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RESEARCH PAPER

STRESS AND COPING MECHANISMS OF NURSING STUDENTS DURING CLINICAL PRACTICE IN GHANA

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ABSTRACT
Stress impacts negatively and positively depending on how effectively the individual experiencing the phenomenon is able to cope. The objective of this study was to identify the stressors in clinical practice for nursing students and the coping mechanisms used. Eighty-nine (89) students from the Department of Nursing, KNUST were selected using systematic sampling methods. Respondents completed questionnaires, part of which was the Perceived Stress Scale (PSS). Data was analyzed using Statistical Package for the Social Sciences (SPSS). The common stressors identified include "when nurses' instructions are different from what is taught in class" and 'feeling ignored by clinical nurses'. Fifty-nine percent (59%)of respondents experienced moderate to high levels of stress. Level of stress was found to decrease with increasing age and year of study; and matured students experienced a lower level of stress compared to the generics. Receiving moral support from family, developing cordial relationship with nurses and praying were among the common coping mechanisms identified. Students experienced stress in the clinical area and used coping strategies that were mainly relationship-based. Greater collaboration between educational and clinical institutions, tutorship and supportive supervision are recommended.

Keywords: *Stress, clinical practice, coping strategies*

INTRODUCTION

Clinical training is a key component of nursing education designed for students to acquire the necessary professional skills and develop the attitudes that will positively impact the quality of care delivered to patients. Factors influencing clinical preparation include the clinical learning environment, clinical educator competence and technical skills of nursing staff (Cheraghi *et al*., 2008).

Clinical education and the clinical area can be stressful for students (Cilingir *et al*., 2011; Chan *et al*., 2009; Timmins and Kaliszer, 2002;

Mahat, 2002*)*. Identified stressors in the clinical setting for students include fear of making mistakes, attitude of clinical team, unfriendly atmosphere, interpersonal relationships, theory-practice gap, lack of teaching and interest in learners, reprimands in front of staff and patients (intimidation), and fear of unknown situations (Cilingir *et al.* 2011; Pulido-Martos *et al*., 2011; Chan *et al.*, 2009; Moscaritolo, 2009; Gibbons *et al.*,2007; Seyedfatemi *et al*., 2007; Timmins and Kaliszer, 2002; Mahat, 2002). Continuous stress affects both physical and psychological health resulting in negative outcomes **(**Button, 2008**)**.

Effective coping strategies for stress are very important and can turn a highly stressful situation into a manageable one (Chan *et al.*, 2009; Rowe, 2006). Some identified coping strategies include family problem solving, social support, spiritual strategy, self-reliance, transference, avoidance, denial and alcohol-drug intake (Seyedfatemi *et al*., 2007; Chan *et al.*, 2009; Kirkland, 1998). The social support strategy has been identified by researchers as very effective in helping students deal with stressful situations and is more frequently used (Mahat, 2002)**.** Failure to identify and use good coping strategies can result in serious personal and professional negative consequences (Seyedfatemi *et al.*, 2007) hence Timmins and Kaliszer (2002) proposed keeping an 'open management style' and supportive leadership as strategies to help students cope in the clinical setting.

Inspite of the information available on stress and coping mechanisms, there is a dearth of knowledge on clinical practice-related stress and coping mechanisms of nursing students in Africa, where human and infrastructure resources in the health sector are limited. The nurse to patient ratio in Ghana is 1: 1,587 (MoH, 2007) and this could influence the clinical experiences of students.

This study was conducted to identify the stressors in the clinical practice of students and their coping strategies in order to determine interventions to improve the clinical experience of students. The findings are expected to help nursing educators, nurses and other clinical practitioners in clinical training of nursing and other students in the health disciplines.

MATERIALS AND METHODS

This study used a descriptive design and was conducted between February and May 2012. Respondents were students of the Department of Nursing, Kwame Nkrumah University of Science and Technology, Ghana. Courses run by the department are Bachelor programmes in General Nursing, Emergency Nursing and Midwifery, and students undertake their clinical practice at the Komfo Anokye Teaching Hospital, some district hospitals in the Ashanti Region, and the Psychiatric Hospital in the Central region. Three hundred and twenty-two (322) students registered in the academic year and the target population for this study was general and emergency nursing students who had clinical practice experience as students. Excluding the first year students, midwifery students and the two students in the research team, two hundred and five students were eligible to participate in the study. Using the class lists (arranged in alphabetical order with student numbers by the University) of the second, third and fourth year students, one hundred (100) students were systematically sampled by selecting every second student (every other student) on the list of each class for the study.

Data was collected using self-administered questionnaires, which was pre-tested with students in another nursing school, which uses the same clinical facilities; and the necessary modification made after pre-testing. The study was explained to the respondents and verbal informed consent was sought from them. Respondents were informed that participation was voluntary and they could decline participation in the study and this will not affect them in anyway. Respondents were also informed not to indicate their names on the questionnaire to assure anonymity. The questionnaire consisted

of demographic data, perceived stress scale (PSS) (Cohen, 1994), stress level scoring and modified ways of coping scale (Carver, 1997). The reliability and validity of the PSS and Brief COPE Scale have been validated by earlier studies (Lee, 2012; Yussof *et al*., 2010). Respondents were asked to rate how often a factor gives them stress on a five-point scale ranging from never to most often. Respondents were also asked to rate how frequently they use each of the coping mechanisms on a 5-point scale, with 5 being what strategies respondents use more commonly. They were asked to rate each strategy separately.

The questionnaires were delivered by the second and third authors who were students at the time of the study. The information provided was strictly confidential and only the research team had access to the data. The study protocol was reviewed by the Research committee of the Department of Nursing and approval was given.

Questionnaires were returned from 89 students (response rate of 89%). Data was processed and analyzed using Statistical Package for Social Sciences (SPSS) Version 16.0. Using the 5-point scale on how often respondents experience stress from the identified factors, three levels of stress were determined; namely low, moderate and high. High level of stress represent point 4 and 5 on the scale, meaning it is a factor that the respondents consider to often or most often give them stress. Moderate stress level is where respondents rate the factor that sometimes gives them stress. Low level stress is where the respondent indicates the factor gives them limited or no stress. The score for each factor in the three levels was determined by calculating the total number of respondents' rating of the factor. A relative importance analysis was used to rank the coping strategies according to their influence in enabling the students pursue their academic objectives and professional aspirations.

RESULTS

Background characteristic of respondents

Out of the eighty-nine respondents, 88 of them indicated their ages and programmes of study. Majority of the respondents (58%) were between 20-25 years, single (84.5%) and mostly Christians (95.5%) (Table 1).

Stressors respondents encounter in the clinical setting

The commonest type of stressor respondents experienced was when "nurses' instructions were different from what was taught in school" and the least common was "working in an unfamiliar environment" (Table 2).

Feelings that respondents could not cope and nurses were hostile were factors from which a higher number of the students experienced moderate to high levels of stress (Table 3).

Level of stress experienced in relation to respondent's age indicates that the older the student, the lower the level of stress (Fig. 1). Similarly, the higher the year of study, the lower the level of stress experienced (Fig. 2) and those with more years of clinical experience tend to experience relatively lower levels of stress. Generic students (students with no prior nursing education or clinical practice experience before enrolling in the B.Sc. programme) reported higher levels of stress than mature students (students who were registered nurses before enrolling in the programme).

Stress coping strategies of respondents

Respondents chose some coping strategies to manage their stress. Ranking the coping mechanisms, the commonly used strategies were "often receiving moral support from their family", "establishing cordial relationship with nurses during clinical practice", and "praying to God about the difficulties faced at the clinical setting" (Table 4).

Others were "looking forward to practicing as professional nurses" and "put up a reformed attitude after a bad experience". The least used

Demographic characteristics of respondents

Age groups		
Age (yrs)	**Frequency**	**Percentage**
Below 20	6	6.8
20-25	51	58.0
26-30	22	25.0
>30	9	10.2
Total	**88**	**100.00**
Sex		
MALE	32	36.0
FEMALE	57	64.0
Total	**89**	**100**
Marital Status		
Single	76	85.4
Married	13	14.6
Total	**89**	**100.0**
Programme of study		
General Nursing	69	78.4
Emergency Nursing	19	21.6
Total	**88**	**100**
Religion of Respondents		
Christians	85	95.5
Islam	4	4.5
Total	**89**	**100.0**

**There was missing data for some variables hence n does not add up to 89 for those variables*

Table 2: Types of stressors encountered during clinical practice

Types of Stressors	Frequency	Percentage (%)
Nurses' instruction differ from what was taught in school	78	86.6
Feel ignored by clinical nurses (Neglect by nurses on field)	76	85.4
Standing throughout clinical practice hours	71	79.8
Intimidation from health staff	68	76.4
Medical staffs are unwilling to help you learn	67	75.3
Health professionals shouting on you	65	73.0
Lack of experience in delivering healthcare services	43	48.3
Inadequate professional knowledge and nursing skills	40	44.9
The hospital environment	40	44.9
Inability to provide correct answers to doctors‘ questions	33	37.1
Inability to help patients with their problems	32	36.0
Unfamiliar environment	28	31.5

([1])*Multiple responses allowed*

Table 3: Level of stress in relation to specific factors

VARIABLES	Stress level and number of respondents LOW	MODERATE	HIGH	TOTAL
Feeling that you could not cope	17	45	27	89
Nurses are hostile and uncooperative	19	47	22	88
Overwhelmed by patients' conditions	27	39	20	86
Feeling unprepared to administer care to patient	40	34	15	89
Feeling anxious and awkward around patients	47	27	15	89
Feeling uneasy when coming to the hospital for clinical	38	35	14	87

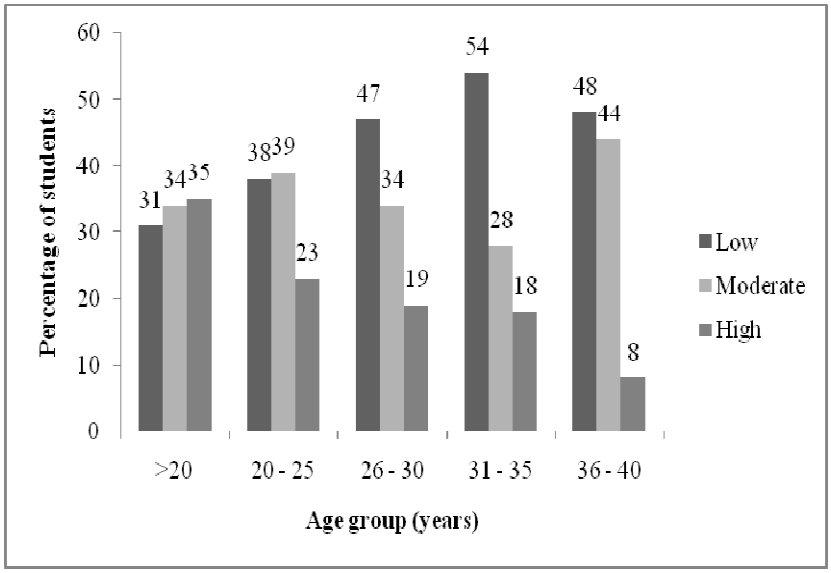

Fig. 1: Relationship between age group and proportion of students who experienced different levels of stress

coping strategy was "exchanging words angrily with nursing and other medical staff".

DISCUSSIONS

A difference in what is taught in the classroom and the instructions of clinical nurses was the most common stressor reported, which probably contributed to the respondents feeling that they could not cope. Karuhije (1997) delineated some differences in the instructional components in the classroom and clinical teaching. She indicated that classroom teaching more often transmits new knowledge and reinforces previous knowledge, which is infrequently cor-

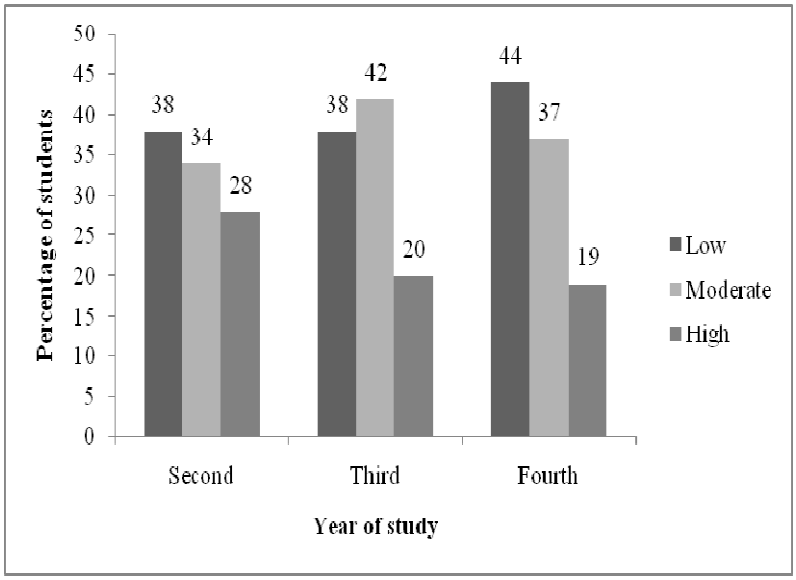

Fig. 2: Relationship between year of study and proportion of students who experienced different levels of stress

Table 4: Students' coping mechanisms for clinical practice-related stress

COPING STRATEGIES	RATINGS (%)	RANK
Often receive moral support from family	78	1
Develop cordial relationship with nurses during clinical practice	76	2
Pray to God that the difficulties faced at the clinical area will end	75	3
Look forward to practicing as a professional nurse	72	4
Put up a reformed attitude after a bad experience	71	5
Engage in diversion therapies	69	7
Clarifying issues with nurses and other health staff	68	9
Jot down relevant information during clinical practice	66	10
Go for clinical practice already psyched up to receive more criticism	64	11
Read beforehand on cases likely to encounter	52	13
Exchange word angrily with staff and other medical staff	28	14

related to clinical experience.

The instructional mode used in the Nursing Department includes didactic teaching and demonstration of nursing procedures using standard procedure manuals. There are challenges of inadequate resources in the clinical setting used by the students and sometimes it becomes

necessary for the clinical staff to improvise, which may contribute to the perceived differences. This also points to a weakness in the process of exchange of knowledge/information update between the teaching and clinical staff. Some factors identified to contribute to perceived differences in classroom information and what clinical nurses teach include lack of collaboration between clinical areas and educational institutions and has been identified as a source of concern for students, nurse teachers and preceptors (Sharif and Masoumi, 2005; Corlett, 2000). The additional research and administrative roles of the university nurse educators to enable them develop their academic profile sometimes makes it difficult for the nursing faculty to spend more time at the clinical area (Corlett, 2003) to work with the clinical staff and transfer classroom information to clinical practice. The Department at the time of the study had a high lecturer to student ratio of 1:54, increasing the demand on staff time, which needs to be addressed.

Most of the other common stressors identified by our respondents such as feeling ignored by nurses, intimidation and unwillingness of the medical staff to teach them can be classified under interpersonal relationship and unsupportive clinical environment similar to other studies by Labrague, (2013) and Cheraghi *et al.* (2008) who indicated that these made the clinical setting non-conducive as a learning environment. This is however not consistent with the findings of some other studies including Chan *et al*. (2009) and Timmins and Kalizer (2002) where stress from nursing staff was the least ranked by nursing students. The perceived unfriendly relationship of the clinical staff could also be due to the high nurse to patient ratio in Ghana, which leaves staff with less than enough time to teach, supervise and interact with students. A non-supportive relationship and clinical environment cannot enhance the effective clinical preparation of students and becomes a stressor for students since it will impede the achievement of their academic and professional aspirations.

The effects of stress and its related factors on nursing students has been reported to result in feelings of rejection and inadequacy (Reeve *et al.,* 2013), which needs appropriate coping strategies to support effective student preparation. The coping strategies of the respondents in the current study can be grouped mainly under social support, staying optimistic and problem-solving.

Receiving moral support from family as a coping strategy is consistent with the study by Seyedfatemi *et al*., (2007) and Reeve *et al.*, (2013) who found their respondents using faculty members less frequently for support than their social network which included peers, spouse and parents. Family structures and support in Ghana are strong and still effective, and could be the reason why majority of the respondents communicated with their families for support to overcome the stressors encountered during clinical practice. This could also reflect an ineffective tutorial system by the Department as a result of the high lecturer: student ratio. Holding post-clinical conferences with students and clinical staff will enable staff identify promptly students' challenges with clinical practice and address them thereby reducing the stress they experience. Using religious mechanisms for coping is common but the process may differ and this depends on the religious orientation of the individual and how stressful the situation the individual is facing (Baqutayan, 2011). Whereas our respondents used praying to God as a strategy, Rajesh Kumar, (2011) found her respondents talking to a minister, priest or rabbi. A person's background and experiences influences the choice of coping factors in stressful situations. Harris, (2013) found that in hospice care where emphasis is on spiritual care as an integral component, nurses have strong belief about the benefit of prayer/meditation in coping with stress at the workplace. Most of our respondents were christians hence used religion very often as a coping strategy. This action could be due to the level of stress they were experiencing and the lack of opportunities to express themselves adequately

about their stress. Where students' experiences were not sufficiently stressful, they have been found to turn to religion as remedy less often (Baqutayan, 2011).

Stress has been indicated as having positive effects of promoting personal growth and development and self-reliance (Singh *et al*., 2011) and it motivates people to be more upholding and persistent to reach the optimum target. The respondents' strategy of remaining optimistic about their future role as professional nurses is a self-motivating process which can be supported through a preceptorship process to mentor students (Timmins and Kaliszer, 2002) to achieve their goals though they may be faced with some stressors. Ryan and Deci, (2000) noted that conditions supportive of autonomy and competence reliably facilitates the expression of the human growth tendency. Using problem-solving strategies of establishing cordial relationship with nurses, clarifying issues with nurses and putting up a reformed attitude after a bad experience are factors that will give students better opportunities for professional growth and competence, which should be promoted to reinforce their optimism. This will also enhance students' ability to chose more beneficial coping strategies and help them develop self-determination.

CONCLUSION

Stressors exist in students' clinical training. The main stressors were differences between theory and clinical instruction and feeling of being ignored by clinical nurses. Majority of the nursing students experienced at least a moderate level of stress and the years of experience as a nurse and the age of a nursing student influences the level of stress experienced by the students. Relationship-based coping strategies are important to students and used more often. Exchange of knowledge update and an improved interaction between teachers, clinical staff and students are ways by which students can be helped to remain optimistic.

LIMITATION OF THE STUDY

The study provides useful information on stress and coping mechanisms among nursing students. However this is the views of a small number of students of one nursing school out of the many nursing schools in Ghana, and their experiences are limited to a few hospitals that may not reflect the views of the larger population of nursing students in Ghana. The student's personality, which is a factor that influences perception and how people experience stress, was not considered in this study.

RECOMMENDATIONS

The orientation of fresh students should include common stressors in the clinical area and how to handle them. Prior to the start of their clinical practice, nursing students must be taken through stress management scenarios that will help them to prepare and keep their optimism about their chosen profession. Nurse educators, administrators and clinical staff should build into nursing programmes, processes to support students to manage stress effectively. Additionally improved interaction between educational and clinical institutions, enhanced tutorship and supportive supervision are recommended.

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