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Role of Stress and Age on Psychological Burnout among Nurses

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The study investigated the role of stress and age in psychological burnout among nurses. One hundred and sixty (160) nurses from the University of Nigeria Teaching Hospital (UNTH) and Mother of Christ Specialist Hospital (MCSH), both in Enugu urban, were selected for the study. Their ages ranged between 28 and 60 years. Survey design was employed. The Maslach Burnout Inventory (MBI) was used to measure the level of burnout while Nursing Stress Scale (NSS) measured the level of stress. Two hypotheses were tested: there would be no statistically significant difference between nurses with high level of stress and nurses with low level of stress in their report of burnout; and there would be no statistically significant difference between younger and older nurses in their report of burnout. Results of analysis of variance with unequal sample sizes showed that young nurses reported higher level of burnout than old nurses: F(1, 156) = 6. 02, p <. 01. The findings were discussed.

The work the helping professionals do occupy the major part of their lives in terms of time, effort and importance. In reviewing the importance of work in the life of an individual, Seaman (1974) concluded that the work one does is of great importance: it takes half of one's waking hours, steers one to particular social circles, generates daily troubles or triumphs and as well defines one's political interest and personal potential for stimulation, challenge and harm.

Stress occurs when environmental or internal demands exceed the adaptive resources of an individual (Lazarus, 1969). Stress has been defined in terms of a misfit of the job and a misfit in terms of a person's needs supplied by job environment (French, Rogers & Cobb, 1980). It is an inevitable part of the challenge that prompts mastery of new skills and behaviour patterns. Difficulties occur, however, when stress becomes excessive.

Research on the causes of psychosocial stress indicates that many occupational settings are potentially stressful. However, Niosh (1995) stated that many job stresses also favour individual characteristics such as personality and coping style as important in predicting whether certain job conditions will result in stress or not. In other words, what is stressful for one person may not be a problem for another person. On the other hand, scientific evidence suggests that certain working conditions are stressful to some people (Elisburg, 1995). The human service organizations, which comprise such professional groups as physicians, nurses, clinical psychologists, psychiatrists, counsellors, public officers, teachers and others, are inherently stressful. Such occupations require working intensely and often intimately with people troubled with physical, psychological and other social

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distresses. Clinical environments involving contact with patients seem particularly stressful and are often associated with emotional distress and burnout.

Moreover, some personality variables such as age, sex, and marital status have been considered as having relationships with stress and burnout. Age has been found as a predictor of stress. Using middle-aged Stockholm construction workers, Theorell (1976) explored the relationship between age and job stress. He found that groups of employees with high scores on a measure of "discord" and on a life-change scale had a higher blood pressure than other groups and that this observation was "more striking" for employees between 40-45 years of age than among employees between 56-66 years of age. Moreover, Adali and Priami (2002) found that age was significantly related to personal accomplishment, both for nurses working in Intensive Care and Emergency units. Langer (1962) also found that stress declines with age and experience. When people stay many years in their profession, they may likely identify possible stressors inherent in their work environment, and thereby device positive coping strategies in managing the stressors.

Nursing profession is one of the most stressful of the healthcare professions because of the nature of work the nurses do. They perform all kinds of duties toward their patients such as monitoring and recording vital signs (blood pressure, temperature and respiration of patients), dressing of wounds, burns, and frequent turning of immobile and unconscious patients as in fracture cases. Some patients come with infectious and life-threatening diseases, such as tuberculosis, cholera, measles, Acquired Immune Deficiency Syndrome (AIDS), and some other kinds of killer diseases. These situations expose the nurses to risks of contracting such infectious diseases and they are usually aware of this.

There is a growing interest in the psychosocial work environment of nursing staff since they are at risk for burnout, role conflict and job dissatisfaction (Piko, 1999). As healthcare professionals, nurses can experience psychological burnout: a state of emotional exhaustion caused by excessive psychological demands made on them. The symptoms of burnout in nurses are as varied as the sufferers. Some people become angry, some become quiet, withdrawn and isolated, which may indicate the onset of depression, some others may manifest over-eating, abuse of alcohol, and still others may experience a range of physical symptoms including chronic illness, high blood pressure and frequent headaches (Clifford, 1999). Job burnout syndrome, according to Maslach and Jackson (1978), is a condition observed among a wide range of helping professionals and is most relevant for jobholders whose work is very involving and demanding. Nurses who experience high level of stress are likely to become victims of psychological burnout, and consequently may become seriously impaired in health, social and occupational functioning. Their social functioning may be seriously impaired as they alienate themselves from co-workers and even their patients and others. This detached attitude of theirs may be evidenced in their insensitiveness to their patients' needs and those around them (Maslach & Pines, 1977).

Burnout as a prolonged response to chronic job-related stressors has a special significance in healthcare professions where staff experience both psychological and physical stress that have behavioural and health implications. In another study by Piko (2005), which

investigated the relationship between burnout, role conflict and job satisfaction in a sample of Hungarian nurses, the findings showed that emotional exhaustion and depersonalization scores were higher while scores on personal '~ accomplishment was lower. Burnout, particularly emotional exhaustion was found to be strongly related to job dissatisfaction. Role conflict contributed positively to emotional exhaustion and depersonalization scores. In another related study, Quattrin, Zanini, Nasciq, Annunziata, Calliqaris and Brusaferno (2006) investigated the level of burnout among nurses working on Oncology unit in order to identify the risk factors of burnout. The findings showed that 35 percent of the nurses had a high level of emotional exhaustion, 17 percent had a high level of depersonalization while 11 percent had a high level of personal achievement.

Stress also results from multiple demands imposed upon the nursing personnel by the medical and administrative staff. Studies indicate that these dual lines of authority result in inter-role conflicts and ambiguity among nurses (Gray-Toft & Anderson, 1981). They are in constant contact with distressed patients and daily encounter dying and dead patients, which inflicts a lot of emotional pain and agony on them. Similarly, it had been demonstrated that stress-inducing factors pervade nursing duties across the various settings in which they work, and these are important determinants of stress and burnout (Gray-Toft & Anderson, 1981).

The following research questions were proposed: will there be a difference between nurses with high level of stress and those with low level of stress in their report of burnout; and will there be a difference between young and old nurses in their report of burnout. The following hypotheses were tested: there will be no significant difference between nurses with high level of stress and those with low level of stress in the report of burnout; and there will be no age difference in the report of burnout among nurses.

Method

Participants

One hundred and sixty (160) nurses drawn from the University of Nigeria Teaching Hospital (UNTH) and Mother of Christ Specialist Hospital (MCSH) participated in the study. The participants were selected using a simple random sampling technique whereby rumpled paper chips bearing either "yes' or "no" were picked in turns by the nurses in each unit without replacement. Those who picked "yes" were selected while those who picked "no" were dropped. They were all female nurses and Igbos by tribe: there were just very few male nurses in the hospital at the time of this study. Both hospitals are located in Enugu. Their ages ranged from 28 to 60 years. Among the participants, 30 held Bachelor of Science (BSc) degree, 15 were paediatric nurses, 8 read anaesthesiology (science dealing with anaesthetics), 12 read Public Health, 6 read Psychology, while the remaining 89 participants had Diploma in General Nursing and Midwifery. There were 91 old nurses (40-60 year-old) and 69 young nurses (28-39 year-old). One hundred and twenty nurses (120) were selected from UNTH while 40 nurses were selected from MCSH.

Instruments

Two instruments were used for the study: Maslach Burnout Inventory (MBI), which was developed by Maslach and Jackson (1978) and was adapted by Ugwu (1995); and Nursing Stress Scale (NSS) developed by Gray-Toft and Anderson (1981). The adapted MBI consists of 16 items that measure emotional exhaustion, depersonalization and personal accomplishment. It was scored on a 5-piont Likert scale, with a split-half reliability coefficient of. 90.

The NSS consists of 34 items with test-retest reliability coefficient of.70. This was adapted by the researcher for Nigerian sample by using 50 nurses from Bishop Shanahan Hospital, Nsukka, for pilot study. Twenty items were finally retained in the scale. Coefficient of .70 was obtained using a split-half reliability, which compared favourably with the. 70 test-retest reliability index of the original scale. NSS was scored on a 4-piont scale reflecting the degree to which the items applied to participants.

Procedure

At UNTH, the researcher made use of ten units for the study: Casualty, Theatre, Female Medical, Male Medical, Intensive Care, Male Surgical, Female Surgical, Children's Ward, Post-natal, and Anti-natal units. The hospital usually operates on three work-shifts: morning, afternoon and night. The participants were selected from all the ten units during the three work shifts. Four (4) participants were selected from each unit in every work shift, one administrative and three bedside staff using a simple random sampling technique. The three work shifts and ten units were covered in administering the instruments. This resulted to a total of 120 participants from the ten units. They were administered MBI and NSS in their respective units. It took four days to administer and collect the instruments at UNTH with the help of two research assistants.

At MCSH, the researcher employed the assistance of a nurse. There were ten administrative staff in the hospital and all of them participated in the study. Simple random sampling technique was used to select the bedside nurses as was done at UNTH. As a result, three bedside nurses were selected from each unit from morning shift. This yielded a total of 30 bedside nurses from the ten units and ten administrative staff. Hence a total of 40 participants were selected from MCSH. These 40 participants responded to the two instruments, MBI and NSS. The questionnaires were collected after three days through the Administrative Matron of the hospital. A total of 160 questionnaires collected from the two hospitals were used for analysis.

Design/Statistics

Cross-sectional design was employed in the study. A two-way analysis of variance (ANOV A) with unequal sample sizes was employed in testing the two hypotheses.

Results

Table 1

Means and Standard Deviation of Burnout Scores for Groups of Nurses

	Age		
Stress Level	**Young Nurses**	**Old Nurses**	**Total**
High stress	*M* = 45.00 *SD* = 6.77	*M* = 40.98 *SD* = 5.10	85.98
Low stress	*M* = 41. 88 *SD* = 7. 34	*M* = 41.84 *SD* = 6.41	83.72
Total	*M* = 86.88	82.82	

Table 1 indicates that young nurses with high level of stress reported higher burnout scores (M = 45.00) than old nurses with high level of stress (M = 40.98). .

Table 2

ANOVA Summary on Stress and Burnout among Nurses

Source	Sum of Squares	*df*	Mean Square	*F*
A (Stress)	50.2	1	50.20	1.74
B (Age)	161.59	1	161.59	6.02*
A X B	155.31	1	155.31	5.39*
S/AB	4184.5	156	28.62	

* = significant, $p < .05$

The results of the ANOVA shows no significant difference between nurses with high level of stress and those with low level of stress in their report of burnout, F(l, 156) = 1.74. However, it shows that there was a statistically significant difference in the degree of burnout reported by young and old nurses, F(l, 156) = 6.02, p <.05. Young nurses (M = 86.88) reported higher level of burnout than old nurses (M = 82.82) (Table 1). The interaction effect of stress level and age of nurse on report of burnout was statistically significant, F(l, 156) = 5.39,p <.05.

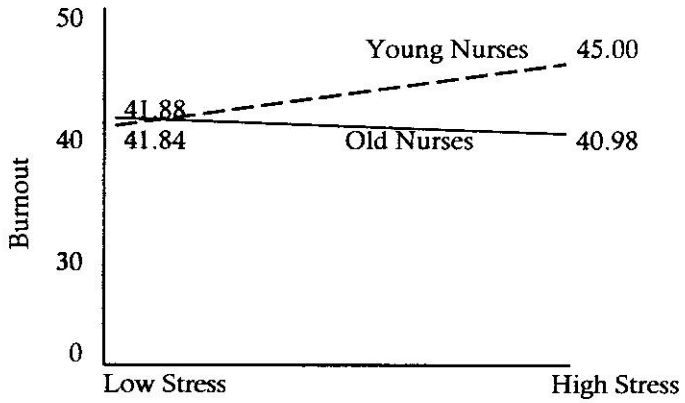

Figure I: Interaction between Stress and Age on Burnout among Nurses

The figure shows that with high stress, young nurses experience higher burnout CM = 45.00) than old nurses (M = 40.98). However, under low stress, burnout experienced by young nurses (M = 81.84) and old nurses CM = 41.88) was only marginally different.

Discussion

The result of the first hypothesis showed a significant difference between young and old nurses on burnout. The burnout mean score for young nurses (86.88) was significantly higher than that of old nurses (82.82). This supports the finding of Theorell (1976), who observed that workers aged 41-55 years had higher scores on "discord" as well as high blood pressure than those aged 56-66 years. The nature of stressor experienced by these nurses might be an important determinant of burnout. Sixty (60) out of the 91 old nurses were in the administrative cadre (Chief Nursing Officer (CNO) and Assistant Chief Nursing Officer (ACNO). This group, most of the times, does not deal directly with patients who are encumbered by all sorts of problems like the bedside nurses; rather their work consists mainly of supervision of the bedside nurses' activities. Sixty (60) out the 69 young nurses were bedside nurses; and this group usually works directly with patients. Moreover, old nurses had longer years of nursing experience (12- 24 years and above), and stress usually declines with age. The young nurses therefore are more likely to experience a lot of stress.

Moreover, it was observed that there were more married old nurses (89 out of 91) than there were in young nurses group (31 out of 69). The implication is that these married old nurses with supportive families may likely suffer less burnout because the social support from their families will serve as stress buffer for them.

There was a significant interaction effect between stress and age in the report of burnout. Young nurses with high level of stress reported burnout (M = 45.00) that was significantly higher than the old nurses burnout with high level of stress (M = 40.98), and the old nurses with low level of stress (M = 41.88) (confer Table 1). The mediating effect of age on work

experience may be relevant in explaining this finding. This is very much in support of the findings of Langer (1962) that stress declines with age and experience. The old nurses might have developed positive coping strategies in managing the stress emanating from their work environment over the years than the young nurses who have not been long on the job. Moreover, Ugwu (1989) maintains that length of service could be regarded as an investment because it binds one more tightly to organization and thereby serves to moderate stress and burnout. These old nurses who may have become used to the stressors obtainable from the hospital environment may not be as responsive as the young nurses to stress; hence their chances of falling victims to burnout would be very minimal.

Sources of stress in the job of nurses are obvious. For instance, nurses are in constant emotional pains with the dying and the dead patients. Sometimes they have to stand for many hours attending to patients, as in surgery cases or labour. Moreover, attending to patients with infectious or threatening diseases, such as tuberculosis, HIV / AIDS, or cancer can be stress-inducing factors in nursing profession. Nurses oftentimes do not have steady hours of meals and sleep because of their work shifts. This points to the conclusions of Gray-Toft and Anderson (1981), that stress-inducing factors pervade nursing profession across the various settings in which they work, and that they are important determinants of stress and burnout.

The utility of the finding could be appreciated most by the nurses and some others in helping professions. The awareness that helping professions like nursing is pervaded with stress-inducing activities, which could likely lead to burnout, will enable them make adequate provisions that will help them manage their work situations, thereby reducing occasions of stress as well as burnout. Hospitals should provide adequate staff strength to help reduce the workload of staff in their various units. Hospital management should liaise with psychologists to assist their staff with mental health check to help their staff keep fit, thereby improving nurses' psychological and physical well-being and quality in health services delivery.

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