

Psychiatric morbidity among Nursing staff of a University Teaching Hospital in Nigeria.

A. D. YUSSUF, S. A. KURANGA, O. R. BALOGUN, P. O. AJIBOYE, O. I. N. BUHARI.

SUMMARY

Background The nursing profession is an important component of the health service and requires commitment and personal sacrifice. This profession may not be spared the onslaught of complex problems of the job, arising from advances in technology and increasing patients' load, and the attendant psychological problems.

Aims The general aim was to heighten an awareness of psychological health problems that may be inherent in nurses' work setting, and to provide a baseline for future research. The specific aim was to examine the level of psychological morbidity and to measure the extent to which personal and work-related factors could be risk factors for this morbidity.

Methods The study was a cross-sectional study of the eligible nurses in the employ of University of Ilorin Teaching Hospital (UITH), using self-report questionnaires comprising the 30-item General Health Questionnaire (GHQ-30), and a questionnaire on socio-demographic/work-related variables. Data were analysed using SPSS version 11. Frequency distributions, chi square figures were calculated, and level of statistical significance set at 5%.

Results Of 385 eligible nurses, 280 returned completed questionnaires (response rate) 72.7%. Fifty (17.9%) scored 4 and above on the 30-item GHQ and were regarded as having possible psychological distress.

Identified risk factors for

developing psychological morbidity included gender, leisure activities, job experience, workload, shift duty, remunerations, promotion, government policy, family, and career future.

Conclusion: Nurses were as likely as any other health personnel to develop psychological impairment. Employment of more nurses, improved emoluments, re-organization of work schedules, and organization of regular lectures/seminars in stress management for personnel are advocated.

Keywords: *Psychiatric morbidity. Nursing personnel. Nigeria.*

INTRODUCTION

Nursing could be regarded as a helping profession that requires a high degree of commitment and personal involvement. (Collins, 1996) As important members of health team, nurses too, are perhaps not spared from the onslaught of complex problems of job that may arise from the advances in technology and possibly, increasing care demands. They may also be prone to dissatisfaction and discouragement in their jobs, with possible psychological problems (Collins, 1996). The environment in which medical professionals work continually undergo profound changes, due to increasing demands in medical care, mounting pressure to keep medical cost down, and health reforms (Yussuf et al, 2006a,b,c). Studies (Escriba et al, 2000; Greenglass and Burko, 2001) have shown that changes in medical care system and the environment can act as stressors on medical

professionals, resulting in physical and mental ill-health. The association of job-related stress/emotional exhaustion and health problems (for example, anxiety, depression, somatic complaints, and post-traumatic stress disorder) have been reported (van Servellen, 1994; Laposa et al, 2003; Yussuf, 2005a; Yussuf et al 2006a,b,c). Hence, stress related disorders have begun to attract attention among medical professionals (Imai, 2004; Yussuf et al, 2006b).

Escriba Aguir and his colleagues (Escriba et al, 2004) in a cross sectional study of randomly selected nurses found that a higher level of exposure to work stress factors lowered their psychological welfare. Many other factors have also been reported to account for work stress among nurses. For instance, Helps (1997) in a study among Accident & Emergency (A&E) nurses found factors relating to the physical working environment and lack of staff as most frequently reported stressors, while Herschbach et al (1991) reported main stress-inducing conditions among nurses as low level of professional experience, working hours and shift work.

The limitation of studies into the job-related psychological problems among nurses in this environment had prompted this research. Its general aim was to heighten the awareness of both nurses and hospital administrators of the importance of psychological distress in the work setting. The specific aim was to provide a baseline for future research in this environment. We have set out to conduct the research among nursing staff of University of Ilorin Teaching Hospital

(UIH) to specifically examine the level of psychological distress among nurses working in the hospital, and to measure the extent to which other key personal and work-related characteristics were associated with the level of distress in these nurses.

METHODS

University of Ilorin Teaching Hospital had 410 nursing staff of different cadres in its employ, distributed across 20 units. Of the 410 potential respondents, 25 were ineligible because they were on leave (maternity, study, or annual leave). Questionnaires consisting of the 30-item General Health Questionnaire (GHQ-30) and a questionnaire to elicit socio-demographic and work-related characteristics were sent to all the remaining 385 nurses. They were informed that the research was meant to assess the impact of work on their psychological well-being, family and social life. They were also assured of confidentiality despite being instructed to fill the questionnaires anonymously. Follow-up questionnaires were sent to non-responders after the first three weeks, and they also received telephone reminders. The psychiatric chief resident (BOIN) took charge of the distributions and collections of these questionnaires. The 30-item General Health Questionnaire (GHQ-30) (Goldberg et al, 1976) was used as a measure of psychological distress. This can be scored 0-30, and a score of 4 or more is suggestive of a probable case of psychological disorder.

A cut off point of 4 was used in accordance with previous studies done in occupational settings in this environment (Yussuf, 2005a,b; Yussuf et al, 2006a,b,c). Data were analysed with SPSS version 11.0. Frequency distributions, cross tabulations, chi square figures were calculated and the level of statistical significance was set at 5%.

RESULTS

Of the remaining 385 respondents, 280 returned completed questionnaires, giving a response rate of 72.7%. Fifty (17.9%) respondents scored 4 and above on the 30-item General Health Questionnaire (GHQ-30), and were considered as having probable psychological distress.

Socio-demographic characteristics

As shown in table 1, 129 (46.1%) of the respondents were in the 35-44-year age group, 268 (95.7%) were females, and 269 (96.1%) were married. Most (207 or 73.9%) of them had more than 3 children, and 277 (98.9%) engaged in leisure activities (e.g., relaxation with family, travelling, outdoor games). Nine (3.2%) respondents had a past history of emotional disorders, while 16 (5.7%) reported having family history of emotional disorders.

Table 1 also shows the work-related characteristics of the respondents. This indicates that 174 (62.1%) of the respondents had job experience of over 10 years, 139 (49.6%) described their workload as heavy, and 127 (45.4%) considered their remunerations as satisfactory. Majority (152 or 54.3%) of them had their promotions not later than 5 years previous, 140 (50.0%) preferred shift duty, 138 (49.3%) perceived their future in nursing as very secure, and 127 (45.4%) perceived government support to health institutions as bare.

Socio-demographic and work-related risk factors (Tables 2)

As indicated, female nurses appeared more likely to be predisposed to developing morbidity ($\chi^2=16.4$, $p=0.0001$, $OR=2.5$, $RR=1.1$), and respondents who engaged in leisure activities appeared 2 1/2 times more likely to develop morbidity ($\chi^2=4.9$, $p=0.03$, $OR=9.5$, $RR=2.5$).

Similarly, respondents who had over 10 years job experience were 3-times more likely to have psychiatric morbidity ($\chi^2=14.0$, $p=0.001$, $OR=0.2$,

$RR=3.1$), and those who reported heavy workload were 2 times more likely to have morbidity ($\chi^2=21.6$, $p=0.0001$, $OR=6.8$, $RR=2.0$). Respondents who assessed their remunerations as very satisfactory had about 3 times likelihood of developing morbidity ($\chi^2=12.7$, $p=0.002$, $OR=0.2$, $RR=2.7$), and those who had their promotions not later than 5 years previous had about 1 1/2 times likelihood of developing morbidity ($\chi^2=7.9$, $p=0.02$, $OR=0.6$, $RR=1.5$). Similarly, respondents who preferred shift duty had increased likelihood of developing morbidity ($\chi^2=7.4$, $p=0.02$, $OR=1.1$, $RR=1.0$), and those who perceived government support as very adequate were about 2 times more likely to develop morbidity ($\chi^2=11.8$, $P=0.003$, $OR=0.4$, $RR=1.9$). Nurses who reported that work was not affecting their families appeared 2 times more likely to develop morbidity ($\chi^2=11.8$, $p=0.003$, $OR=0.4$, $RR=2.3$), and those who reported feeling secure in the nursing profession were also more likely to have morbidity ($\chi^2=7.6$, $p=0.02$, $OR=2.2$, $RR=1.2$).

Table 1. Sociodemographic/work characteristics of respondents.

Variable	N=280(100%)
Age:	
<34 years	128(45.7)
35-44 years	129(46.1)
45-54 years	23(8.2)
Gender:	
Male	12(4.3)
Female	268(95.7)
Marital status:	
Single	4(1.4)
Married	269(96.1)
Separated/divorced	3(1.1)
Widowed	4(1.4)
Number of children:	
<3 children	73(26.1)
>3 children	207(73.9)
Past history of emotional disorders:	
Yes	9(3.2)
No	271(96.8)
Family history of emotional disorders:	
Yes	16(5.7)
No	264(94.3)
Engagement in Leisure activities:	
Yes	277(98.9)
No leisure	3(1.1)

Years of experience:

<5years	24(8.6)
5-10years	82(29.4)
Above 10years	174(61.9)

Future in nursing profession:

Very secure	138(49.3)
Secure	126(45.0)
Not secure	16(5.7)

Assessment of remuneration:

Very satisfactory	60(21.4)
Satisfactory	127(45.4)
Not satisfactory	93(33.2)

Period last promoted:

Nil promotion	50(17.9)
<5years previous	152(54.3)
>5years previous	78(27.9)

Preferred duty:

Shift duty	140(50.0)
Call duty	110(39.3)
Undecided	30(10.7)

Perception of government support:

Very adequate support	72(25.7)
Bare support	127(45.4)
Inadequate support	81(28.9)

Assessment of workload:

Very heavy	110(39.3)
Heavy	139(49.6)
Appropriate	31(11.1)

Table II. Socio-demographic/work-related risk factors for morbidity in the respondents

GHQ-negative ($N_1=230$, 100%) GHQ-positive ($N_2=50$, 100%)
Variable

Age:

<34 years	103(44.8)	25(50.0)
35-44years	105(45.7)	24(48.0)
45-54years	22(9.6)	1(2.0)

Gender:

Male	11(4.8)	1(2.0) †
Female	219(95.2)	49(98.0)

Marital status:

Single	3(1.3)	1(2.0)
Married	220(95.7)	49(98.0)
Separated/divorced/ Widowed	7(3.0)	

Number of children:

<3 children	58(25.2)	15(30.0)
>3 children	72(74.8)	35(70.0)

Engagement in Leisure activities:

Yes	229(99.6)	48(96) "
No leisure	1(0.4)	2(4.0)

Years of experience:

<5years	13(5.7)	11(22.0) †
5-10years	70(30.4)	12(24.0)
Above 10years	147(63.9)	27(54.0)

Assessment of workload:

Very heavy	90(39.1)	0(40.0) †
------------	----------	-----------

Table 2 continued

Heavy Appropriate	Light Moderate	High Very high
----------------------	-------------------	-------------------

Assessment of remuneration:

Very satisfactory	40(17.4)	20(40.0) °
Satisfactory	111(48.3)	16(32.0)
Not satisfactory	79(34.3)	14(28.0)

Period last promoted:

Nil promotion	36(15.7)	14(28.0) °
<5years previous	123(23.9)	29(58.0)
More than 5years previous	71(30.9)	17(34.0)

Preferred duty:

Shift duty	113(49.1)	27(54.0) "
Call duty	87(37.8)	23(46.0)
Undecided	30(13.0)	

Perception of government support:

Very adequate support	50(21.7)	22(44.0) °
Bare support	107(46.5)	20(40.0)
Inadequate support	73(31.7)	8(16.0)

Work affecting family:

Yes	31(13.5)	16(32.0) †
No	199(86.5)	34(68.0)

Future in nursing profession:

Very secure	120(52.2)	18(36.0) "
Secure	95(41.3)	31(62.0)
Not secure	15(6.5)	1(2.0)

† p<0.0001, † p<0.001, ° p<0.002, ; p<0.003, * p<0.01, ** p<0.02

DISCUSSION

Morbidity level

The morbidity level of 17.9% was in consonance with the reported morbidity among hospital consultants and bank workers (Yussuf et al, 2005b; Yussuf et al, 2006b) but lower than the reported level among resident doctors (Yussuf, et al, 2006a) in the same environment. The similarity of morbidity level with the studies among consultants and bank workers could be a reflection of similarity of socio-cultural and work setting. These groups perhaps, have some common features (e.g. maturity, secured employment, and secured marriage). The dissimilarity with the reported morbidity among residents could be due to the inherently stressful nature of residency training, coupled with the unstable institutional and government policies (Yussuf et al, 2006a; Yao and

Wright, 2001; Sargent et al, 2004). Although, there was no statistically significant difference between GHQ-negative and GHQ-positive respondents, with and without family history of psychological problems ($\chi^2=0.3$, $p=0.6$), other factors such as genetic factor may also be contributory. This could be a subject of future studies.

Sociodemographic and work-related risk factors for morbidity

Female gender was found to have increased predisposition to developing psychiatric morbidity. This was contrary to the finding of Yussuf (2005b) that reported increased morbidity in male gender but in concurrence with Beena and Poduval study (1992) that reported increased psychiatric morbidity among females, because of role conflicts and overload. The present finding might be a reflection of the possible stress inherent in having to cope simultaneously with household burden and the demands of work, especially in an environment with a characteristically poor industrial policy.

Not engaging in leisure activities was found to be about 2½-time more likely to predispose the respondents to developing morbidity. This, perhaps, underscore the import of recreations or leisure activities in the mitigation of psychological problems (Yussuf, 2005b; Yussuf et al, 2006a; Al-Shamari et al, 1995; McFarlane et al, 2004). Effective leisure and extracurricular activities have been reported to make nurses adhere strictly to job schedules (McFarlane et al, 2004). Therefore, absence of leisure activities could possibly have eliminated possible avenues for letting off work tension in these respondents.

Respondents' who had working experience of above 10-years were 3 times more likely to have morbidity. This was contrary to studies that have reported significantly reduced morbidity with increased job experience (Escriva et al, 2000; Ernst et al, 2004) owing to increased confidence. The downward review of years of service before retirement (from 35years to 30years), and the request

of voluntary retirement of public officers with 30 years working experience, could possibly be a trigger for psychological distress. Another possible explanation could be that, the older the nurses in the profession (i.e. longevity), the more the job responsibilities, and the more dutiful they became thus, invariably, encountering more pressure. This may further explain the 2 times increased likelihood of developing morbidity among respondents who reported heavy workload. This was in agreement with previous studies among nurses (Tyler and Ellison, 1994; McFarlane et al, 2004).

Surprisingly, nurses who expressed remunerations as being very satisfactory were found to be about 3 times more likely to have psychological distress. This contrasted with the findings among residents, consultants, and other occupational groups (Shankar and Famuyiwa, 1991; Yussuf, 2005b; Yussuf et al, 2006b) but consistent with other studies (Ramirez et al, 1996; Al-Shamari et al, 1995). Perhaps, the feeling of satisfactions with remunerations may have served as impetus for the nurses to overwork with the resultant significantly increased psychological distress. Being overworked could also have caused the significantly increased morbidity found among nurses who desired shift duty which is perhaps, stressful.

Surprisingly, nurses who were promoted not later than 5 years previous were 1 1/2 times more likely to have morbidity. Perhaps, the increased demands of their new status might be overwhelming enough to have served as trigger for psychological problems. Another possible explanation could be the effect of the positive life event (i.e. promotion) on the respondents, this, and other factors have been reported as possible causes of psychological disorders (Yussuf, 2005b).

Nurses who felt their future in the profession was secure were significantly more likely to have morbidity. This finding was however difficult to explain. Perhaps, these

nurses were devotedly dutiful, and the attendant work overload, without leisure activities to let off possible tension, could make them more vulnerable. Leisure activities have been reported to have mitigating effects on work stress (Yussuf, 2005b; Al-Shamari et al, 1995; Yussuf et al, 2006a; McFarlane et al, 2004).

Respondents who felt government should improve on all aspect of health care (remuneration of staff, funding of the health institutions, and reduced interference with health institutions' administration) appeared more likely to have morbidity. This could be the window into a more serious issues plaguing and causing psychological distress in the health sectors. These nurses may have been resentful of all government policies on health but found no convenient medium of expression, bottled them up, and the eventual manifestation as emotional distress.

Respondents who felt work did not affect their family appeared 2 times more likely to have psychological distress. This was contrary to the finding of a previous study (Yussuf, 2005b) that reported home-work conflict as an important source of stress especially for women workers. Perhaps the nature of nursing profession which probably is more of care giving could have equipped these nurses to be solidly in control of their homes regardless of work pressure.

CONCLUSION

From the foregoing, it was evident that the nurses in the employ of University of Ilorin Teaching Hospital (UIH) were as likely as any other health personnel to develop psychological distress. The distress was not significantly associated with any socio-demographic factor but was significantly associated with work-related factors like workload, shift duty, remunerations, promotion, government policy, family, career future, and interpersonal relationship.

We therefore advocate that our health institutions should endeavour to employ more nurses to lessen the

workloads on the employees, re-organise work schedules to accommodate times off duties, improve staff emoluments, encourage career development among the nurses, and institute regular lectures/seminars in stress management for personnel. Further researches to establish possible contributions of genetics, and types (i.e. diagnoses) of psychiatric morbidity in nurses are also advised.

LIMITATIONS OF THE STUDY

The methodological differences between the present study and the previous ones on nurses precluded definitive comparison. Therefore, these findings may not be generalisable. Reliance on self-report by the nurses could also limit the interpretation of the results, because the study objectives may have encouraged exaggerated loading of psychological stressor factors in the respondents.

The study did not determine the types (i.e. diagnoses) of psychiatric morbidity in the GHQ-positive nurses for necessary intervention. This could however, be a subject for future research.

REFERENCES

- Al-Shamari, S. A., Khoja, T. A., Al-Subaie, A. S. (1995) Job satisfaction and occupational stress among primary health care center doctors. *International Journal of Mental Health*, 24, 4, 85-95.
- Beena, C., Poduval, P. R. (1992) Gender differences in work stress of executives. *Psychological Studies*, 37, 109-113.
- Collins, A. M. (1996) The relation of work stress, hardiness, and burnout among fulltime hospital staff nurses. *Journal of Nursing Staff Development*, 12, 2, 81-85.
- Ernst, M. E., Messmer, P. R., Franco, M. Gonzalez, J. L. (2004) Nurses job satisfaction, stress and recognition in paediatric setting. *Pediatric Nursing*, 3, 3, 219-227.
- Escriba, Aguir, V., Mas Pons, F. Cardenas Echegaray, M., Burgueta Ramos, D., Fernandez Sanchez, (2000) Work-related stress factors and the psychological well-being of hospital nurses. *Rev Enferm*, 23, 7-8, 506-511.
- Goldberg, D. P., Rickels, K., Downing, Hesbacher, P. (1976) A comparison of

Psychiatric screening tests. *British Journal of Psychiatry*, 129, 61-65.

Greenglass, E. R., Burke, R. J. (2001) Stress and the effects of hospital restructuring in nurses. *Canadian Journal of Nursing Research*, 33, 2, 93-108.

Helps, S. (1997) Experiences of stress in accident and emergency nurses. *Accid Emerg Nurs*, 5, 1, 48-53.

Herschbach, P. (1991) Stress in the hospital - stresses on nurses and physicians. *Psychother Psychosom Med Psychol*, 41, 5, 176-186.

Imai, H., Nakao, H., Tsuchiya, M., Kuroda, Y., et al. (2004) Burnout and work environments of public health nurses involved in mental health care. *Occupational and Environmental Medicine*, 61, 764-768.

Laposa, J. M., Alden, Lynn, E., Fullerton, L. M. (2003) Work stress and posttraumatic stress disorder in ED nurses/personnel. *Journal of Emergency Nursing*, 29, 1, 23-28.

McFarlane, D., Duff, E. M. W., Bailey, E. Y. (2004) Coping with occupational stress in an accident and emergency department. *West Indian Medical Journal*, 53, 4, 242-247.

Beena, C., Poduaval, P. R. (1992) Gender differences in work stress of executives. *Psychological Studies*, 37, 109-113.

Paykel, E. S. (1978) Contribution of life events to causation of psychiatric illness. *Psychological Med*, 8, 245-247.

Ramirez, A. J., Graham, J., Richards, M. A., Gregory, W. M. (1996) Mental health of hospital consultants: the effects

of stress and job satisfaction at work. *Lancet*, 347, 724-726.

Sargent, M. C., Sotile, W., Solile, M. O., Rubash, H., et al. (2004) Stress and coping among orthopaedic surgery residents and faculty. *The Journal of Bone and Joint Surgery*, 86, 1579-1586.

Shankar, J., Famuyiwa, O. O. (1991) Stress among factory workers in a developing country. *Journal of Psychosomatic Research*, 35, 163-166.

Tyler, P. A., Ellison, R. N. (1994) Sources of stress and psychological wellbeing in high-dependency nursing. *Journal of Advance Nursing*, 19, 3, 469-476.

Van Servellen, G., Topf, M., Leake, B. (1994) Personality hardiness, work-related stress, and health in hospital nurses. *Hosp Top*, 72, 2, 34-39.

Yao, D. C., Wright, S. M. (2001) The challenges of problem residents. *Journal of General Internal Medicine*, 16, 7, 498-499.

Yussuf, A. D. (2005,) A syrvey of

psychiatric morbidity among bank workers in Ilorin, Nigeria. *The Tropical Journal of Health Science*, 12, 1, 14-20.

Yussuf, A. D. (2005b) Risk factors for psychiatric morbidity among bank workers in a northern city of Nigeria. *South African Journal of Psychiatry*, 11, 2, 63-68.

Yussuf, A. D., Ajiboye, P. O., Buhari, O. I. N., Kuranga, S. A., et al. (2006a) The psychological health problems of resident doctors in a Nigerian Teaching Hospital. *South African Journal of Psychiatry*, 12, 4, 106-111.

Yussuf, A. D., Balogun, O. R., Kuranga, S. A. (2006 b) Prevalence and the risk factors for psychiatric morbidity among tertiary hospital consultants in Nigeria. *South African Journal of Psychiatry*, 12, 2, 26-36.

Yussuf, A. D., Balogun, O. R., Kuranga, S. A. (2006c) A survey of psychiatric morbidity and the risk factors among chief executives of tertiary health institutions in Nigeria. *Nigeria Journal Psychiatry*, 4, 1, 15-20.

CORRESPONDENCE: Yussuf, AD. Dept. of Behavioural Sciences, College of Health Sciences, University of Ilorin, Ilorin.

YUSSUF, AD, Dept. of Behavioural Sciences, College of Health Sciences, University of Ilorin, Ilorin. KURANGA, SA, Dept. of Surgery, College of Health Sciences, University of Ilorin. BALOGUN, OR, Dept. of Obstetric and Gynaecology, College of Health Sciences, University of Ilorin. AJIBOYE, PO, Dept. of Behavioural Sciences, College of Health Sciences, University of Ilorin. BUHARI, OIN (Mrs), Senior Registrar, Chief Resident, Dept. of Behavioural Sciences, University of Ilorin Teaching Hospital, Ilorin.