

EXPLORING STRESSORS EXPERIENCED BY REGISTERED NURSES AT A SELECTED URBAN TEACHING HOSPITAL IN RWANDA

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ABSTRACT

Nursing is identified as being among the most stressful occupations with nurses continuously encountering stressors while delivering services. Stress is regarded as a challenge experienced by practising nurses. Studies have shown the negative influence of stress on both nurses and patients. However, little is known about the stressors experienced by registered nurses (RNs) in Rwanda. The main aim was to explore the stressors experienced by RN's in a selected urban teaching hospital in Rwanda. A non-experimental, exploratory retrospective contextual study using a self-administered questionnaire to assess RNs' stressors was conducted. A questionnaire of nurses' stressors developed by Bianchi (1990) was used. Convenience sampling involved n=85 hospital-employed RNs. Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 15 and Intercooled Stata 10. The results were summarized using descriptive statistics i.e. frequencies and associations using Chi-square and presented in tables and graphs. Pearson's chi-square was used to examine possible associations between demographic data and stressors. A p-value of <0.05 was considered to be statistically significant with a 95% confidence interval. The results revealed that RNs face a variety of stressors such as staff and material shortages, facing the deaths of patients, dissatisfaction with the work environment, work overload



and time spent on bureaucratic activities. The consequences of stress were: low quality of patient care, job dissatisfaction and burnout syndrome. RNs' stressors need to be addressed in order to create a working environment conducive to high quality patient care.

Keywords: registered nurses, stressors, Rwanda, quantitative survey

INTRODUCTION AND BACKGROUND INFORMATION

Internationally, nursing is regarded as a stressful occupation (Magnavita, 2014:374; Teymourzadeh, Rashidian, Arab et al., 2014:302). Nurses in low-income African countries experience similar stressors to those mentioned in the international literature and they encounter more stressors related to insufficient resources available in their working environment (Lambert and Lambert, 2008:39; Figley, 2002:41). In Africa, stress related to nurses is associated with the pandemic of Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) and Tuberculosis (TB) as a co-infection of HIV disease where ever-increasing numbers of patients need care or the nurses need care themselves (Kerr, Brysiewicz and Bhengu, 2014:45).

Daily, nurses experience environmental and situational stressors resulting from the nature of their work. The consequences are poor quality patient care and reduced job satisfaction, leading to an inability to retain nursing staff (Lenthall, Wakerman, Opie, Dollard, Dunn, Knight, MacLeod and Watson, 2009:209). A lack of management support, daily exposure to death and to dying of patients, caring for ill family members or being ill themselves add to the work stress experienced. Rwandan nurses have the added burden of resource depletion as a consequence of the 1994 genocide (Ministry of Health, 2007), with nurses leaving the country in search of better working conditions and perceived higher salaries. They are also trying to distance themselves from poor execution of nursing care for people who are living with HIV/AIDS and infected with TB (Kerr, Brysiewicz and Bhengu, 2014:45). Nurses in this article are referred to as RNs.

An extensive literature review was conducted to identify stressors experienced by nurses in the Rwandan context, however, little information was found. Understanding stressors experienced from nurses' perspectives can be a way of creating mitigating strategies to handle the situation. Thus, knowing their stressors, nurses could be involved in improving working environments. In addition, this article will suggest new ways of increasing the quality of care delivered, job satisfaction among nurses, and it will hopefully contribute to modify the current human resource policy.

STATEMENT OF THE RESEARCH PROBLEM

Nurses continuously encounter stressors while delivering services. As a clinical instructor, the researcher experienced low work morale among nurses, which impacted negatively on service delivery. Between 2006 and 2009, nurse turnover was reported to be between 30–40% at the selected hospital. Patrician, Shang and Lake (2010:4) support this hypothesis by reporting that dissatisfied nurses are more likely to experience low morale and decide to leave their jobs. Understanding factors contributing to nurse stress in Rwanda is a way of creating mitigating strategies to improve morale, reduce nurse stressors and retain them. The literature review revealed that there is little relating to the stressors Rwandan nurses are exposed to, or to the consequences of stress among them. The research questions were: what are the stressors experienced by RNs; and, what are the consequences of the stressors experienced by RNs?

PURPOSE OF THE STUDY

The purpose of this study was to explore stressors experienced by RNs and the consequences of stress on those employed in a selected teaching hospital in an urban Rwandan setting.

DEFINITION OF CONCEPTS

Registered nurses. In Rwanda, RNs fall into two categories, A1 and A0. The RNs who are categorised as A1 are those whose nursing education is at a diploma equivalent, and A0 RNs are those whose nursing education is at a Bachelor Degree equivalent level (Gitembagara, Relf and Pyburn, 2015:29).

Stressors. The stimulus (or threat) that causes stress such as an emotional event of nursing a dying patient (Bianchi, 2009:1055).

RESEARCH METHODOLOGY

The study was conducted in July 2010 at an urban teaching hospital in Butare, Rwanda, which had six (6) wards comprising 500 beds, of which only 314 were used.

A non-experimental, exploratory, retrospective contextual quantitative study design was used to explore the stressors experienced by RNs and the consequences of the stressors.

The model of stress appraisal and coping formulated by Folkman, Lazarus, Gruen and DeLongis (1986:141) was used to guide data collection and analysis. The model comprises organisational stressors, cognitive appraisal and ways of coping, as components. Organisational influence on nursing stress (Hayes, 2015:212) and

nursing strategies discovered through the literature review were used for conceptual clarity. Low quality of care (Mojdeh, Sabet, Irani, Hajian and Malbousizadeh 2008:5), job dissatisfaction, intention to leave, high turnover, high absenteeism and burnout syndrome (Sveinsdottir, Biering and Ramel, 2006:876) were added to the conceptual framework. Concepts about nursing strategies included were team work, effective communication (Uys, Minnaar, Reid and Naidoo, 2004:51), interdisciplinary collaboration (Maria, Pavlos, Eleni, Thamme and Constantinidis, 2010:49), improved working conditions and transformational leadership (King and McInerney, 2006:76).

Convenience sampling was used to select from a total of N=87 RNs who were available on duty and willing to participate in the study. Thus, (n=85) RNs arrived and accepted voluntarily to complete the questionnaires. Written permission was obtained from Bianchi (1990), the designer of the original questionnaire, written in French, to modify a self-completion nursing stress questionnaire for use in the Rwandan context. Respondents received French questionnaires to complete, which were translated into English.

The questionnaire had four sections: demographic data including age, gender, qualification, unit of affiliation, period of experience and marital status. The other three sections were: nurses' stressors, impact of stressors and coping strategies that nurses use. These sections measured the stress experienced by the respondents using a five-point Likert scale from no stress, little stress, medium stress, high stress and extreme stress. Two open-ended questions were included where respondents could describe stressful situations not accounted for in the Likert scale sections and in which they could describe how they react to stressful situations.

Instrument content validity was ensured by checking items in the instrument against the study objectives and concepts in the conceptual framework to ascertain if they measured all elements to be investigated. External validity was ensured because the sample used for this study included all available members of the study population (n = 85).

A pre-test was carried out with five (5) RNs who did not participate in the main study in order to determine that the respondents understood the questionnaire without any ambiguity and were able to complete it correctly. In order to test for reliability, the instrument was examined and corrected by experienced researchers and a statistician. Reliability was calculated by a statistician using Cronbach's alpha for the overall questionnaire, and was 0.87 for this study.

An information session was held with the respondents and nurse managers of the hospital to explain the purpose of the investigation, to request participation and to negotiate a convenient time to collect data for this study. Questionnaires were handed to the respondents to complete. The researcher was available to respond to questions by the respondents. They were then requested to place completed questionnaires in a

secure box, located in the work area, provided for this purpose. The box was emptied by the researcher for further data management and analysis.

Data management and analysis

Data collected were coded and entered into Statistical Package for the Social Sciences (SPSS) version 15 and Intercooled Stata 10 by the researcher. Descriptive statistics inclusive of frequencies and associations using Chi-square were performed and presented in tables and graphs. Pearson's chi-square was used to examine possible associations between demographic data and stressors. A p-value of <0.05 was considered to be statistically significant with a 95% confidence interval. Content analysis aided analysis of responses from the open-ended questions. Similar patterns were grouped into emerging themes. This allowed the interpretation of the underlying content. Answers to the open-ended questions were summarised in a matrix allowing for quantification of respondents' views according to issues raised in the questionnaire.

Ethics

Ethics approval was obtained prior to commencing data collection from the University of KwaZulu-Natal Ethics Committee, as well as the Rwandan Health Institute and the teaching hospital. The data collection process was explained to all respondents, along with respondent rights, including anonymity, confidentiality and the right to withdraw from the study without any reprisal. Confidential informed consent was obtained in writing from each respondent, with a copy handed to each respondent for their own records.

RESEARCH RESULTS

A respondent response rate of 97.7% was achieved (n=85). As this was a contextual study limited to one hospital, the results cannot be generalised.

Demographic characteristics of respondents

In this study, 71% (n=60) of respondents were in the 26–35 year age group; 61% (n=52) were women, of whom 94% (n=80) were three-year diploma equivalent qualified RNs; and 6% (n=5) bachelor degree equivalent qualified RNs. Eighty-eight per cent (n=75) had been nurses for 0 to 5 years and 67% (n=57) were single. Thirty one (36%) worked in the surgical ward, 24% (n= 20) in maternity, 12% (n=10) in specialised units, 11% (n=9) worked in the medical ward, 9% (n= 8) in the paediatric ward and 8% (n=7) worked in the intensive care unit.

Nurses' stressors

The major stressors identified were ranked in order of their importance as follows: staff and material shortages, 46% (n=39); facing death and dying of patients, 39% (n=33); time spent on bureaucratic activities, 29% (n=25); dissatisfaction of the work environment, 28% (n=24); work overload and over job description, 28% (n=24); being asked questions by patients, 26% (n=22); conflicts with physicians, 26% (n=22); and communication with management, 22% (n=19).

Other stressors mentioned by RNs included lack of support from hospital management, 56% (n=48); patients without medical aid, 50% (n=43); patients suffering from cancer, 36% (n=31); delay in referral processes, 35% (n=30); non-utilisation of nursing care plans, 32% (n=27); and low level of education of patients, 22% (n=19).

The stressors of highest reporting experienced by RNs were identified in this study as work load, facing death and dying, 39% (n = 33), and limited available resources, 46% (n = 39).

Table 1: Work load as a nurse stressor (n=85)

Stressors	High stress	Extreme/ Excessive stress	Total frequency and percentage
Time spent on administrative activities	19	6	25 (29%)
Work overload and job description	18	5	23 (27%)
Emergency care of critical patient and family	11	5	16 (19%)
Performing duties with minimal time and high demand of patient	12	0	12 (14%)
Control of quality of care	5	4	9 (11%)
	65	20	85 (100%)

The respondents reported high stress or extreme/excessive stress when they spend time on administrative activities 29% (n = 25); work overload 27% (n = 23); high patient and family demands; and control of quality care.

Qualitative and quantitative workloads have also been identified as stress factors in Korean hospitals by Lee (2012:27–36). Only high or excessive/extreme levels of stress are focused on for the purpose of analysis and readability.

Facing death and dying

Respondents expressed high/extreme stress regarding facing death and dying of patients, 39% (n=33). Gallagher, Saunders, Tambree, Monterosso and Naglazas (2014:7) support this finding. These authors state that irrespective of previous experiences, nurses' experiences of death of patients caused them anxiety and sadness. Being asked a question by patients for which they do not have a satisfactory answer (26%, n= 22), receiving patients into units and providing nursing care to patient and family, 8% (n= 7), and self-care instruction, 4% (n=3), resulted in high or extremely high stress levels. Similarly, Pulido-Martos, Augusto-Landa and Lopez-Zafra (2012:21–22) report that nurses experience stress related to patient care and fear of committing errors.

Limited resources

The respondents indicated shortages of nurses, infrastructure and materials, 46% (n=39), requests for revision, replacement or repair of equipment, 18% (n=15), and daily requisition of materials, control of used and available materials and equipment

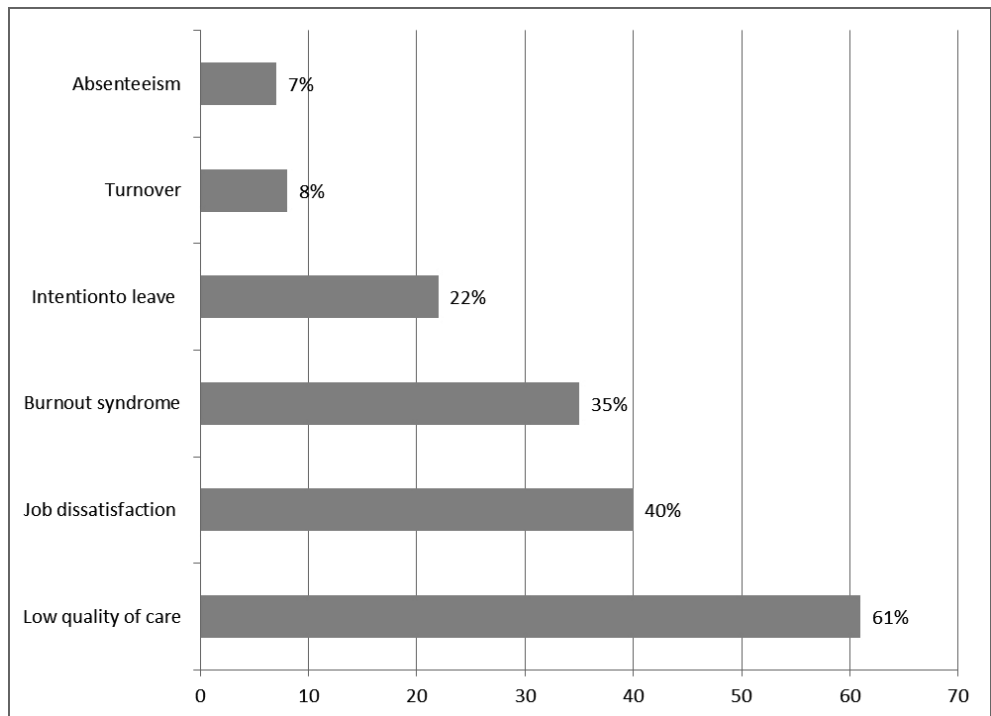


Figure 1: Consequences of stress

14% (n=12) caused high/extremely high stress levels. The lack of material resources is possibly linked to a post-war context, which proves stressful to nurses as does the shortage of staff. This is similar to the situation in Sierra Leone after the civil war, as there was a lack of available healthcare facilities, poor quality of services and drug stock-outages (Bertone, Samai, Edem-Hotah and Witter, 2014:2). Limited resources were identified as a factor of high level occupational stress among Jordanian mental health nurses (Hamaideh, 2011:15) who have never experienced genocide. It is of interest in a post-genocide setting that interaction with nurses and nurse managers does not seem to present a challenge to many nurses.

Consequences of stress

The respondents were asked to rate the consequences of stress from among several options given to them.

It was noted by 61% (n=52) that the most prevalent consequence of stress was low quality of patient care. Thirty-four respondents (40%, n=34) expressed job dissatisfaction and 35% (n=30) claimed they were exposed to burnout syndrome. Moreover, 22% (n=19) indicated that stressful situations could push them to leave nursing; seven respondents (8%, n=7) mentioned high staff turnover; and 7% (n=6) identified absenteeism as consequences of nursing stress, which is supported by Kane (2009:32).

Additional comments made were lack of organisation, 5% (n=4); low morale, 9% (n= 8); continuous conflict, 4% (n=3); being late, 2% (n= 2); and suicide ideation, 1% (n=1). Similar findings were made by Bianchi (2004:737–745). Nurses reacted to stress experienced (in rank order) by informing the nurse manager, 26% (n = 22), feeling frustrated, 23% (n = 20), and resorting to alcohol use, 3% (n = 3). These findings are supported by Milliken *et al.* (2007:205).

Association between demographic variables and nurses' stressors

Associations between demographic variables and nurses' stressors were tested and showed a significance ($p=.022$).

Table 2: Association between age and dissatisfaction with the work environment

Age group	Dissatisfaction of work environment		Total n (%)	p-value
	High stress	Extreme stress		
20–25	1	3	4 (4.7%)	* $p=.022$
26–35	15	3	18 (21%)	
36–45	0	0	0	
>46	1	1	2 (2.4%)	
Total	17	7	24 (28.2%)	

Seven per cent ($n=6$) indicated absenteeism as a consequence of stress. Kane (2009:32) asserts that nurses experiencing stress continuously become exposed to stress-related illnesses, leading to increased absenteeism. Milliken *et al.* (2007:205) add that smoking and alcohol abuse have a negative effect on the nurses' health, and contribute to a reduction in the quality of care delivered to patients. Low morale in the work place was indicated by 5% ($n=4$) as a consequence of stress. This is supported by Mojinyinola (2008:143) and Roberts, Grubb and Grosch (2012:3) who demonstrated that nurse stress led to lack of concentration, low satisfaction, body pain and low morale as negative effects of stress for nurses. On the other hand, negative effects of stress on healthcare organisations include stressful working environments, which lead to poor productivity and impact negatively on service delivery (Bhanga, 2010:51; Roberts, Grubb and Grosh, 2012:2).

One respondent stated that stress prompts suicide ideation. This is supported by Chipas, Cordrey, Floyd, Grubbs, Miller and Tyre (2012:54) who found that 21.3% of nurses expressed suicide ideation. Though stress is inevitable in human lives (Folkman *et al.*, 1986), this indicates the extent to which stress can be dangerous to nurses, it highlights the high levels of stress present, and it suggests that the development of policies for prevention and management of stress in Rwanda should be treated as urgent.

DISCUSSION

This study has identified stressors experienced by registered nurses in an urban teaching hospital in Rwanda. The study findings identified work load, facing death and dying and limited available resources as stressors. Increased workload is linked to burnout and staff turnover. Lee (2012:27-36) concurs with the findings of this study. Pillay (2009:15) has reported that workload increases nurse dissatisfaction. Increased workload makes it difficult for nurses to satisfy patient needs (Lenthall

et al., 2009:2001). In sub-Saharan African countries where HIV and conflicts are prevalent, increased workload is a stressor that has consequences for nurses.

In this study the consequences of stress were deemed to be low quality of patient care, job dissatisfaction and burnout syndrome. These consequences of stress require that putting in place strategies and policies for the prevention and management of stress in the context of this hospital, be regarded as urgent. Examples of strategies to be used to prevent stress are team work, effective communication and improved working conditions (Maria, Pavlos, Eleni, Thamme and Constantinidis, 2010:49).

This study found an association between the age of registered nurses and dissatisfaction with the work environment. The age group most dissatisfied with the work environment was those in the 26–35 year old range. This same age group was more stressed by death and nursing dying patients (Gallagher, Saunders, Tambree, Monterosso and Naglazas, 2014:7). Li and Lambert (2008:37) found that older nurses had better skills and experience to assist them dealing with stressful conditions than younger nurses.

The stressors for the respondents of this study are a consequence of increasing patient numbers, which is a result of poverty and sickness linked to HIV in Rwanda (Rwanda Ministry of Health, 2007). Problem-solving skills must be considered as a further problem-solving strategy to cope with stress.

LIMITATIONS

One hospital in an urban area and the small sample size along with convenience sampling methods used are limitations of this study that limit generalisation of the results.

RECOMMENDATIONS

Policy makers and hospital managers

An awareness of nursing stressors and providing favourable work environments would improve the quality of patient care provided. There is also a need to implement support strategies in order to promote nurses physical and emotional wellbeing. Nurse managers need to focus on the prevention and management of stressors among nurses. Job descriptions and scopes of practice for nurses need revisiting so that RNs can function optimally.

Nursing practice

There is a need to encourage attendance at courses related to recognising workplace stressors, stress management, conflict management and time management in order to overcome work challenges.

Future research

There is a need to undertake further research to investigate how health providers can be supported to improve the provision of quality patient care. A larger sample using a survey is recommended to account for different settings and to achieve generalisability of the results.

CONCLUSION

Rwandan nurses' stressors should be addressed in order to create a working environment conducive to high quality care, staff satisfaction, motivation and staff retention. Respondents indicated that they face a variety of stressors that, despite the influence of the genocide, are closely linked with the results from other studies. However, nurses dealing with the aftermath of the genocide have the added emotional demand of a stressful work environment. Changes can be made to address these issues to allow for a high quality work environment and that of better patient care outcomes.

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