A Descriptive Study on Psychiatric Morbidity among Nurses Working in Selected Hospitals of Udupi and Mangalore Districts Karnataka, India

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Abstract—Nursing is recognized as a stressful occupation and has indicated a probable high prevalence of distress. It is a helping profession requiring a high degree of commitment and involvement. If stress is intense, continuous and repeated, it becomes a negative phenomenon or "distress," which can lead to physical illness and psychological disorders. The frequency of common psychosomatic symptoms including sleeping problems, tension headache, chronic fatigue, palpitation etc. may be an indicator of nurses' work-related stress level. Objectives of the study were to determine psychiatric morbidity among nurses and to find its association with selected variables. The study population consisted of 1040 registered nurses working in selected medical college hospitals and government hospitals of Udupi and Mangalore districts. Descriptive survey design was used to conduct the study. Subjects were selected by using purposive sampling. Data were gathered by administering background proforma and General Health questionnaire. Severe distress was experienced by 0.9% of nurses and 5.6% had some evidence of distress. Subjects who did not have any distress were 93.5%. No significant association between psychiatric morbidity in nurses and demographic variables was observed. With regard to work variables significant association is observed between psychiatric morbidity and total years of experience ($z=10.67$, $p=0.03$) and experience in current area of work ($z=9.43$, $p=0.02$).

Keywords—Psychiatric morbidity, nurse, selected hospitals, working.

I. INTRODUCTION

NURSING is a helping profession requiring a high degree of commitment and involvement. Stress in nurses is an endemic problem. It contributes to health problems in nurses and decreases their efficiency. If stress is intense, continuous and repeated, it becomes a negative phenomenon or "distress," which can lead to physical illness and psychological disorders. The frequency of common psychosomatic symptoms including sleeping problems, tension headache, chronic fatigue, palpitation etc. may be an indicator of nurses' work-related stress level. Psychiatric morbidity may not have an unexpected, short-span onset, but it builds up slowly which may give rise to chronic psychiatric conditions, such as professional burnout, depression, anxiety disorders, and even conditions that have an impact on every aspect of their lives. A study identified the degree of job strain and investigated the association between job strain and the minor psychiatric disorders in hospital nurses. A total of 907 registered nurses were recruited for this study via stratified random sampling from hospitals in Kaohsiung, Taiwan. Each participant was requested to answer a structured questionnaire anonymously and a 98.1% response rate was achieved. The Job Strain Questionnaire was used to measure job strain. The minor psychiatric disorder was measured by the Chinese Health Questionnaire and a cut-off score of 4 or more was used to identify subjects with minor psychiatric disorder. Results indicated that 24.5% of the nurses were in the high strain group and that those who were unmarried, had lack of social support, and those with shift work were most susceptible to high job strain. A total of 443 (48.8%) respondents were identified as having minor psychiatric disorder. Multiple logistic regressions revealed that high job strain, poor social support, and poor self-perceived health were the significant factors for nurses to have minor psychiatric disorder [1]. Another study assessed psychological well-being of nurses in different job settings in Alexandria and identified socio-demographic, psychosocial and workplace predictors. A total sample of 412 nurses represented nurses working in five different health organizations in Alexandria. A self-administered questionnaire was used to collect socio-demographic, occupational and health data, and the Standardized Arabic Version of General Health questionnaire with 30 items, Job Descriptive Index and Social Support Scale were also used. Results revealed that 21.67% of nurses recorded moderate to severe psychological symptoms on GHQ. Fewer years of experience, negative family and friend support, and negative total work satisfaction were found to be significant predictors of psychological ill health among nurses in a descending rank order [2].

The extent of work stress in nurses in a hospital setting was found out by identifying the major sources of stress, and finding the incidence of psychosomatic illness related to stress in Pune, Maharashtra. The study used a questionnaire relating to stressors and a list of psychosomatic ailments. One hundred and six nurses were included in the study. The factors relating to stress were given weights according to the severity. The total score of 50 was divided into mild, moderate, severe, and burnout. Stress levels were studied in 106 nurses covering all units of the hospitals. Fifty-six percent of the staff had more than 10 years of experience. Age and experience wise, this was a senior workforce. Significant stress of varying in severity was experienced by 73.59% of nurses. Stiffness in the

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neck and shoulders seen in the nurses is largely due to continuous tensing of muscles due to stress. Sixty-six percent of the nurses were interested in training for new skills and 60% desired more training for their present job. Sixty percent of the nurses were not satisfied with their existing salary and benefits. Their home life was disturbed due to night shifts, overtime, transport delays and difficulty in getting leave. Worry about children and their studies not being properly supervised were common. In spite of 60% of the nurses complaining of headache, it was not statistically proved to correlate with increasing level of stress. It could be due to lack of sleep because of the dual responsibility of work at hospital and at home. Acidity affected 62% of the nurses. Anemia was seen in 32% of the staff. This may be because of erratic meal times, missing meals because of overwork and faulty eating and excessive consumption of tea and coffee during the night shift. From this study we can infer that acidity, anemia, backache and stiffness in the neck and shoulders are related to stress at home and workplace. Emotional symptoms of forgetfulness, getting excessively angry, and worrying also significantly affected the nurses in this study [3].

A. Objectives

- To determine the psychiatric morbidity among nurses
- To find the association between psychiatric morbidity and selected demographic and work place variables

II. METHODS

Survey approach was adopted for the study. The study population consisted of the registered nurses working in selected medical college hospitals and government hospitals of Udupi and Mangalore districts, Karnataka, India. Purposive sampling was used to select the samples from medical college hospitals, whereas all available samples were chosen from government hospitals as the population was comparatively very less in government hospitals. Total sample size was 1040. Sampling criteria included female nurses who were: registered with state nursing council, working as staff nurses, involved in direct patient care, employed at the hospital at least six months and working in respective units at least six months.

A. Measures

The instruments used to collect the data were Background proforma, and General Health Questionnaire.

Tool 1: Background proforma

It had 11 items such as age, professional qualification, marital status, married status, type of family, number of children, monthly income, area of work, daily working hours, experience in current area of work and total years of experience as a nurse. Content validity was established by nine experts from the field of psychiatric nursing, psychiatry, psychology and psychiatric social work.

Tool 2: General Health Questionnaire-12

This questionnaire was used to assess psychiatric morbidity among nurses. It is developed by David P Goldberg in the year 1970 as a screening instrument to detect psychiatric disorders in community settings and non-psychiatric clinical settings, such as primary care or general practice. Total number of items is 12. The reported Cronbach's alpha coefficient for the GHQ is in the range of 0.82 to 0.86. The instrument is considered as reliable and has been translated into 38 different languages. When correlated with the global quality of life scale, the GHQ showed negative correlation. This demonstrates the inverse relationship with an increase in distress leading to a decrease in quality of life. The responses were rated from 0-3 and the range was 0-36 with the score of 11-12 as typical, Score >15 evidence of distress and Score >20 suggests severe problems and psychological distress.

B. Data Collection Procedure

The nurses were contacted and administered the questionnaires in their respective wards during different shifts according to their convenient time. The institutions which had continuing nursing education programme (CNE) nurses were met and data were collected soon after the CNE sessions.

III. ETHICAL CONSIDERATIONS

Written permission was obtained from the administrators of the institutions selected for the study. The study proposal was presented to the PhD committee of the Manipal University and ethical committee members of Kasturba hospital, Manipal, Karnataka, India and ethical clearance was sought. Permission was also sought from the administrators of the institutions from where the subjects were selected. On the days of data collection, the researcher introduced herself and the purpose of the study was explained to the subjects and written consent was taken. Subject information was also provided to them. The subjects were assured of the confidentiality of the information provided.

IV. RESULTS

A. Description of Sample Characteristics

Age of the subjects varied from 21 to 56 years, with a mean age of 28.9 ± 7.67 years. Majority i.e. 730 (70.2%) of the subjects were in the age group of 21- to 30 years. General Nursing and Midwifery was the professional qualification for 906 (87.1%) of the subjects. With reference to marital status, 555 (53.4%) were single and among the married 326 (67.22%) of the subjects were staying with spouse and 142 (29.28) were staying away from spouse due to job related reason. With regard to type of family 858 (82.5%) were from nuclear family. Data on number children show that among 485 married subjects most of them i.e. 214 (44.13%) have two children and 17.32% had no children. Monthly income for 532 (51.2%) of the subjects was within the range of rupees 5001-9000.

With regard to area of work most (32.1%) of the nurses were from medical area followed by surgical area which was 17.6%. Majority (75.5%) of them was working for eight hours a day, but 5.7 % of them were working for 12 hours or more. With reference to data on total years of experience 592 (56.92%) had 1-5 years of experience and 54 (5.19) of them

had experience more than 20 years. Data on experience in current area of work reveal that 390 (37.5%) had less than one year of experience and 138 (13.27) had more than five years of experience in current area of work.

B. Description of Psychiatric Morbidity

The data related to psychiatric morbidity were collected by using the General Health Questionnaire-12 and the scores were classified into normal, evidence of distress and severe distress and are presented in Fig. 1.
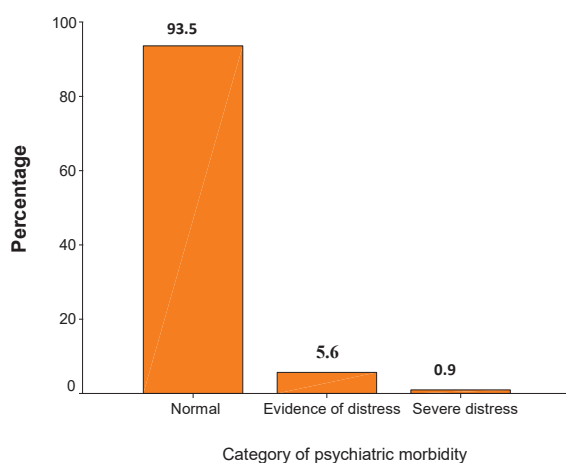

Fig. 1 Psychiatric morbidity among nurses

C. Association between Psychiatric Morbidity and Selected Demographic Variables

As age was a continuous variable and did not follow normality, Spearman's rho was calculated between Psychiatric morbidity and age to determine whether age is related to psychiatric morbidity among nurses. The Spearman rho calculated was -0.023 with p value of 0.461 which was not significant at 0.05 level. It can be interpreted there is no relationship between psychiatric morbidity and age of nurses. Association between psychiatric morbidity and other demographic variables was determined by computing Kruskal-Wallis test and Mann-Whitney (Z) test and the findings are presented in Table I.

Data presented in Table I show that there is no significant association between psychiatric morbidity in nurses and demographic variables such as professional education, marital status, type of family, number of children, and monthly income($p > 0.05$). It indicates that all the demographic variables are independent of psychiatric morbidity in nurses.

D. Association between Psychiatric Morbidity and Selected Work Variables

Association between psychiatric morbidity and work variables was determined by computing Kruskal-Wallis test and Mann-Whitney (Z) test and the findings are presented in Table II.

Data presented in Table II indicate that Kruskal-Wallis test computed between area of work, daily working hours and psychiatric morbidity among nurses are not significant at 0.05

level of significance. Significant association is observed between psychiatric morbidity and total years of experience and experience in current area of work ($p < 0.05$). Hence these work variables are identified as determinants of psychiatric morbidity in nurses. Further analysis was done with Bonferroni correction with regard to these two variables and the findings are shown in Table III.

Data presented in Table III based on Bonferroni correction show that there is significant association between psychiatric morbidity and total years of experience in the pairs of 1-5:16-20, ($p = 0.003$). Analysis revealed that median psychiatric morbidity score presented in Table II is more for the nurses who have 1-5 years of experience (Md=8). Data on experience in current area of work also reveals significant association in the pair of 1-3 :> 5 ($p < 0.0083$). Median psychiatric morbidity score (8) is more for nurses who have 1-3 years of experience in the area they are currently working.

TABLE I
MEDIAN, IQR, TEST STATISTIC, DF AND P VALUE OF PSYCHIATRIC MORBIDITY AND DEMOGRAPHIC VARIABLES OF NURSES
N=1040

Demographic variables	Median	Inter quartile range	Test statistic & df	p value
Professional qualification				
GNM	8	5-11	1.44	0.49
BBSc	8	6-10.5	2	
PCBSc	8	6-11.5		
Marital status*				
Single	8	5-11	1.16	0.24
Married	8	5 -10	1	
If married (Married status)				
Staying with spouse	7.5	5-10		
Staying away from spouse	8	5-10	0.91	0.82
Divorced	9	4.75-11.25	3	
Widowed	9	7-11		
Type of family*				
Nuclear	8	5-10.25	0.71	0.48
Joint	8	5 -11	1	
No. of children				
None	7	5-9		
One	8	5-11	3.91	0.42
Two	7	5- 10	4	
Three or more	8	5-12		
Monthly income in Rupees				
<5000	8	5-10		
5001-9000	8	5-11	1.49	0.68
9001-13000	8	6-10	3	
>13000	8	5.75-12		

V. DISCUSSION

With regard to Psychiatric morbidity present study revealed that among 1040 nurses 0.9% had severe distress and 5.6% had some evidence of distress. Normal subjects were 93.5%. Percentage of severe distress (0.9%) in the present study is in agreement with the lower range of the prevalence study on psychiatric morbidity conducted in India which is 0.95% [4]. Findings of the present study differs from the finding of Yang, Pan, Yang (2004) who conducted a study on job strain and the

minor psychiatric disorders in hospital nurses in Kaohsiung, Taiwan and identified a total of 443 (48.8%) respondents as having minor psychiatric disorder. Poor social support was identified as one of the factors associated with psychiatric morbidity [1]. Similar finding is also reported in a study conducted by Tabolli, Ianni, Renzi, Di Pietro, Puddu (2006) to assess burnout and psychiatric disorders, such as anxiety and depression among nurses working at the IDI-Sanità in Rome. About 33% of respondents showed a GHQ-12 score typical for disorders such as anxiety or depression. [5] Arafa et al. who assessed psychological well-being of nurses in different job settings in Alexandria found 21.67% of nurses as having moderate to severe psychological symptoms on General Health Questionnaire (GHQ-30) [2]. The study by Yussuf compared the levels of morbidity in 3 groups of health professionals (Consultants, Residents, and Nurses) working (who are identified as having probable psychiatric morbidity) in University of Ilorin Teaching Hospital. Fifty (17.9%) nurses with mean scores of 5.2 (SD=2.1) scored four or more on the 30-item GHQ, and were considered as having probable psychiatric morbidity (F=5.7, p=0.005) [6]. These differences in findings could be due to the differences in the job description and responsibilities of the nurses working in India and abroad.

TABLE II
MEDIAN, IQR, TEST STATISTIC, DF AND P VALUE OF PSYCHIATRIC MORBIDITY AND WORK VARIABLES OF NURSES
N=1040

Work variables	Median	Inter quartile range	Test statistic & df	p value
Area of current work				
Medical	8	6- 10.25		
Surgical	8	6- 11		
Operation theatre	7	5-10		
Intensive care unit	8	5- 10.25	12.76 8	0.12
Causality	8	6-11.5		
Special ward	6	4- 10		
Pediatrics	9	5-10		
OBG	7.5	5-11.75		
Dialysis	7	4-8		
Daily working hours				
8	8	5-11		
10	8	6- 11	4.51 2	0.11
12 and more	9	7- 10		
Total years of experience				
1-5	8	5-11		
6-10	8	5-11		
11-15	8	6-11	10.67 4	0.03
16-20	7	5-9		
>20	7	5.75-9		
Experience in current area of work				
<1	8	6-11		
1-3	8	5-11	9.43 3	0.02
3-5	8	5-11.75		
>5	7	5 -9		

In countries where the nurses are having equal responsibility as physicians with regard to the care of the patients are also important members of the health care team contributing treatment plans. Thus accountability towards patient care is more for the nurses in these set ups, so also the demands put on them which in turn must be causing increased stress among them. This might be related to psychiatric morbidity rate among nurses working abroad. In present study 66% had very good social support and only 22 (2%) subjects reported poor social support. There was also a weak but significant negative correlation between psychiatric morbidity and social support, i.e. better social support is associated with lesser score on psychiatric morbidity. This could be the reason for having less percentage of nurses having psychiatric morbidity in the present study.

TABLE III
Z VALUE, AND P VALUE OF PSYCHIATRIC MORBIDITY WITH REGARD TO TOTAL YEARS OF EXPERIENCE AND EXPERIENCE IN CURRENT AREA OF WORK AFTER BONFERRONI CORRECTION
N=1040

Grouping variable	Groups	z value	p value
Total years of experience*	1-5 >20	1.11	0.27
	1-5 16-20	2.99	0.003
	1-5 11-15	0.37	0.71
	1-5 6-10	0.18	0.85
	6-10 >20	0.89	0.37
	6-10 16-20	2.50	0.01
	6-10 11-15	0.37	0.71
	11-15 >20	1.38	0.17
	11-15 16-20	2.75	0.006
	16-20 >20	1.1	0.25
Experience in current area of work**	<1 >5	2.53	0.01
	<1 3-5	0.28	0.78
	<1 1-3	0.1	0.92
	1-3 >5	2.62	0.007
	1-3 3-5	0.19	0.84
	3-5 >5	2.08	0.04

Bonferroni corrected level of significance *0.005 **0.0083

VI. CONCLUSION

It was revealed in the study that during initial period of job there is increased chance to develop psychological problems; this could be due to the problem in the adjustment with the new environment. Providing support to the newly joined nurse through mentor/preceptor programme can be of great help in dealing with this issue as it may reduce role ambiguity along

with clear communication of role expectations. Nurse administrators can take active role in starting it for their new nurse. Senior nurses can be oriented to this concept through continuing nursing education programme.

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