However, understanding the factors that satisfy or dissatisfy nurses can guide the development of interventions that can improve the working conditions and discourage attrition among them. Therefore, the purpose of this study was to determine the factors influencing the attrition of nurses in the Royal Victoria Teaching Hospital (RVTH).

Methods: A descriptive study design was used and information was obtained through self –administered questionnaire from a simple randomly selected sample of 75 nurses. Data was analyzed with SPSS version 15 using descriptive and inferential statistics and the significant level was set at 0.05.

Results: Findings from the study indicate that 24% of the respondents already left the hospital and 67% of those working with RVTH during the time of data collection reported that they had the intention to leave. Among those who left the hospital, most of them were trained midwives and had working experience of 10 years or more. The study respondents rated the hospital low in meeting their basic human needs. The main factors reported to be contributing to their attritions were low opportunity for promotion, management and financial problems, lack of self-esteem and self-actualization and low sense of love and belonging.

Conclusion: The high rate of attrition among nurses in RVTH calls for urgent interventions that will include reviewing the remuneration of nurses and management reform that targets their human needs.

Keywords: Attrition, Basic Human Needs, Factors Influencing, Nurses, RVTH, The Gambia.

INTRODUCTION

This study was conducted in 2010 but it is believed to be still relevant as it deals with attrition of nurses who are the foundation of a health system and a key prerequisite to improving health outcomes [1]. In recent years, the situation of human resources for health (HRH) in many sub-Saharan African countries has been commonly described as crisis [2]. A key contributor to the crisis is attrition of the health workforce, measured by the number of health workers who permanently leave their posts [2, 3]. Attrition is due to a number of reasons, including retirement, death, dismissal and voluntary resignation by health workers who leave the public health sector to work in the private sector, for more attractive occupations in the home country, or to emigrate to work in health facilities in richer countries, in search of better pay and working conditions [4]. In the Gambia, as in other countries in sub-Saharan Africa, the HRH crisis has become a major challenge for health service delivery and for achieving the health-related Millennium Development Goals [5]. The emergence and re-emergence of infectious diseases such as HIV/AIDS, TB and malaria have increased the demand for health services, putting an additional stress on the existing human resources in the public health sector in African Countries [6]. As the Gambia started receiving support for HIV/AIDS, TB, malaria and immunization services from international donors such as Global fund, Global Alliance for Vaccines and Immunization and UNICEF in 2004 – 2010, the country's ability to translate such funding into improved and equitable health outcomes is threatened by the lack of sufficient human resources in the health sector (Demographic Health Survey [7]. In the public sector there were three doctors and 49 nurses per 100 000 population (compared to a ratio of 143 nurses per 100 000 population recommended by the World Health Organization), and more than half of all health personnel and 80% of doctors were based in urban areas [5]. Shortages and misdistribution of HRH in the public sector may also pose a major challenge to Gambia in reaching the health-related Sustainable Development Goals [8).

Effective HRH planning and policy formulation in the Gambia and elsewhere require sound empirical evidence on why and at what rate health workers leave the public health sector. However, while their anecdotal evidence of high attrition rates among health workers in The Gambia, there is a weak human resource information system (HRIS) that cannot provide adequate data on the rates of health worker attrition in the country. One way to obtain

empirical data on HRH attrition, when the data are not routinely available from a HRIS, is a health facility survey. Surveys of available HRH resources in developing countries have become more prevalent in recent years, often as part of larger health services provision surveys [7]. However, service provision surveys focus on the numbers and training characteristics of health workers, and do not include questions about HRH attrition. Moreover, no study was found in literature looking at the factors contributing to the attritions of nurses in the Gambia and though other studies were limited to material incentives, few if any studies, except this one took the novel approach of also considering non-material factors. Therefore, this study is highly needed to add to the evidence on HRH attrition in sub-Saharan Africa, to provide evidence for HRH planning in the Gambia and to lay the groundwork for further research needed to support HRH policy decisions in the country and beyond.

AIM OF THE STUDY

The purpose of this research was to describe the factors that had contributed to the attrition of Nurses in RVTH. From this exploration, recommendations for possible solutions of the attrition of nurses in the Gambia were highlighted and areas for further research were identified.

STUDY OBJECTIVES

The objectives of this study are

1. To describe the demographic distribution of nurses leaving RVTH.
2. To determine the levels in which RVTH is able to meet the human needs of nurses.
3. To explore the relationships between background factors (age, cadre, length of service and position held), human needs and attrition of nurses in RVTH.

THEORITICAL FRAMEWORK

The Maslow Hierarchy of Needs [10] was the theory that guided this research work. According to this theory, there are five categories of human needs, which are to be fulfilled sequentially in order to initiate, promote and maintain a desired human behaviour. These

needs are physiological, safety, love/ belonging, self-esteem and self-actualization [10]. This study measured these concepts of Human Needs in order to find out which of the needs of the nurses are not met and its relationship with their attrition. Other related literatures were also reviewed so as to outline what has been already known about the problem under research and how they are related to the Gambian situation. Conceptually, the Maslow Hierarchy of Needs Model proposes that one or more of the needs of the nurses in RVTH could not be fulfilled in the required sequential order leading to their attrition. However, related literatures suggest that there are influential factors that affect the attainment of these needs in the work setting [3, 6, 11]. These factors are unsupportive management, suboptimal working environment/condition and low remuneration. According to these literatures [2, 3, 7, 11] unsupportive management is characterized by lack of promotion, lack of continuing professional education, lack of autonomy, no performance appraisal system, favouritism and stereotype which can have direct effect on self-actualization, self-esteem, and love/belonging. The main features of suboptimal working conditions are shortage of staff and lack of essential equipment to do the work [12]. Shortage of staff has can perform dual functions, i.e. can lead to attrition due to overwork but attrition can in turn lead to shortage of staff. Suboptimal working environment/conditions hamper the attainment of the need for occupational safety because it can cause increased risk for nosocomial infections and injuries [12]. The characteristics of inadequate remuneration are inability to own a compound, difficulty in financing children's education and feeding which affect the attainment of the physiological needs of the nurses, and thereby leads to attrition [11, 12] (Figure 1).

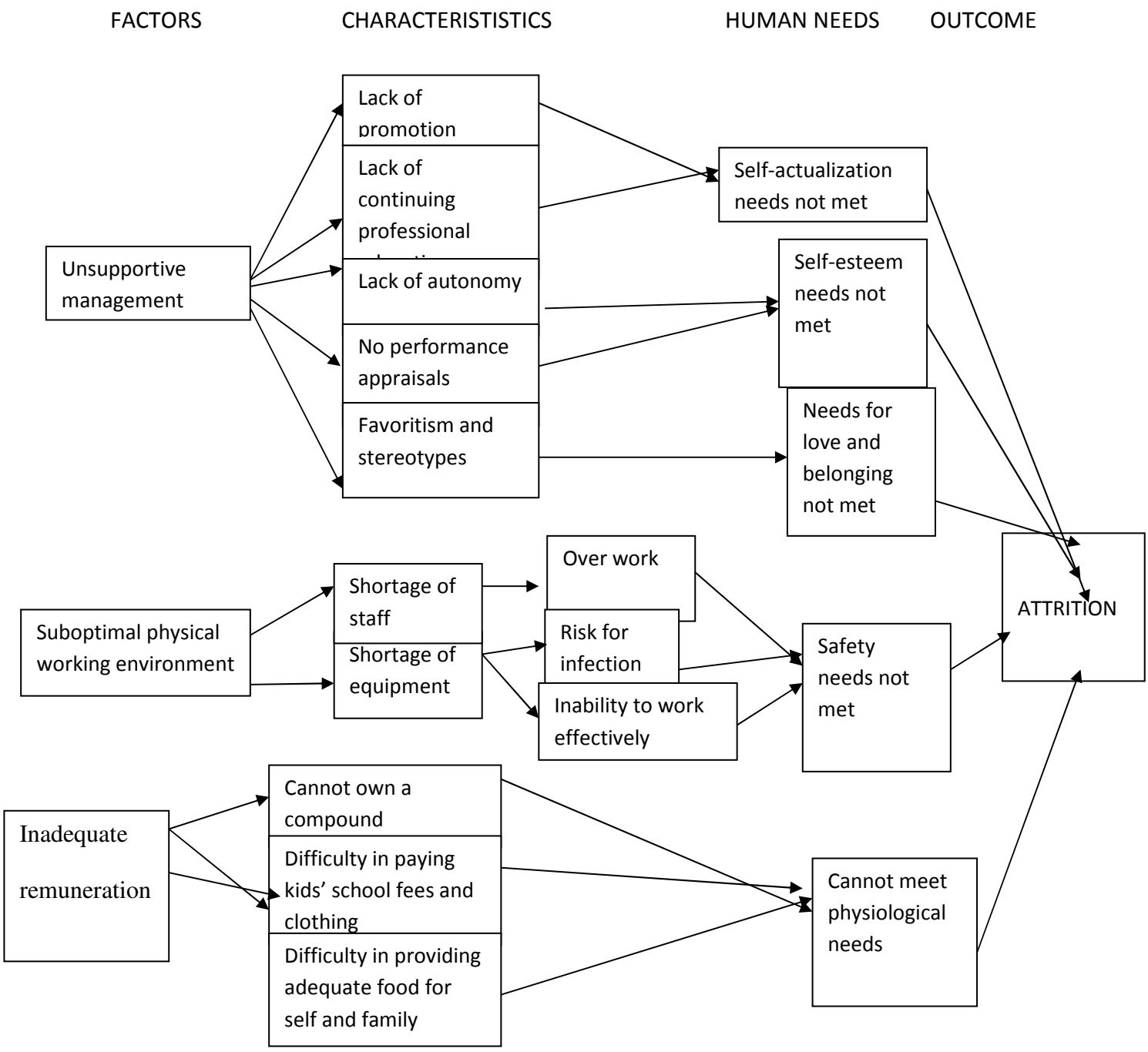

FIGURE 1: CONCEPTUAL FRAMWORK

METHODOLOGY

STUDY DESIGN

This study used a descriptive cross-sectional design in order to describe the relationships among the study variables. The study began with an exploration of the common factors responsible for attrition of nurses in developing countries cited in literatures and the relationships between these factors and attrition of Gambian nurses were measured. Using this design facilitated the identification of relationships among the study variables without manipulating environment of the participants.

STUDY POPULATION AND INCLUSION CRITERIA

The study population consisted of all the nurses working at RVTH during the time of the data collection and those that left RVTH in the period 2004 – 2009. In RVTH there are two distinct categories of nurses, i.e., trained and untrained nurses. The trained nurses are further divided into levels, i.e., the first level nurses are the registered nurses and midwives and second level nurses are enrolled nurses and midwives. The untrained nurses are the ancillary nurses. According to the staff records in RVTH, there were 236 nurses working at the hospital during the time of data collection. This record also showed that 86 nurses left the hospital from 2004-2009. Therefore, the total study population was 342 nurses.

The inclusion criteria for this study was; working as a nurse in RVTH during the period of the study; or resigned from nursing job from RVTH between the period 2004 and 2009.

SAMPLE SIZE AND SAMPLING TECHNIQUE

In the expectation of 70% response rate, a sample of 106 participants was identified for this study. An effective sample size of 96 students was calculated using the formula from WHO for Sample Size Determination in Health studies [13] as follows:

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

Thus: n = $\frac{1.96^2 \cdot 0.5 \cdot 0.5}{0.1^2} = \frac{3.8416 \cdot 0.25}{0.01} = 96.04$

Where *n* = sample size,

Z = Z statistic for a level of confidence,

P = expected prevalence or proportion, and *d* = precision (in proportion of one; if 5%, *d* = 0.05).

Z statistic (*Z*): For the level of confidence of 95%, which is conventional, *Z* value is 1.96.

At least 96 participants of randomly selected nurses were needed in order to be 95% confident that the sample mean would be within one standard error of the true population mean. However, the sample size for the current study was set to 106 respondents after 10% of the calculated sample size to make-up for non-turns or incomplete questionnaires.

Two sampling methods were used in this study, that is, simple random sampling and convenient sampling. Convenient sampling was used for respondents who were not currently working in RVTH while simple random sampling was done for the selection of respondents working at RVTH during the period of data collection. The attrition data set in RVTH was reviewed; the names of all those nurses who left the hospital from 2004 to 2009 recorded, and respondents from this group were selected by convenient sampling method. The reasons for using convenient sampling for this category include that some of them travelled outside the country or were working in the far side of the country, that is, they were inaccessible.

During the simple random sampling, all the names of nurses working in RVTH during the time of the study were acquired and recorded in a computer. These names were arranged in alphabetical order and computer-generated random numbers were assigned to the corresponding names in the list. That is, the names of nurses that matched the random numbers were selected as respondents. This random sampling was used to strengthen the study design.

RESEARCH TOOL

The instrument used in this study was developed by the researchers, guided by the Maslow' Hierarchy of Human Needs Model and related literature. The questionnaire consisted of two parts. Part one dealt with the demographic data of the respondents and part two was on factors related to attrition of nurses. The demographic part was made of twelve (12) questions. Under part two, factors relating to attrition of nurses were measured by the

Human Basic Needs Indicator Scale. This scale is a 48- item questionnaire design to measure the five constructs of the Maslow Hierarchy of Human Needs Model.

SCORING OF RESEARCH TOOL

Responses of items of the Human Basic Needs Indicator Scale was measured on a 5-point likert-type scale ranging from 1-5, with 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. Negatively worded items were reversed coded and scale scores were computed by summing up item scores. There were 48 items, with total score ranging from 48 to 240. The physical needs subscale contained six items and its total score ranged from 6 to 30 on meeting of the physical needs. The safety subscale contained seven items; total score ranged from 7 to 35 on safety needs. The love and belonging subscale contained seven items; total score could range from 7 to 35. The self-esteem and self-actualization subscale contained eight items; total score could range from 8 to 40. The higher the score on the subscales of physical, safety, love and belonging, self-esteem and self-actualization, the greater the perception or belief held.

VALIDITY AND RELIABILITY OF THE STUDY QUESTIONNAIRE

The study questionnaire was sent to five experts on human resource management, hospital administration, research and nursing. These experts were tasked to review the questionnaire for comprehensiveness, representativeness and clarity, as they have never been tested in the targeted population. Each item was measured using three categories, that is, representativeness, clarity and comprehensiveness. Representativeness was measured using a 4-point Likert-type scale with the lowest to highest indicating “item not representative”, “item needs major revision to be representative”, “item needs minor revision to be representative” and “item is representative” respectively. Clarity was also measured using a 4-point Likert-type scale in which 1 = item not clear; 2 = item needs major revision to be clear; 3 = item needs minor revision to be clear; and 4 = item is clear. Comprehensiveness was measured using a 2-point Likert-type scale; 1 = item should be deleted and 2 = item should be retained. Ratings were averaged across the five experts; with average item ratings ranging between 3.2 and 4. Only two items had average rating between 1.4 and 2, and were deleted from the questionnaire.

The study questionnaire was also pilot tested with a sample of 10 nurses from Serekunda Hospital. The study instrument recorded a good reliability value during the data analysis. The total Chronbach's alpha of the Human Need Scale was 0.83. The Physical Need Subscale had a Chronbach's alpha of 0.86, Safety Needs Subscale was 0.81, Love and Belonging Subscale was 0.84 and Self-esteem and Self Actualization Subscale was 0.79 respectively.

DATA COLLECTION

Self-administered questionnaire was used as a data collection technique. It took two months to collect the data (8th July – 30th September, 2010). Considering that a number of investigators reported response rates between 65% and 85% in surveys of nurses (9, 10], at least 70% response rate was expected but it turns to be 71%.

DATA ANALYSIS

Data was coded and analyzed using Statistical Package for Social Sciences Version 15.0 (SPSS, INC., Chicago, IL). All raw data were entered in the computer and checked for errors. The research questions provided direction for analysis of the study. Preliminary analysis included: a) frequency and distributions of the sample on all background variables; b) summary statistics and internal consistency reliability, Chronbach's alpha was used to estimate the reliability of the study tool; and c) correlation and linear regression were used to check for relationships between study variables. Level of statistically significant was set at $p < 0.05$.

ETHICAL CONSIDERATIONS

All the ethical protocols of RVTH were observed. These included presenting the research proposal to the research review board and giving the respondents the required information for informed consent. Each of the respondents was given consent forms to sign.

RESULTS

Characteristics of the respondents

A total of 106 nurses were enrolled into the study but only 75 of them completed filled and returned the study questionnaires making a response rate of 71% (table 1). The age range of the sample was 23 – 54 years with a mean age of 34.50 years and standard deviation of 8.33 years. There were more males (n= 38; 51%) than females (n= 37; 49%). Most of them were married (n = 48, 64%). The largest ethnic group was Mandinka tribe (n = 24, 32%). Fula represented the second largest (n = 19, 25%). Most of them were SRNs (n = 34, 45%) and were working with RVTH (n = 51, 68%) while the remaining 32% (n= 24) already left RVTH during the time of data collection. Most of the nurses in this sample had nursing experience of 10 years or more (n = 36, 48%) but 60% (n = 45) worked with RVTH for only 1 – 3 years.

Table 1: Demographic Distribution of Study Respondents (N = 75)

Variable	n	%
Age		
M	*34.5*	
SD	*8.3*	
Gender		
Male	38.0	51.0
Female	47.0	49.0
Marital Status		
Single	23.0	30.0

Married	48.0	64.0
Widow/Widower	2.0	3.0
Divorce/Separated	2.0	3.0
Ethnic Background		
Mandinka	24.0	32.0
Wollof	15.0	20.0
Jola	5.0	7.0
Fula	19.0	25.0
Others	12.0	16.0
Nursing Cadre		
SRN	34.0	45.0
SCM	12.0	16.0
SEN	12.0	16.0
SEM	9.0	12.0
Ancillary Nurse	8.0	11.0
Working experience		
1- 3 years	*30.0*	40.0
4 – 6 years	*6.0*	8.0
7 – years	3.0	4.0
10 years or more	36.0	52.0
Years of working with RVTH		
1- 3 years	45.0	60.0
4 – 6 years	9.0	12.0
7 – years	6.0	8.0
10 years or more	15.0	20.0

DESCRIPTION OF THE RESPONDENT WHO WERE NOT WORKING WITH RVTH

Among the nurses who had already left RVTH during the time of data collection (n = 24), most of them were male (n = 14, 58%), midwives (n = 14, 58%) and had working experience of 10 years or more (n = 18, 75%), but 42% (n = 10) of them worked with RVTH for only 1 – 3 years before leaving. With regard to position held prior to leaving RVTH, 46% (n =11) reported that they were senior nurses whilst 42% (n =10) said junior nurse and remaining 12% (n = 3) said senior nursing officer. Most of them (n = 11, 46%) reported that they left RVTH due to administrative problems, whilst the rest gave financial problems like low salaries and difficulty in accessing loans (n = 7, 29%), unsafe working environment due risk for infection and over worked (n = 2, 8%) and others like academic and health reasons (n = 4, 17%). More than three-quarters of them (n = 15; 79%) reported working with private pharmacies whilst the remaining 14% and 7% worked with private hospitals and self-employment respectively (Figure 2).

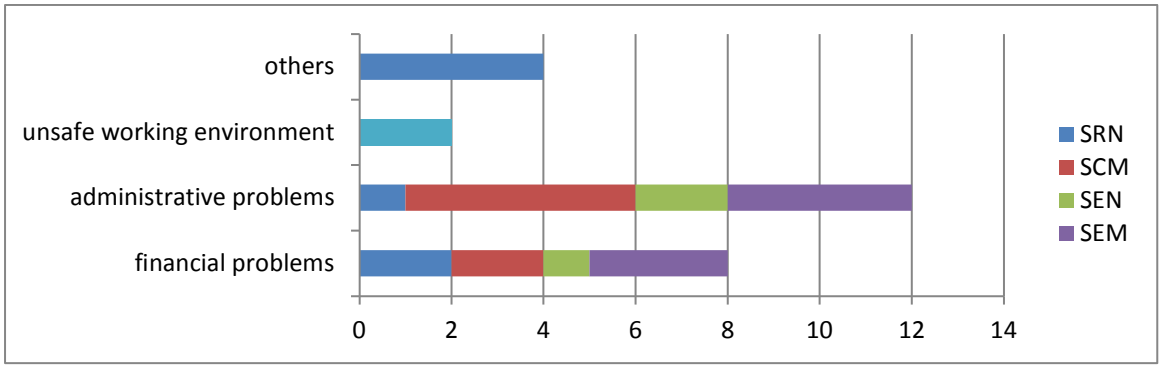

Figure 2: Bar Chart Showing Distribution of Reasons for Attrition across Nursing Cadres

Note: SRN = State Registered Nurse, SCM = State Certified Midwife, SEN = State Enrolled Nurse, SEM = Stated Enrolled Midwife

DESCRIPTION OF THE PARTICIPANTS WHO WERE WORKING WITH RVTH

Among the study participants who were working with RVTH during the time of data collection (n = 51), 69% (n = 35) were female nurses. The most frequent cadre of nurses was SRN, represented by, 55% (n = 28), followed by SEN (n = 10, 20%). Majority (n = 35, 69 %) of this category of participants worked with RVTH for only 1- 3 years. However, 67% (n = 34) reported that they had the intension to leave RVTH and most of them (53%) said that they will be

leaving due to poor management system in the hospital. Moreover, even those with no intention to leave (figure 3) reported that they have no plan to leave because of their love for the nursing profession (n = 14, 28%), love for the country (10%, n = 5), had no other option but to stay (24%, n = 12), contented with what is provided (14%, n = 7) and others like waiting for opportunity to go for further studies or promotion (6%, n = 3, Figure, 3).

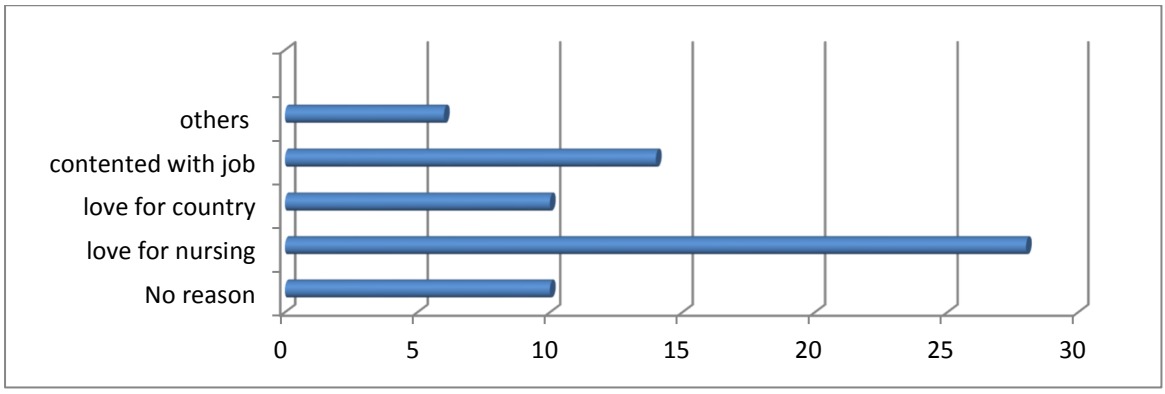

Figure 3: Bar Chart Showing Reasons for not intending to Leave RVTH among Participants

Needs of the Participant Nurses

The human needs of the study participants were assessed by measuring the following dimensions of the Maslow's Hierarchy of Health Needs Model: Physical needs, Safety Needs, Love and Belonging, Self Esteem and Self Actualization Needs. In this study, the participants rank the RVTH lower in meeting their physical needs (m = 2.07, SD = 0.64) than safety needs (m = 3.68, SD = 2.02). Almost half (n = 37, 49%) of the nurses did not agree that they find it easy to feed themselves and families and in paying their children's school fees. Moreover, 68% (n = 51) strongly disagree that they were contented with the amount they were paid. With regard to meeting their safety needs, the nurses could neither agree nor disagree whether their safety needs were met by the Hospital Management. Nonetheless, most of them disagree (56.0%) that the hospital environment is safe, 51% (n = 38) disagree that nurses in RVTH are not at risk of infection and injuries and 53% (n = 40) strongly disagree that nurses in RVTH do have health insurance. The participant scored RVTH low in meeting their love and belonging needs (m = 2.57, SD = 0.80). Thirty-eight percent (n =29) of the participants strongly disagreed that the work of the nurses is highly recognized in RVTH and agreed that there is no system of appraisal in RVTH. However, a good number of them disagree or cannot decide

(25%) that some nurses are discriminated in RVTH. They also disagreed (n = 37, 49%) that there is no union or association in RVTH. Meeting the self- esteem and self-actualization needs of the participant was rated low. The mean score for this subscale was 2.24 with a standard deviation of 0.67 which indicated that the nurses in this study disagreed that their self- esteem and self-actualization needs were met by their employer institution, i.e., RVTH. Sixty-eight percent (n = 51) disagreed that they had opportunities for further training and 33% (n = 25) strongly disagreed that they were frequently provided with opportunity to attend in-service training. Moreover, they reported that it is not easy to be promoted (81%) and there are limited senior positions in RVTH (65%, n = 49). Fifty-seven percent (n = 43) said that the retirement benefits for nurses are not attractive and there is too much control from the management (49%, n = 37) with decisions solely made by management without consulting junior staff.

Relationships between Human needs, Intention to leave RVTH and Attrition of Participants

The result of the bivariate analyses presented in Table 2 shows that, currently working with RVTH was significantly positively related to intention to resign from RVTH ($r = .89$, $p < .001$), but negatively related to the level of meeting the needs for love and belonging ($r = -.33$, $p < .001$), and self –esteem and self-actualization ($r = -.31$, $p < .001$). The relationship between the participants' intention to resign from RVTH and the level of meeting their total human needs was significantly negative ($r = -. 32$, $p < 0.001$). However, its relationships with the other human needs, i.e., safety needs, and physical needs were negative but not significant. This means that the lower in meeting their human needs, the more likely these participants will have the intention to resign. The higher they rated their intention to resign from RVTH, the more likely they will leave.

Attrition from nursing job in RVTH was negatively related to the levels of meeting all the human needs but these relationships were not significant except for the need for love and belonging ($r = -.26$, $p < 0.05$) and self-esteem and self-actualization needs ($r = -.79$, $p < 0.001$. All the human needs subscales were significantly positively interrelated.

Table 2: Interrelationships between Human needs, Intention to leave RVTH and Attrition of Participants

Variable	Resigned	Int. resign	Phy. need	Saf. need	Love. need	Self-est. and act. need	Human needs total
Resigned	1						
Int. resign	.89**						
Phy. need	-.08	-.15					
Saf. need	-.07	.-18	.45**				
Love. need	-.26*	-.33**	.33**	.37**			
Self-est. need	-.79**	.-31**	.47**	.55**	.64**	1	
Human needs total	-.22	.-32**	.68**	.73**	.78**	.88**	1

Note: **p < 0.01. *p < 0.05. Resigned = Resigned from RVTH. Int. resign = intention to resign from RVTH. Phy. need = Physical needs. Saf. need = Safety needs. Self-est. need = self-esteem and self –actualization needs.

The stepwise regression analysis presented on Table 3 indicated that demographic variables specifically position held before leaving RVTH and reasons for leaving RVTH (notably management and financial problems) accounted for 61% (R^2 = .61, p < 0.001) of the variance in attrition from working as a nurse in RVTH among the participants. Attrition was negatively significantly related to position held before leaving RVTH (β = -.90, P < 0.01, df = 73). This is shown by the Junior and Senior Nurses reporting higher frequencies of leaving RVTH than Nursing Officers and Senior Nursing Officers. Position held before leaving RVTH only, accounted for 35% (R^2 = .35, p < 0.001) in the reported attrition rate by the study participants.

There was no significant prediction of nurses' attrition from gender, tribe, nursing cadre and years of nursing experience among the study population.

The human needs specifically love and belong, and self-esteem and actualization needs accounted for 35% ($R^2 = .35$, $p < 0.05$) of the attrition among the study participants. Combining these human needs with position held prior to leaving and reasons for leaving increases the attrition prediction value of these participants to 94% ($R^2 = .94$, $p < 0.001$).

Table 3: Summary of Stepwise Regression Analysis for Demography, Human needs, and Attrition of Participants (N = 75)

Variables	Model 1			Model 2			Model 3		
	B	SE of B	β	B	SE of B	B	B	SE of B	B
1. position before leaving	-.48	.03	.90**	-.29	.03	-.55**	-.28	.02	-.52**
2. reasons for leaving				11	.02	.52**	.10	.01	.43**
3. Love and belonging needs							-.02	.01	-.26*
4. self –esteem and actualization							-.01	.002	-.23*
R^2 of Model		.35			.61			.94	

Note: **p < .01. *p < .05. df: model 1 = 73, Model 2 = 72 and Model 3 = 71

DISCUSSION

The research was done based on the aim of determining the factors contributing to attrition of nurses in RVTH and the results highlight several areas for discussion. First, the overall attrition rate was high. This finding is in line with the typical concern voiced by researchers and policy-makers that secondary and tertiary health facilities, in sub-Saharan Africa tend to lose nurses at a higher rate, compared to that of the developed countries [14, 15, 16, 17]. According to Pillay, reports confirmed that nurses working in the private healthcare sector in South Africa were more satisfied with their salary, workload, working environment, and resource availability than their colleagues in public healthcare facilities [18]. In RVTH, trained midwives (State Certified Midwives and State Enrolled Midwives) and Registered Nurses (State Registered Nurses) had much higher rates of attrition, compared to Enrolled Nurses (SEN) and Nurse Ancillaries (NA), although resignation was the predominant reason for attrition in all cadres. This finding may reflect a recent trend for Midwives and SRNs, who may be moving completely away from public service rather than staying on with the dual employment opportunity (often referred to as "moonlighting") that has been on the books for years. The differential rates of attrition in these cadres and SEN and NA may thus reflect that these highly trained nurse professionals are more likely to emigrate for work in health facilities abroad or to go completely into private practice or employment in the NGO sector in the home country (which are not as readily available to SEN and NA). Moreover, majority of the nurses in this sample have nursing experience of 10 years or more but worked for few years in RVTH and left, which is a point of concern for the researchers. In addition, most of those who did not resign during the time of the data collection reported that they had the intension to leave RVTH and will be leaving due to poor management system in the hospital. This is indicating that RVTH is serving as an exit point for the most of the qualified nurses in the Gambia. RVTH being the only Teaching hospital in the Gambia is expected to attract nurses rather than repelling them. This problem found can easily be notice with the current situation of ward management in this hospital. Most the wards in-charges have less than two years of experience. In order for this hospital to be able to provide quality care to its clientele, a good number of senior trained staff is needed to assign them with the responsibility of managing and supervising the junior staff.

Secondly, human resources are the foundation of a health system and a key prerequisite to improving health outcomes. The Gambia is working hard towards achieving the sustainable development goals related to health but this is less likely to be realized if this trend of attrition of highly trained nurses continues. Most of those who resigned from RVTH are working with private pharmacies and hospitals which usually charge more than the average Gambians can afford. This means that even though their services may be available but not accessible to the larger population. Skilled deliveries form an integral part in the strategies of fighting Maternal and infant mortalities and morbidities. Similarly, it was reported in the State of North Carolina that the nursing shortages have garnered significant attention and resources from state and national workforce planners but investments in expanding program capacity have not been matched by attention to the factors contributing to the nurses' rates, with the result of enlarging the pipeline without fixing the leaks [19].

Studies from other countries as to why nurses resign have found that the main reasons are low pay, sub-optimal working conditions, shortage of staff and concerns regarding occupational safety [20, 21] and reasons related to the HIV/AIDS epidemic, such as fear of becoming infected on the job and overwhelming workload and stress induced by caring for, and seeing high death rates among HIV/AIDS patients [21]. It was found that an unfavorable working environment negatively affects employees physiologically, emotionally, cognitively and behaviorally which then leads to poor staff retention and organizational productivity [22]. In this study, an additional problem is unsupportive management systems and inability to meet their basic human needs especially sense of love and belonging and self- esteem and self-actualization needs. Results of a study conducted in the USA revealed that nurses who work in unfavorable environments tend to develop job-stress related conditions such as burnout, depression and aggression [23]. Aggression can further give rise to lateral violence, which can directly affect patient to nurse, family, or collegial, relationships [22, 23]. Furthermore, the attrition of senior nurses (SCM and SEM) positively correlated with limited positions for Nursing officers, Senior Nursing Officers and Matrons to be promoted to and low opportunity for further training. This had an effect in their ability to meet their self-esteem and self-actualization need. For the junior nurses meeting their physical needs especially finance, safety needs and sense of love and belonging were significant driving forces of their resignation in RVTH. These "push" factors combine with "pull" factors such as better pay and

opportunities available in other occupations or health facilities abroad contribute immensely in the attrition of nurses in RVTH.

Based on the Maslow's Hierarchy of Basic Human Needs Model, concepts of physical needs, safety needs, love and belonging needs, self –esteem and actualizations needs are positively related to the motivation to adhere to required behavior [24]. This is similar to the findings of this study that meeting the basic human needs have accounted for 35% of the variance of attrition among the participants. Combining these human needs with position held prior to leaving and reasons for leaving increases the attrition prediction value of these participants to 94%. Moreover, levels of meeting their basic human needs had strong correlations with problems reported to be motivating them to leave. This study finding is in accord with that of the Quality of Work Life (QWL) concept of Richard Walton, as stated in Booyens and Bezuidenhoudt, that human beings become part of an industrial organization in order to meet their economic, social and psychological needs and failure to meet them creates job dissatisfaction, low work morale, and an increased employee turnover [25].

IMPLICATION OF FINDINGS TO POLICY MAKERS

The issue of attrition of nurses is not only critical to inadequate nurses to meet the health needs of the increasing population of the Gambia but also for quality of care and cost of care both for the government and the general populace. To the extend nurses leave the nursing job, the risk for overworking the limited available staff increases resulting to de-motivation and eventually their attrition. Overworking the limited available nursing staff can also lead to poor quality of care with increase incidences of care-related complications, longer hospital admissions, increase medical care cost and deaths.

Although attrition of nurses may be due to natural factors such as old age and retirement but most of the time is as a result of man-made factors such as job-related stress, poor management and remuneration systems. Policy makers and RVTH administration in particular, need to recognize attrition of nurses as a major player in the quality of care provided to their clients and the health of the Gambians in general. Therefore, urgent interventions that involve reviewing the remuneration of nurses and management reform which targets the human needs of nurses should be undertaken.

LIMITATIONS OF THE STUDY

The research tool used in this study was developed by the researcher and has not been tested in different study populations. Therefore, if this tool is adopted for use in any research targeting different study population, validity and reliability estimates should be calculated to determine whether similar values like that of this study can be achieved.

The head of the management team, which is the Chief Medical Director, during the time of the data collection, is no more in RVTH. This means that there is a new leadership with possibility of different management style. The management problems highlighted in this study may not exist in this current management. Therefore, there is a need to conduct a similar study in the hospital to find out whether the problems found in this study still exist.

SUMMARY AND CONCLUSION

In summary, the results of this study showed that 32% of the participant already left the hospital within the period of five years (2004 to 2009), and 67% of those working with RVTH during the time of data collection reported that they had the intention to leave. Among those who left the hospital most of them were trained midwives (SCM and SEM) and had a working experience of 10 years or more but about half of them worked for RVTH for only 1 to 3 years before leaving. The participants rated the hospital low in meeting their human needs. The main factors reported to be contributing to their attritions were low opportunity for promotion, management and financial problems, lack of self-esteem and self-actualization and low sense of love and belonging.

Therefore, one can conclude that the evidence provided in this study highlights the need to develop appropriate policies to retain staff in the public health sector that may need to be tailored for different cadres based on their needs.

RECOMMENDATIONS

The findings of this study alongside with other literature suggest that the cause of nurses' attrition is multifactorial and human needs do change overtime. Therefore, descriptive data on factors contributing to attrition of nurses in RVTH is sensitive to time. Surveys need to be conducted periodically to examine these factors overtime. Interventional studies targeting

the human needs of the nurses can also be carried. These studies may include interventions like staff appraisal system, training, flexible loan scheme, etc. Further research into differences in attrition patterns by gender or region would help in designing retention incentives and shaping the composition of intakes to nursing schools. Although there has been heavy investment by both the Government and the development partners in the health sector, it is now evident that without earmarking some funds and staff motivated management style to increase the pool of human resources, nurses in The Gambia will continue to leave the public health sector.

COMPETING INTERESTS

The authors declare that they have no competing interests.

AUTHOR'S CONTRIBUTIONS

All the authors contributed equally and approved the submission of the article for publication.

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