

## Shift Duty and Stress Coping Strategies among Nurses in the University College Hospital, Ibadan

Chioma C. Asuzu

*Department of Guidance and Counselling, University of Ibadan, Ibadan, Nigeria  
E-mail: chiomasuzu20@yahoo.com*

**KEYWORDS** Shift Duty. Stress. Coping Strategies. Nurses

**ABSTRACT** This is an exploratory analytical survey, aimed at identifying the effect of shift duty and the coping strategies used to adjust to the stress of shift work among nurses working in the University College Hospital, Ibadan in Nigeria. The sample of the study consists of 166 nurses working in various wards selected by a stratified random sampling. The questionnaires were in two sections A and B. Data was collected and analysed using percentages,  $\chi^2$ , t-test and correlation analysis. Shift duty was reported as stressful by 79 (47.6%) of the nurses studied. Various stress coping responses were identified which were largely based on planning. Neither age nor seniority on the job had any statistical significant influence on the proportion of nurses that report stress from shift work. The positive coping styles correlated negatively with the negative ones but the negative correlations were significant in only two instances namely between planning and denial ( $P < 0.01$ ) and between positive interpretations and growth and alcohol – drug disengagement ( $P < 0.05$ ). Stress coping responses of nurses were largely based on planning and active coping. The findings of this study indicated a need for establishment of counselling unit within the hospital where nurses or even other health workers could be guided and counselled on positive coping strategies for effective delivery of nursing care to the patients.

### INTRODUCTION

Nurses as a group of health personnel engage in shift work, and the nature of their work demands a 24-hour duty. Since no person can work round the clock without sleep, such jobs that demand a 24-hour duty have to be covered by a system of shift duties by different people leading to a shift in duty arrangement. This shift has been identified by Gordon and Henifin (1980) as stressful and may lead to negative health effects at three levels. Shift duty has been known to disturb body physiology, which in man has been developed to run as circadian rhythm. As such, it may be assumed that shift work may result in biological disorder in man (Gordon and Henifin 1980). Apart from shift duty, other sources of stress have been identified among nurses such as the emotional attachment that some extremely ill and distressed patients try to develop with the nurses who serve them well. The death of such patients may lead to severe stress (Asuzu 2005).

As our contemporary societies have changed, with a lot of advancement in technologies and the changing role of women, where married women have to take up paid jobs in order to meet up with family needs. They do not only take jobs, but they may have to run shifts in some of them. Some of these shifts have been identified by

various researchers as stressful and may result in negative health effects by affecting their sleep, work performance, social and family lives (Rose 1984). All these may eventually lead to job dissatisfaction. These stresses and the way to mitigate them need to be studied and understood so that they may be attended to.

### Literature Review

Shift duty has been identified as stressful and it has physiological and psychological consequences. Estryn (1990) established the facts that shift duty leads to fatigue and sleep impairment. Shah (1990) attributed social and health problems to shift work for those who engage in it. As such it is very stressful when individual nurses are not using good coping responses to adjust to the demands of shift work. It may result in the three stages of general adaptation syndrome as identified by Selye (1978). When nurses have enough coping strategies to deal with the problem, it results to successful coping and as such, leads to restoration of psychological wellbeing. When the coping skills are not adequate the stress may lead to illness and eventually death. Coping refers to behaviour that protects people from being psychologically harmed by problematic social experience (Pearlin and Schooler 1978). Bakare (1985) describe coping

as the mobilization of an individual's biological, social and psychological responses in order to effectively deal with stressors. Coping is useful because it helps in reduction of challenges, threats and frustration and thereby protecting the individual.

Coping is usually done in two ways, either by eliminating or modifying conditions giving rise to the problems and also by controlling the meaning of the experience in the manner, which neutralizes its problematic character.

Coping is one of the components of psychological wellbeing and there are three main types. According to Bakare (1986) they are direct attack response, which Scott and Howard (1970) called assertive response. The second is substitute act response called flight response and the third is called submission response, which is also known as freeze, or inert response. In the first one the individual meets the problem directly and proffers solution to the problem, in the second type, the problem may be reformulated and third one, the individual submits to the problem and suffers the consequences. Ceslowitz (1990) states that nurses use planful problem solving approach in confronting coping as a way of adjusting to stress. Bakare (1985) states that the secret of successful coping responses lies in the ability to select which coping responses will maximize one's effectiveness and satisfaction in the process of problem resolution.

Shift duty generates stress in individual nurses and nurses with the stress of shift work manifest it in various ways. Some nurses by understanding and becoming consciously knowledgeable about the inherent nature of shift duty in nursing, try to adjust to it. A lot of nurses use social support; this was revealed by Henifin (1980) to moderate health effect of shift work and also reduces the symptoms of stress. Furthermore, Sprusinka and Makowska (1992) agreed with the above statement and stated that social support is considered to be an essential factor in the perception of global stress and it reduces the impact of the stressors as well as reducing the detrimental effects of stress. Included in the social support is having an understanding husband. It helps a lot in coping with stress of shift work. Some nurses keep their children in day care centers while others invite their parents to stay with them, others employ house help to help them while some are officially absent from work. There are no studies yet in the specific area of coping

strategies or shift work tolerance in this environment. This is why it especially with shift work is very significant to identify strategies used in coping with stress.

The purpose of this study was to find out the coping mechanisms that nurses apply to reduce the stress arising from shift work and their relative frequency and the one most used of all of them. The relationship of these coping mechanisms to each other was also identified. The methods may be useful from the point of view of the clinical psychologist developing educational intervention to reduce the impact of such shift duties.

### Research Question

What are the self-identified coping responses and practices used by UCH nurses in dealing with stress from shift work?

### Hypotheses

There will be no significant difference between the different conceptual coping response styles based on the age of the participants.

There will be no statistically significant correlation between the different coping styles used by the nurses.

### RESEARCH DESIGN

This is exploratory analytical survey designed to collect information from nurses on the coping strategies used by them to maintain equilibrium from the stress of shift work.

**Participants:** The subjects were all professional nurses who were registered by the Nursing and Midwifery Council of Nigeria. The subjects were selected by simple random sampling of all nurses in all the wards in the UCH.

**Instrumentation:** The instrument used for this study was self-constructed questionnaire known as shift-duty coping scale and standardized COPE inventory. The questions were divided into sections A and B.

Section A consists of some demographic information such as age, sex, marital status, professional status and some questions on stress and coping responses.

Section B is on COPE Inventory. It has 14 items on various ways of coping and the answers were made in continuous scale of mea-

surement and information obtained was used to identify the coping responses. The validity and reliability coefficient of the instruments were 0.75 and 0.76 respectively by test-retest study. (reliability). The questions were pre-tested among some groups of nurses in Adeoyo Hospital Ibadan. The questions were later modified based on the findings of the pretest.

**Procedure:** Entry into the wards of the hospital was achieved through the office of the chief matron of the hospital. Random sampling procedure was adopted in selecting the subjects for the study. The questionnaires were distributed to all the sampled subjects in all the wards and same were collected two weeks later.

**Data Analysis:** The data were analysed by t-test while SPSS was used for the correlation analysis. The result of the analysis was used in answering the research questions and testing hypothesis stated in the study.

## RESULTS

Table 1 showed the actual coping actions volunteered by the nurses with the stress of shift work in an open-ended question. Their free responses were reviewed and recoded into the 4 categories given below at the end of the exercise. This will be used to answer the research question. What are the coping responses used by the nurses? The UCH nurses used various coping responses as shown in Table 1. 62.0% of the nurses used coping strategy such as household preparations which include planning the household duties before starting on any shift. It also includes buying all the household needs before starting on any shift. They sleep and rest adequately during the night averagely about six hours. This helped them to cope and maintain equilibrium.

**Table 1: Systems identified by the Nurses for coping with shift work**

<i>Coping responses</i>	<i>Percentage</i>
Household preparation and adjustment	62.0
External arrangements	14.6
Resignation to the circumstances	9.0
Work place preparations	8.4
Others	6.0
Total	100.0

About 14.6% of the nurses use external help arrangement to cope during the shift. This they

did by getting help from outside the home to look after their families during the time they were at work. This can be regarded as social support, as some of the nurses send for their mothers, brothers and sisters to stay with their families while they were at work. Some of the nurses took their children to the homes of their relations, in order to cope well during the period of night shift especially.

Furthermore, about 9% of the nurses practice resignation by saying to themselves that they do not have any alternative or choice than to stop bordering and just accept the shift duty. About 6% constitute "others" who pray, sedate themselves with drug when they wish to sleep or drink coffee to keep awake if they are on night duty.

In conclusion, a good percentage of the nurses cope with shift duty by adequate planning.

Section B of the instrument was used to study the psychological coping response of the nurses to stress. The section consisted of 14 psychological groups of responses to stress, 13 of these elicited by 4 sub-questions, for which total aggregate score was obtained for each nurses. The 14th response was a single question. The section consists of the following group of psychological responses.

1. Active coping
2. Planning
3. Suppression of competing activities
4. Restraint coping
5. Seeking social support instrument.
6. Seeking social support instrument emotional
7. Positive re-interpretation and growth.
8. Acceptance.
9. Turning to religion.
10. Focus and venting of emotion
11. Demand
12. Behavioural disengagement
13. Mental disengagement
14. Alcohol drug disengagement.

Table 2 shows the mean scores of the nurses on different coping styles. It revealed that out of the first 13 coping styles on which any individual maximum score can be 16, item no 10 based on focus and venting of emotion is the most actively used coping response by the nurses. This is followed by planning (item 2) and positive re-interpretation and growth (item 7) response styles based on demands and disengagements were among the least ones.

**Table 2: mean score of the nurses on the different coping styles used by them**

S. No.	Category of coping response	Mean score
1.	Active coping	11.1
2.	Planning	11.9
3.	Suppression of competing activities	8.8
4.	Restraint coping	9.3
5.	Seeking social support, instrument	8.1
6.	Seeking social support, emotional	9.6
7.	Positive re-interpretation and growth	11.6
8.	Acceptance	9.7
9.	Turning to religion	7.7
10.	Focus and venting of emotions	13.0
11.	Denial	7.6
12.	Behavioural disengagement	7.4
13.	Mental disengagement	7.9
14.	Alcohol-drug disengagement	1.3

Hypothesis one, states that there will be no significant difference between the age groups and the different coping responses styles.

The t-test was used in testing hypothesis. Behavioural disengagement and mental disengagement showed statistically significant difference between the nurses as shown in Tables 3 and 4.

This implies that those below the age of 40 will go to movies, day dream, sleep or engage in other enjoyable activities in response to stress, including that from shift work. In order words, those below 40 years use more of mental and behavioural disengagement than those above 40 years.

Table 5 shows the t-value and p-values of all 14 coping styles by all 163 nurses in which these questions were properly answered. There was no statistically significant correlation between different coping styles used by the nurses.

### Correlation of the Coping Styles

It was desired by the researcher to explore

**Table 3: T-test on the use of behavioural disengagement compared between the age groups**

Age	No	DF	X	SD	T-obsvalue	Cr. T	P-Value
20-39 yrs	123	161	7.463	3.498	2.331	1.96	<0.05

**Table 4: T-test on the use of mental disengagement compared between the age groups**

Age	No	DF	X	SD	T-obsvalue	Cr.T	P-Value
20-39 yrs	123	161	8.146	3.059	2.733	1.96	<0.01
40 yrs and >	40		6.825	2.510	2.887		

**Table 5: T-test values on the use of the different coping styles between the age groups**

S.No.	Coping styles	t-value	Df	P-value
1.	Active coping	0.492	161	NS
2.	Planning	1.016	161	NS
3.	Suppression of competing activities	0.634	161	NS
4.	Restraint coping	1.404	161	NS
5.	Seeking social support	0.583	161	NS
6.	Seeking social support instrument, emotional	0.201	161	NS
7.	Positive re-interpretation and growth	0.783	161	NS
8.	Acceptance	1.414	161	NS
9.	Turning to religion	0.762	161	NS
10.	Focus and venting of emotions	1.241	161	NS
11.	Denial	1.184	161	NS
12.	Behavioural disengagement	2.231	161	<0.01
13.	Mental disengagement	2.733	161	<0.01
14.	Alcohol-drug disengagement	0.139	161	NS

the correlation between the various coping styles among the nurses. Table 6 is correlation matrix of all 14 coping styles as scored by the nurses. All the coping styles from 1 – 7, which may be interpreted as positive response styles, correlated significantly with each other at the levels of 0.01 and 0.001, with the exception of item 3 and 5. Coping response items 8 to 10, which may be interpreted as somehow in between very actively positive coping response and the denial/disengagement (negative) responses, also had positive correlation with items 1 to 7, but many more of these were not significant as was the case between items 1 to 7. However, it is only from item 11 (denial) to the end of disengagement styles which may all be interpreted as rather negative response styles that negative correlations were statistically significant, that is, those between planning and denial  $P < 0.01$  on the one hand and between positive re-interpretation and growth and alcohol-drug



disengagement ( $P < 0.05$ ) on the other hand. Thus, the more people use planning as a coping response style, the less significantly they use denial; so also the case between re-interpretation and growth with alcohol-drug disengagement.

Thus hypothesis 5 is rejected in 36(40%) of the 91 pairs where this was sought and accepted in 55 (60%) of the cases (Table 6).

### DISCUSSION

The focus of this study was to identify actual actions that the nurses take to reduce the stress of shift duty. Most of these activities could be grouped under the broad heading of planning. This is in line with the findings of Ceslowitz (1990). Thus these strategies can be suggested to younger entrants in the profession who experience great stress from shift duty. The work by Ceslowitz (1990) also identified emotional exhaustion in the diploma graduates. These nurses also make use of social supports as a coping response and this has been established by Gordon and Henifin (1980) who stated that social support help to reduce the symptoms of job stress. Furthermore Lee and Ellis (1990) emphasized social support as a coping response.

Hypothesis 1 states that there will be no statistically significant difference between the age groups using the different coping responses styles. This hypothesis was tested with t-test only behavioral disengagements showed statistically significant differences between the nurses as shown in Tables 3 and 4. The age was classified into two, those below 40 and those above 40 years. The findings are in line with the findings of Spelten et al. (1993) in their study of coping strategies of nurses in England.

This might be significant because more nurses under 40 years were used for the study. These groups of nurses are younger in age and some of them unmarried, as such may have more time to go to the movie, daydream and sleep more than usual. This shows that there is greater exhibition of what may be called less mature emotional responses to stress or use of less mature coping that actually showed to be statistically significantly different in older and younger nurses as shown in Tables 2 and 3. On the two main disengagement methods hypothesis 2 states that there will be no statistically significant correlation between the different coping styles used by

the nurses. This hypothesis was tested by the use of correlation matrix between the various coping styles among the nurses. Table 6 shows correlation matrix of all the coping styles as scored by the nurses. All the coping styles from 1-7, which may be interpreted as positive response styles, correlated significantly with each at the levels of 0.01 and 0.001, with the exception of item 3 and 5. Even though coping response items 3 and 10 which may be interpreted positively with items 1 to 10, they were not as highly correlated as items 1 to 7 did with each other. Negative correlations were noted from item 11 (denial) to the end of disengagement styles. However only 2 of those negative correlations were statistically significant, that is, those between planning and denial ( $p < 0.01$ ) one hand and between positive and alcohol-drug disengagement ( $p < 0.05$ ) on the other hand.

The negative correlations between the very active and positive response styles and apparently not so positive ones will suggest that, the more one used the positive one, the less one will use the other on the opposite pole. Thus, the more people use planning as a coping response style, the less significantly they use denial. So also is the case with the re-interpretation and growth with alcohol-drug disengagement.

Active coping and planning go together and UCH nurses use them and use less of denial and disengagement. Thus, hypothesis 2 is rejected in 36(40%) of all the 91 pairs of the correlation matrix where this was sought and accepted in 55(60%) of the cases as shown in Table 6.

The fact that not so positive response styles scored the least in this section is possibly a reflection the good qualities of the indigenous social lifestyle.

Furthermore, most of the nurses, identified with the more positive coping styles, many of these are used side by side with the others. For example active coping and planning are highly correlated in their usages by them.

The findings of this study have generated need for creation or establishment of counselling unit in the hospital where nurses both young and old, senior and junior and other health professionals will be properly guided and counselled, which will certainly result in job satisfaction and high productivity. Alternatively this may be incorporated in the services given by the Staff Medical Services of the Hospital.

## REFERENCES

- Asuzu CC 2005. Shift duty and other sources of stress among nurses in the University College Hospital, Ibadan. *Nigerian Journal of Applied Psychology*, 8(1): 213-225.
- Bakare ACM 1986. The dynamics of psychological adjustment among Nigerians 1985/86. *University lecture*, Ibadan: University of Ibadan.
- Carver CS, Scheier MF, Weintraub JK 1989. Assessing coping Strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56: 267-283.
- Ceslowitz SB 1990. The relationship of burn out, use of coping strategies and curricular programmed of registered nurses. *Journal of New York State Nurses Association*, 21(1): 4-8.
- Estryng-Behar M 1990. Stress at work and mental health status among female hospital workers. *British Journal of Medicine*, 47(1): 20-28.
- Gordow GC, Henifin MS 1980. Health and safety, job stress, and shift work. *Professional Psychology*, 11: 409-420.
- Pearlin L, Schooler C 1978. The structure of coping. *Journal of Health and Social Behaviour*, 19: 2-21.
- Selye HF 1976. *Stress of Life*. New York: McGraw-Hill Book Co.
- Shah MZ 1990. Sleep and wakefulness pattern of nurses. Engaged in a rotational shift. *Journal of Pakistan Medical Association*, 40(10): 245-260.
- Spelten E 1993. The relationship between coping strategies and CHQ scores in Nurses. *Ergonomics*, 26(1): 227-232.
- Sprusinska E, Makowska Z 1992. The effects of social support on women's perception of global stress and health status. *Medical Pr*, 43(5): 403-410.