Depression, Anxiety and Stress among Nurses Working in a Tertiary Care Centre in Southern India

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Authors' contributions

This work was carried out in collaboration among all authors. Authors NKM and DMK were involved in conceptualization and project execution and manuscript preparation. Authors KM and NB were involved in recruitment of subjects, data collection, extraction and analysis of the study. Author BA managed the literature searches and contributed to manuscript writing. All the authors have contributed to manuscript writing. All authors read and approved the final manuscript.

Short Communication

ABSTRACT

Purpose: Nursing professionals have to meet huge expectations on one side and cope with the demanding situations on the other side. The purpose of the present study was to evaluate the prevalence of depression, anxiety, and stress among nurses working at a tertiary care centre in South India.
Design: Cross-sectional survey design.
Methods: 387 female nursing professionals aged 20-50 years, working at a tertiary care centre for a minimum of two years, voluntarily participated in the study. Individuals with a history of psychiatric illness, major health problems, or those on sleep medication were excluded. Anxiety, depression, and stress levels were assessed by administering the DASS 21 questionnaire. Descriptive statistics and percentages were calculated using Microsoft Excel.
Findings: The results showed prevalence of: Anxiety (63.3%); depression (56.05%); and stress

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(36.17%) in those who participated in the survey. Anxiety was highest, followed by depression, and lastly, stress.

Conclusions: Work-related anxiety is the commonest mental health issue reported by professional nurses, followed by depression and stress. Yoga-based intervention would be efficacious if implemented within hospitals both to prevent and manage mental health problems associated with the nursing profession.

1. INTRODUCTION

Nursing is a demanding profession requiring high levels of Commitment and Energy, both mentally and physically. Professional nurses suffer from anxiety, stress, and depression and associated physical and mental ailments due to the intrinsic nature of their work. The nursing profession involves responsibilities towards human health, doing clinical processes, dealing with dying patients, handling emergency and unpredictable situations [1]. Nurses' working conditions and workplaces are influential factors affecting their mental health. Working different shifts and in places such as emergency wards and caring for terminal patients puts considerable psychological and physical pressures on nurses. As a result, they experience anxiety, depression, and sleep problems [2].

Mental health and sleep-related problems are particularly evident in nurses on shift work. A recent study reported that shift work disorder (SWD) is significantly associated with anxiety, depression, and quick returns. The physical and mental health effects of shift work may be caused by circadian disturbance and/or sleep deprivation related to irregular working hours. Several psychosocial, behavioural and psychological mechanisms cause shift work to disturb nursing professionals' health [3]. Anxiety is a disorder that, if unrelieved, causes mental illness. For example, the ability to anticipate danger, take necessary precautions, and adapt suitably to cope in a healthy way is called Signal Anxiety (the fight response). On the other hand, the inability to cope or adapt to demanding situations is called Traumatic Anxiety (the flight response). Hence a person in such situations typical in nursing can suffer from different anxiety disorders. Anxiety is related to nervousness, stress, strain, pressure, and tension. Depression, on the other hand, represents another form of response to emotionally demanding situations. It relates to unhappiness, discouragement, hopelessness, and lack of cheerfulness, leading to unmanageable imbalances [3]. Researchers have observed direct correlations between poor sleep quality and increased physical and psychiatric morbidity, a decline in cognitive function, and impaired quality of life (QOL) [4].

As nurses play a significant role in treating patients, periodic studies and suitable corrective measures on their depression, anxiety, and stress could greatly improve the quality of professional function in the health sector. Such measures would affect not only the mental health promotion of nurses but also impact the quality of patient care. With this in mind, this article reports the prevalence of anxiety, depression, and stress among nursing professionals in South India. While the mental health issues are in the raise, attempts are being made to identify appropriate interventions to prevent and manage the same in nursing professionals. The published literature suggests that Yoga can be used as a potential preventive as well as a management strategy in nursing professionals for mental health needs.

2. MATERIALS AND METHODS

There were 387 subjects who were employed female Nurses, aged range of subjects 21 to 50 years, with Bachelors' or Masters' Degrees and middle-class Socio-Economic Status, constituted the study population. The subjects who underwent whose scores were Mild and above on any one of the scales of Depression, Anxiety, and stress and were willing to participate in the survey voluntarily were considered. They were informed of the purpose of the research and assured that all information would be kept confidential.

2.1 Design of the Study

The present study was conducted with a cross-sectional survey design.

2.2 Assessments

DASS 21 is a 21-item questionnaire for assessing mood swings on the three parameters,

anxiety, stress, and depression. It uses a four-point Likert scale from level 0 (Never) to 3 (Very Much). Higher scores indicate higher levels of each parameter. Also, a specific classification scoring was applied for anxiety, stress, and depression level that measured responses by 0-4 (Normal), 5-11 (Mild) and, 11-21 (Severe). The questionnaire was administered to all the subjects during the leisure time of their own choice.

2.3 Data Extraction and Analysis

After collecting the questionnaires, the calculation of the subscale scores of the DASS-21 questionnaire is done. Under each subscale, the severity of each variable was further assessed and tabulated. Based on the number of individuals and their respective scores on the three domains (Anxiety, Depression, and Stress) their respective percentages were calculated.

3. RESULTS

In the present study, results showed a high prevalence of anxiety (63.3%) for a sample size

of n=245, depression of (56.05%) for a sample size of n=217, and stress (36.17%) for a sample size of n=140, among surveyed nursing professionals. Table 1 shows the prevalence of anxiety, depression, and stress.

Table 1. Prevalence of Anxiety, depression and, stress

Variables	N (Sample size)	%
Depression	217	56.07
Anxiety	245	63.30
Stress	140	36.17

N= number of individuals who reported respective symptoms of depression, anxiety, or stress based on the rating mild or above

The severity of each variable is as shown in Fig. 2. It may be observed that anxiety is found to be most prominent; its prevalence value is 63.3% higher than the other two variables compared to the data reported in the literature, which could be attributed to a difference in the working culture and environment.
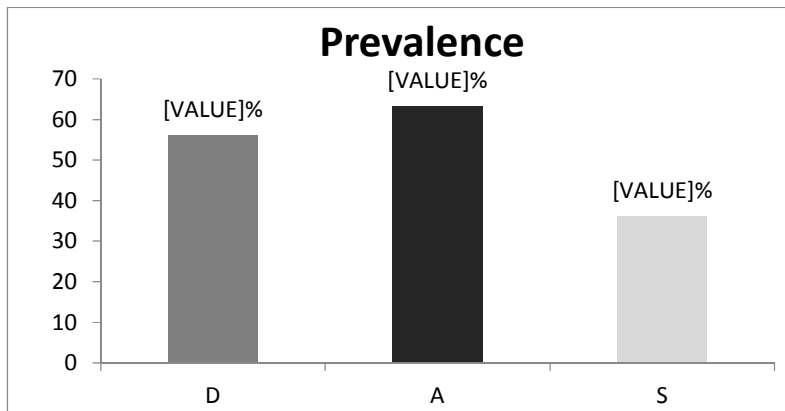

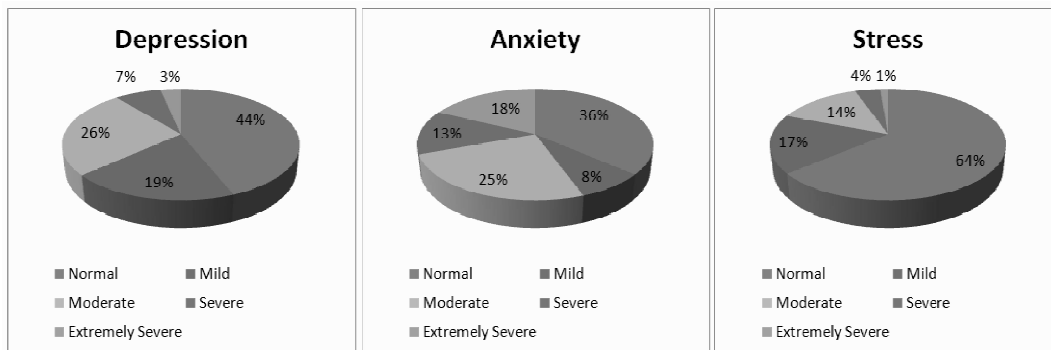**Fig. 1. Prevalence of D-depression, A-Anxiety, and S-stress in nursing professionals**

Fig. 2. Showing the Severity of Anxiety, depression and stress among survey population

Table 2. Showing Prevalence of mild, moderate, severe and extremely severe levels of anxiety, depression and stress among the surveyed population

Variable	Depression		Anxiety		Stress	
	Number	**percentage**	**Number**	**percentage**	**Number**	**percentage**
Normal	170	44%	141	36%	247	64%
Mild	75	19%	31	8%	66	17%
Moderate	100	26%	96	25%	53	14%
Severe	29	7%	50	13%	16	4%
Extremely Severe	13	3%	69	18%	5	1%
Total	387	100%	387	100%	387	100%

4. DISCUSSION

The present study suggests a high prevalence of anxiety, depression, and stress among nurses. As mentioned earlier, various factors are contributing to the increasing prevalence of the three important mental health issues which were assessed in the present study. While shift work appears to be contributing to a major chunk of anxiety, working under pressure situations are also responsible for increased stress and anxiety [3].

The results of the present study are in line with the studies done outside India. A previous study on Chinese nurses reported a 43.4% prevalence of anxiety [5]. Another study reported a 43.2% prevalence of anxiety among shift working nurses [6]. Perhaps, the study by Mathad and colleagues reported the highest prevalence of anxiety (65·5%) and the presence of depression in 10% of people among staff nurses [7].

The working environment, responsibilities, and duties of nurses put them in the frontline of numerous occupational health hazards. Most nurses experience constant job-related pain, especially musculoskeletal like Neck, shoulder, and back. Work overload and stress are other factors threatening nurses' health; they cause burnout and exhaustion, leading to depression and anxiety. Such mental health issues often develop into severe forms of mental health problems such as major depression, bipolar disorder, schizophrenia etc. Mental health ailments are associated with decrease work efficacy and increased absenteeism to job.

Nursing is a stressful activity by itself, but identifying the problem at the right time and with suitable stress management techniques should make it possible to reduce its adverse effects.

In an attempt to understand the possible solutions for the management of mental health issues in nursing professionals, we found Yoga and meditation as an important intervention. Various researchers have reported that practicing Yoga has proved to be effective to reduce Stress, Anxiety, and Depression [8]. After 12 sessions of regular Hatha Yoga practice, it was found that depression, anxiety, and stress decreased significantly in women. Alexander, et al. [9] showed that Yoga has brought about improvement for self-care (p <.001), mindfulness (p = .028), emotional exhaustion (p = .008), and depersonalization (p = .007) among Nurses [9]. Fang and Li [10] have shown that by practicing Yoga more than two times every week, 50–60 minutes each time after work by Nurses, can improve sleep quality and reduce work stress. Another study demonstrated that practicing Yoga exercises two sessions/ week; 8 weeks enabled better coping strategies for stress among intensive care unit nurses [11]. Similar reports were also published by other researchers showing that regular Yoga practice for 4 weeks can decrease stress and/or anxiety symptoms [12]. As mentioned earlier, the beneficial effects of Yoga were also illustrated following an 8-week intervention of Yoga, for 5 days/week, 1 hrs/day was effective in improving self-compassion and mindfulness among nursing [7]. Gurav and Wankhade suggested that Yoga can be considered as a complementary therapy or an alternative method for medical therapy in the treatment of anxiety disorders [13]. In a meta-analysis of 12 randomized controlled trials (RCTs) of Yoga for clinical depression, it was reported that Yoga was shown to be superior to health education in reducing anxiety, quit smoking, improving bipolar disorder, regulate the autonomic nervous system, and improve depression and anxiety symptoms [14] Yoga was also shown to be significantly better than usual

care, relaxation exercises, or aerobic exercise in decreasing depressive symptoms.

The commonly recommended practices include breathing exercises, loosening exercises, simple physical postures, relaxation techniques, voluntarily regulated breathing, and meditation. The duration of a single yoga session across the studies varies from 1 hour per day, six days a week for three months as maximum to 45 minutes per day, twice a week for three weeks as a minimum.

5. CONCLUSIONS

The present study reports a high prevalence of anxiety, depression, and stress among female nursing professionals working in a tertiary care centre and suggests that an effective intervention such as Yoga in the hospital setup shall serve as a preventive healthcare strategy to manage mental health problems among nursing professionals.

CONSENT

Signed informed consent was obtained from all the subjects.

ETHICAL APPROVAL

It is not applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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