Are the adverse psychiatric outcomes reflection of occupational stress among nurses: An exploratory study

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ABSTRACT

Background: Stress-related disorders encompass a broad array of conditions, including psychological disorders such as depression and anxiety etc. Among healthcare professionals, nurses have been found to be most prone to burnout. **Aims and Objective:** 1) To find out the prevalence of recent stress among staff nurses in terms of somatic symptoms, anxiety, social dysfunction and depression and; 2) To find out the association between these psychiatric outcomes and various socio-demographic variables, inter-personal relationships, working environment and professional stress. **Materials and Methods:** Institutional based cross sectional study conducted on 100 staff nurses. Goldberg and Hillier's 28-item scaled version of the General Health Questionnaire (GHQ-28) was used to measure the psychological aspect of quality of life of Staff nurses. **Results:** The most common psychological outcome noted was the social dysfunction (94%) among the staff nurses. For anxiety, potential stressor were doctors' attitude, insufficient salary and separate wash room for females; whereas significant association was found between depression and unsatisfactory attitude of doctors, fellow nurses, not enough time for rest and not getting enough holidays. **Conclusion:** Social dysfunction could be cause or effect of other psychiatric manifestations like anxiety or depression

Key words: Staff nurses, GHQ 28 items, Psychological aspect, Quality of life

INTRODUCTION

Job Stress has been widely investigated and refers to a temporary adaptation process in an occupation associated with physiological, physical and/or cognitive symptoms. Research shows that stress has an impact on nurses' physical and mental health[1] and is associated with work related medical problems including cardio-vascular diseases, irritable bowel Syndrome, hypertension and cancer.[2,3] It is the harmful physical and emotional response to a poor match between job demands and the worker's capabilities, resources, or needs. Stress-related disorders encompass a broad array of conditions, including psychological disorders such as depression and anxiety; other types of emotional strain, such as fatigue and tension, maladaptive behaviours, and cognitive impairment.[4,5] In turn, these conditions may lead to poor work performance and can affect patient safety.[6,7] However, it is recognized that negative events do not always trigger psychological distress, which arises only when imposed demands are perceived to exceed ability to cope.[8]

There are times when nurses find themselves in "Burnout" situations manifested by emotional exhaustion, detachment, and lack of drive and enthusiasm to work and achieve. Among healthcare professionals, nurses have been found to be most prone to burnout.[9] Satisfied workers tend to be more productive, creative, and committed. Therefore, a

highly satisfied and free from burnout nurses' will eventually be effective in rendering a quality nursing care since their ultimate goal is the patient satisfaction outcome.[10]

Nevertheless, work stress and burnout remain significant concerns in nursing, affecting both individuals and organizations. For the individual nurse, regardless of whether stress is perceived positively or negatively, the neuroendocrine response yields physiologic reactions that may ultimately contribute to illness.[11] In the health care organization, work stress may contribute to absenteeism and turnover, both of which detract from the quality of care.[12]

In a number of studies, it was revealed that work overload was the most significant predictor of poor mental health. Studies have provided evidence that satisfied workers tend to be more productive, creative, committed and will eventually contribute to higher quality patient care and patient satisfaction, tend to care more about work quality and are more generally productive.[13]

Thus, this study was planned out 1) To find out the prevalence of recent stress among staff nurses in terms of somatic symptoms, anxiety, social dysfunction and depression and; 2) To find out the association between these psychiatric outcomes and various socio-demographic variables, inter-personal relationships, working environment and professional stress.

MATERIALS AND METHODS

It was an Institutional based cross sectional study, conducted in the year 2013-14. Place of the study was Swami Vivekanand hospital, attached to Subharti Medical College, Meerut. It is a tertiary hospital. Study population comprised of nursing staff working in the hospital. Study unit included in the study was the GNM qualified nurse. All the GNM qualified nurses working in the day or night shift were covered by consequential sampling technique; and all those who were on leave or not available at the time of data collection twice were excluded from the study. Thus, total sample size of the study comprised of 100 staff nurses.

Data collection technique: Pre designed and pre tested, and validated questionnaire in English and Hindi by the experts was administered.

It had two parts:

Part I: covering their socio demographic variables and variables on their working enviornoom, including attitude of the different category of working staff, salary, job condition etc.

Part II: Goldberg and Hillier's 28-item scaled version of the General Health Questionnaire (GHQ-28) was used to measure the psychological aspect of quality of life of Staff nurses. This 'scaled' version of the GHQ has been developed on the basis of the results of principal components analysis. The four sub-scales, each containing seven items, are as follows:
- A – somatic symptoms (items 1-7)
- B – anxiety/insomnia (items 8-14)
- C – social dysfunction (items 15-21)
- D – severe depression (items 22-28)

Each subscale for further subdivided as having "No Stress"(score 0) and having "Stress"(any score between 1 to 7).

The stress levels of staff nurses was separately scored for somatic symptoms,anxiety, social dysfunction and severe depression in terms of stress and no stress and the association of this stress with socio-demographic variables, interpersonal environment and working conditions was evaluated.Data was entered and analysed in SPSS version 17 and association was found using chi-square test and logistic regression.

Quality Assurances of the data collection: Data was collected by the well trained and well qualified two primary investigators themselves.

RESULTS AND DISCUSSION

Stress and socio-demographic determinants

Occupational stress has been a long-standing concern of the health care industry. Studies indicate that health care workers have higher rates of substance abuse and suicide than other professions and elevated rates of depression and anxiety linked to job stress. In the target study majority of the nurses were found to be suffering from social dysfunction (94%) followed by somatic symptoms (88%), anxiety (55%) and depression (35%) (Table 1).

Age has a significant statistical association with anxiety. Majority (58%) of the Staff nurses above the age of 35 years were found to be suffering from anxiety whereas younger nurses were found to be suffering more from

Table 1: Distribution of staff nurse according to different sub scale of GHQ [multiple responses]

SN	Variable	Yes	No
1	Somatic symptoms	88	12
2	Anxiety	55	45
3	Social dysfunction	94	6
4	Depression	35	65

social dysfunction (46.8%) and depression (57%) (Table 2). Similarly, some other authors describe that depression is more evident in younger than in older groups.[14]

Stress and inter-personal relationships

In the present study doctors attitude was found to be a potential stressor causing anxiety (80%) and depression (86%) among nurses (Table 3).

Similarly, in another study problematic relationships among team members were shown to increase burnout.[15] Verbal abuse from physicians was noted to be stressful for staff nurses.[16] In a study of 260 RNs, conflict with physicians was found to be more psychologically damaging than conflict within the nursing profession.[17] Similarly, in a qualitative study of 50 nurses conducted in England, managers were identified as a direct cause of stress.[18] Finally, responses from 611 RNs on 50 inpatient nursing units in four southeastern U.S. hospitals showed that group cohesion was higher and job stress lower when nurse managers used a more participative management style.[19] A striking finding in our study was that attitude of paramedical staff (82%) and patient's male (76%) and female (73%) attendant were potential stressors leading to social dysfunction among nurses (Table 3).

Stress and working environment

In our study, majority of the study subjects reported that they did not have enough time for rest leading to somatic

symptoms (85%) and depression (94%) respectively (Table 4).

Contrary to this, the association among weekly hour load, anxiety and depression showed no statistical significance among the study participants, similar to another study among nurses,[20] which revealed no association between psychological symptoms and number of hours worked during the week. Among another professional group, psychic disorder appeared among professionals with a significantly higher weekly hour load ($p<0.0001$).[21] Similarly, Bonnie M Jennings et al found in his study that the nurses on 12-hour shifts experienced significantly more chronic fatigue, cognitive anxiety, and emotional exhaustion.[22] In the target study, Insufficient salary was found another important stressor resulting in anxiety (85%) and depression (94%) among nurses respectively. A study on the relation between depression and socio-demographic characteristics, which included remuneration, found that the prevalence of depressive episodes was related with family income, i.e., when one variable decreased (income for example), the other increased (depression for example) ($p<0.0001$).[14]

The present study showed a significant statistical association between anxiety and interpersonal relationships (unsatisfactory doctor's attitude; p=.024),working conditions such as insufficient salary (p=.008), separate washroom for females(p=.041), and job tiring(p=.034) respectively.

In our study a significant statistical association was found between depression and unsatisfactory doctor's attitude (p=.015) and attitude of another nursing staff (p=.023), poor salary (p=.001), not enough time to rest (p=.009) and Not enough holidays (p=.004) respectively. Similarly, in another study, depression was inversely correlated with physical health ($r = -0.39$, $p < 0.01$), psychological status ($r = -0.27$, $p < 0.01$), environmental conditions ($r = -0.33$, $p < 0.01$) and social relationships ($r = -0.29$, $p < 0.01$).[23]

Professional stress and psychological aspect of health

In the target study, due to professional stress significant association was present with the psychological component as depression (p=.000) followed by anxiety (p=.004) (Table 5). Similarly, in another study, anxiety was directly correlated with depression and inversely correlated with physical health ($r = -0.40$, $p < 0.01$), psychological status ($r = -0.19$, $p < 0.01$), environmental conditions ($r = -0.27$, $p < 0.01$) and social relationships ($r = -0.23$, $p < 0.01$).[23]

CONCLUSION

Burnout situation among staff nurses has been found a common problem in comparison to other health care

Table 2: Distribution of staff nurse according to sub scale of GHQ and socio-demographic factors

SN	Variable	Somatic N=88	Anxiety N=55	Social dysfunction N=94	Depression N=35
1	Age				
	15-25	42 (48)	2 (3.6)	44 (46.8)	20 (57.1)
	26-35	38 (43)	21 (38.2)	43 (45.7)	15 (42.9)
	>35	8 (9)	32 (58.2)	7 (7.4)	0
	Chi sq	χ^2=0.024	χ^2=12.9	χ^2=7.4	χ^2=5.784
	p value	p=0.988	p=0.002	p=0.025	p=0.005
2	Gender				
	Male	30 (34.1)	17 (30.9)	32 (34)	12 (34.3)
	Female	58 (65.9)	38 (69.1)	62 (66)	23 (65.7)
	Chi sq	χ^2=0.003	χ^2=0.52	χ^2=0.001	χ^2=0.002
	p value	p=0.95	p=0.47	p=0.97	p=0.965
3	Marital status				
	Married	32 (36.4)	20 (36.4)	33 (35.1)	12 (34.3)
	Unmarried	56 (63.6)	35 (63.6)	61 (64.9)	23 (65.7)
	Chi sq	χ^2=8.748	χ^2=1.458	χ^2=0.067	χ^2=1.96
	p value	p=0.013	p=0.482	p=0.967	p=0.374
4	No of children				
	No child	8 (9.1)	4 (7.3)	9 (9.6)	6 (17.1)
	One child	8 (9.1)	4 (7.3)	6 (6.4)	0
	2-3 children	17 (19.3)	13 (23.6)	19 (20.2)	6 (17.1)
	Not applicable	55 (62.5)	34 (61.8)	60 (63.8)	23 (65.7)
	Chi sq	1.395	=1.96	=6.915	=8.39
	p value	(p=0.707)	(p=0.58)	(p=0.075)	(p=0.038)

Table 3: Distribution of staff nurse according to GHQ and Interpersonal relationship

SN	Variable	Somatic N=88	Anxiety N=55	Social dysfunction N=94	Depression N=35
1	Doctors				
	Excellent	29 (33)	11 (20)	29 (30.9)	5 (14.3)
	Satisfactory	54 (61.4)	40 (72.7)	60 (63.8)	29 (82.9)
	Poor	5 (5.7)	4 (7.3)	5 (5.3)	1 (2.9)
	Chi sq (p value)	2.382 (0.304)	7.488 (0.024)	0.337 (0.845)	8.339 (0.015)
2	Nurse				
	Excellent	40 (45.5)	23 (41.8)	40 (42.6)	10 (28.6)
	Satisfactory	48 (54.5)	32 (58.2)	54 (57.4)	25 (71.4)
	Poor	0	0	0	0
	Chi sq (p value)	0.63 (0.427)	0.236 (0.627)	1.331 (0.244)	5.202 (0.023)
3	Paramedical staff				
	Excellent	18 (25.5)	10 (18.2)	16 (17.0)	5 (14.3)
	Satisfactory	68 (77.3)	43 (18.2)	75 (79.8)	30 (85.7)
	Poor	2 (2.3)	2 (3.6)	3 (3.2)	0
	Chi sq (p value)	1.376 (0.503)	0.389 (0.823)	8.722 (0.013)	3.026 (0.220)
4	Male patient				
	Excellent	3 (3.4)	0	2 (2.1)	0
	Satisfactory	53 (86.9)	33 (60)	61 (64.9)	21 (60)
	Poor	11 (12.5)	9 (16.4)	12 (12.8)	6 (17.1)
	NA	21 (23.9)	13 (23.6)	19 (21.2)	8 (22.9)
	Chi sq (p value)	1.003 (0.776)	6.870 (0.076)	23.68 (0.000)	3.350 (0.34)
5	Female patients				
	Excellent	9 (10.2)	6 (10.9)	10 (10.6)	6 (17.1)
	Satisfactory	53 (60.2)	33 (60)	62 (66)	19 (54.3)
	Poor	5 (5.7)	4 (7.3)	7 (7.4)	4 (11.4)
	NA	21 (22.8)	11 (20)	15 (15.9)	5 (14.3)
	Chi sq (p value)	5.094 (0.278)	1.011 (0.908)	25.532 (0.000)	7.509 (0.111)

Table 4: Distribution of staff nurse according to GHQ and work environment

SN	Variable	Somatic	Anxiety	Social dysfunction	Depression
1	Salary enough				
	Yes	22 (25)	8 (14.5)	23 (24.5)	2 (5.7)
	No	66 (88)	47 (85.5)	71 (75.5)	33 (94.3)
	Chi sq (p value)	0.000 (p=1)	7.125 (p=0.008)	0.236 (p=0.637)	10.68 (p=0.001)
2	Separate room for female				
	Yes	4 (4.5)	0	4 (4.3)	2 (5.7)
	No	46 (52.3)	32 (58.2)	45 (47.9)	20 (57.1)
	NA	38 (43.2)	23 (41.8)	45 (47.5)	13 (37.1)
	Chi sq (p value)	1.317 (p=0.518)	6.4 (p=0.041)	6.133 (p=0.047)	1.533 (p=0.465)
3	Separate wash room				
	Yes	17 (19.3)	5 (9.1)	21 (22.3)	5 (14.3)
	No	32 (36.4)	22 (40)	36 (38.3)	15 (42.9)
	NA	39 (44.3)	28 (50.9)	37 (39.4)	15 (42.9)
	Chi sq (p value)	3.47 (p=0.176)	11.310 (p=0.003)	2.403 (p=0.301)	1.536 (p=0.464)
4	Hostel hygiene				
	Good	73 (83)	43 (78.2)	77 (81.9)	30 (85.7)
	Bad	14 (15.9)	9 (16.4)	14 (14.9)	5 (14.3)
	Very bad	1 (1.1)	3 (5.5)	3 (3.2)	0
	Chi sq (p value)	8.840 (p=0.012)	2.584 (p=0.275)	1.552 (p=0.460)	1.864 (p=0.394)
5	Enough time for rest				
	Yes	13 (14.8)	8 (14.5)	20 (21.3)	2 (5.7)
	No	75 (85.2)	47 (85.5)	74 (78.7)	33 (94.3)
	Chi sq (p value)	12.524 (p=0.000)	2.273 (p=0.132)	1.596 (p=0.207)	6.866 (p=0.009)
6	Enough holidays				
	Yes	47 (53.4)	26 (47.3)	50 (53.2)	12 (34.3)
	No	41 (46.6)	29 (52.7)	44 (46.8)	23 (65.7)
	Chi sq (p value)	0.103 (p=0.748)	2.227 (p=0.136)	0.412 (p=0.521)	8.425 (p=0.004)
7	Job tiring				
	Yes	39 (44.3)	30 (54.5)	41 (43.6)	19 (54.3)
	No	49 (55.7)	25 (45.5)	53 (56.4)	16 (45.7)
	Chi sq (p value)	0.138 (p=0.711)	4.5 (p=0.034)	1.211 (p=0.271)	1.876 (.171)

Table 5: Distribution of staff nurse according to GHQ and professional stress sore

SN	Professional stress score	Somatic	Anxiety	Social dysfunction	Depression
1	0-15	43 (48.9)	17 (30.9)	44 (46.8)	7 (20)
2	16-30	43 (48.9)	36 (65.5)	47 (50.0)	25 (71.4)
3	31-45	2 (2.3)	2 (3.6)	3 (3.2)	3 (8.6)
	Chi sq (p value)	3.257 (0.196)	11.223 (0.004)	0.721 (0.697)	17.891 (0.000)

providers, which leads to lack of passion and zeal towards the work. This affects their productivity as well as satisfaction for self and towards the health care services provided by them, ultimately affecting the work culture of an organisation.

In the target study social dysfunction has emerged out as one of the major concern for psychiatric outcome, which may be cause or effect of other psychiatric manifestations like anxiety, depression. Improper doctors attitude and unsatisfactory working conditions like lack of separate washroom for females, and insufficient salary leads to anxiety or depression significantly. But all these visible and invisible reasons for psychiatric changes can be modified if organisation actively participate in the problem solving process and promote conducive environment for dialect with health staff without being judgemental. This may improve retention of the workforce along with quality of care provided by them.

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