

ASSESSMENT OF OCCUPATIONAL BURNOUT AND ITS DETERMINANTS, CAUSES OF OCCUPATIONAL STRESS, AND ITS COPING STRATEGIES AMONG NURSES WORKING IN THE PSYCHIATRIC WARDS: A MIXED-METHOD STUDY

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ABSTRACT

AIMS:

This study assessed occupational burnout and its determinants, causes of occupational stress, and its coping strategies amongst 13 nurses working in the psychiatry wards in India.

METHODS:

This was a longitudinal mixed-method study. The qualitative component comprised interviewing each participant under the steps of "free listing" and "pile sorting" to assess the causes of occupational stress and its coping strategies. The occupational burnout experiences were assessed using the Maslach Burnout Inventory.

RESULTS:

Low-level depersonalization scores were present among six (46.1%) participants. Scores under this component of burnout were negatively correlated with years of work experience in providing nursing care for admitted psychiatric patients ($r_s = -0.548, p=0.05$). Median scores of the emotional exhaustion scale ($p=0.047$) and of the depersonalization scale ($p=0.016$) were significantly higher among participants working at the government hospital. The major cause of occupational stress was poor infrastructure and treatment facilities with a salience score of 0.154. The most adopted strategies to tide over occupational stress were reading books and meditation with a salience score of 0.128 and 0.109 respectively.

CONCLUSION:

Extended work experience of participants was associated with their better ability to understand and empathize more with the patients as reflected by the low depersonalization scores. Two components of occupational burnout were found to be higher among nurses working in the government hospital. Organizational relationships were a more common cause of occupational stress than client-related matters among the participants. Recreational activities were the most common coping strategies adopted by the participants to deal with stress.

KEYWORDS

occupational burnout, determinants, occupational stress, causes, coping strategies, psychiatric nurses, free listing, pile sorting, mixed-method study

INTRODUCTION

Occupational stress refers to how people react when presented with high work demands and pressure that may or may not match their capability and knowledge. It challenges their ability to cope with the situation [1].

Over the years, it has been accepted and documented that nurses work under immense stress. A study in Mumbai, India reported that 87.6% of nurses experienced occupational stress [2]. Their work involves sudden swings from routine repetitious work to emergent situations, being exposed to excessive noise, unpleasant sights, and prolonged and irregular hours without rest [3]. This can affect their emotional well-being. Most of the problems in this field arise from the high demands of the work setting and delivery of a high standard of care for critical patients. This was supported by the findings of an analysis of 70 research papers for the period 1966 to 2000 reviewed as part of this study, which explained the adverse effects of work-related stress on the mental health of nurses. This was also found to affect enthusiasm to work, resulting in absenteeism and reduced work efficiency and performance [4]. Instances of unpredictable patient aggression and violence act as potential detrimental forces [5].

Nurses working in the psychiatric field have to face many ethical issues. A primary concern of psychiatric nurses is to ensure that the patient is not harmed. This limits their actions, making it one of the most stressful areas of nursing practice [6]. If the stress is not well managed, it can lead to a plethora of emotional and psychological issues such as depression, anxiety, irritability, resentment, insecurity, and a high attrition rate [6].

It has been observed that the strategies usually employed by nurses could be both adaptive or maladaptive, which may depend on their social support [2]. It is seen that the most common coping strategies include escaping, avoidance, detachment, withdrawal, and catharsis, which have a negative impact on their lives [7-9]. Effective use of coping strategies has been reported to stabilize and nullify the harmful effects of stress and improve mental health [10]. This study was hence done to assess occupational burnout and its determinants, causes of occupational stress, and its coping strategies among nurses working in the psychiatry wards of two tertiary care hospitals in Mangalore city, Karnataka, India. A mixed-method study was chosen

so that the qualitative component will give a description of the causes of occupational stress and of the various coping strategies adopted by the participant. The quantitative component of the study will help to identify the determinants of occupational burnout.

MATERIALS AND METHODS

This hospital-based mixed-method study (quantitative and qualitative) was done in November and December 2019. The Institutional Ethics Committee approval was taken in November 2019. It was a longitudinal study done among nurses posted in the psychiatric wards in a government and private hospital. This was done because the working environment in a government hospital set up is different from that of a private hospital set up. Permission to conduct this study at the above-mentioned hospitals was taken from the respective medical superintendents.

The sample size was based on the Law of Saturation. "The definition of the law is that data collection is considered saturated when no new elements are found, and the addition of new information ceases to be necessary since it does not alter the comprehension of the researched phenomenon" [11]. The convenience sampling method was used to recruit participants. Staff nurses who were posted in the psychiatric ward for at least six months were eligible to be part of this study. Non-consenting participants were excluded from this study.

Complete information about the nature and purpose of the study was given to the participants in a language that they could understand.

Written informed consent was taken from each of the participants. They were reassured that the information provided by them would not be disclosed. Each participant was interviewed on a one-to-one basis in a private room in the hospital.

Data were collected using both a semi-structured self-administered questionnaire and an interview schedule. The data collection tools were content validated with the help of subject experts. It was translated into the local language Kannada, and was language validated by the process of translation and back-translation. The questionnaire had three sections:

Part I was a self-administered questionnaire. It consisted of questions to collect the socio-demographic information of the participants such as age, gender, type of family, place of residence, educational qualifications, and work experience.

Their work settings in terms of whether working in a government or private hospital were also enquired. This was because the infrastructure of the hospitals, treatment facilities available, cost of treatment, number of patients, and the socio-economic conditions of the patients are different in both these organisations. Therefore, these factors could also influence the mental health of the nurses working at these hospitals.

Part II was an interview schedule. A one-on-one personal interview was conducted with each participant. This interview comprised of two components— "free listing" and "pile sorting".

Free listing [30]: In this procedure, participants were invited to answer two questions.

1. What do you think are the causes of stress in your work settings?
2. What are the coping strategies used by you to tide over these stressors?

Before beginning the interview, all the participants were given a briefing about the proceedings. Then these two questions were read out to the participants, and any clarification sought was explained to them. This ensured that they had an adequate understanding of these questions. The participants then wrote their responses on a sheet of paper. They were given 20 minutes time to complete this exercise. The answers provided by each of the participant was read out to them on a one-to-one basis.

After the "free listing" procedure was conducted among all the participants, they were invited on a later date to participate in the "pile sorting" procedure [30]. This was also done on a one-to-one basis for each participant in a private room in the hospital. The responses obtained from "free listing" were put together in this procedure. The dissimilarities and similarities in the responses provided by the participants were identified. The aim was to narrow down the responses into specific groups. "Pile sorting" was done for those responses (reasons), which showed a relatively high "Smith's S" value.

"Smith's S (Smith's saliency score) refers to the importance, representativeness, or prominence of items to individuals or the group. It is measured by word frequency across lists and word rank within the list."

The identified sources of stress and the coping mechanisms stated by the participants were written on separate cards. Each card was assigned a number. The cards were then handed to the participants, who arranged them in groups according to their choice. The participants were then asked to explain the reason behind choosing the selected group. The set of cards was then handed over to the next participant. All participants were finally given the opportunity to rearrange the stack should they choose to do so. Each participant was given 20 minutes time to complete the exercise.

Part III was a self-administered questionnaire. It comprised the Maslach Burnout Inventory (MBI) [12]. This focuses on three aspects: exhaustion, depersonalization, and personal achievement. Permission to use this questionnaire for this research study was obtained from its manufacturers. This inventory assesses the effect of occupational burnout on the mental health of the participant nurses. It comprises 22 questions. Each question being designed on a seven-point Likert scale with options – "never", "a few times in a year", "once in a month", "a few times in a month", "once in a week", "a few times in a week", and "every day". The scores corresponding to these options ranged from 0 to 6.

The MBI questionnaire had three sections:

- Section A had seven questions that assessed the "emotional exhaustion" experienced by the nurses. A score of up to 17 was considered low level, 18-29 as moderate, and above or equal to 30 as high-level burnout.
- Section B comprised of seven questions to assess the "depersonalization" among the participants. A score ≤ 5 was considered low level, 6 to 11 as moderate level, and ≥ 12 as high level of occupational burnout.
- Section C comprised of eight questions to assess the "personal achievement" among the participants. A score ≤ 33 , 34 to 39, and ≥ 40 corresponded to a high-level, moderate level, and low level of occupational burnout respectively.

The entire process of data collection from the participants was sequential and was completed over three separate days. Part I and the "free listing" component of Part II of the

data collection tool was done in one setting for all the participants.

The pile sorting component of Part II was conducted on another day. Finally, Part III of the data collection tool was completed by all the participants at a later date.

The quantitative data were coded and entered into IBM SPSS Statistics for Windows (version 25.0. Armonk, NY: IBM Corp.).

The normality of their age distribution, their work experience, work experience in psychiatry wards, and scores obtained by them for emotional exhaustion, depersonalization, and reduced personal accomplishment under MBI, were done using the Shapiro-Wilk test. Only the age of the participants followed the normal probability distribution. The descriptive statistics were presented as proportions, mean, standard deviation, median, and interquartile range (IQR).

Statistical tests like the Chi-square test, Mann-Whitney U test, and Spearman's rank correlation coefficient were

used for analysis. A p value of ≤ 0.05 was considered as a statistically significant association. Qualitative analysis was done using Visual Anthropac (4.98.1) software. This software was used to interpret the results of both "free listing" and "pile sorting". To get a collective picture, multidimensional scaling and hierarchical cluster analysis of the pile-sorted data were undertaken.

RESULTS

A total of 16 nurses fulfilled the inclusion criteria for participation. Of which, 13(81.2%) gave written informed consent for participation. The majority of whom were female [11 (84.6%)]. The mean age of the study participants was 40.4 ± 10.7 years. Majority of the nurses were working in the government hospital [8(61.5%)]. Their median work experience was 12 years [IQR 4.75, 24.5]. Their median work experience providing care to admitted patients with various psychiatric illnesses was one year [IQR 0.5, 1]. (Table 1)

TABLE 1: SOCIO-DEMOGRAPHIC DISTRIBUTION AND WORK-RELATED CHARACTERISTICS OF THE STUDY PARTICIPANTS (N=13)

Characteristics	Number	Percentages
Age group (years)		
≤30	3	23.1
31-40	4	30.7
41-50	3	23.1
>50	3	23.1
Gender		
Male	2	15.4
Female	11	84.6
Marital status		
Unmarried	3	23.1
Married	10	76.9
Type of family		
Nuclear	8	61.5
Joint	5	38.5
Educational qualification		
BSc Nursing	5	38.5
Diploma Nursing	8	61.5
Place of residence		
Urban	11	84.6
Rural	2	15.4
Work experience (years)		
1-10	5	38.5
11-20	3	23.1

21-30	4	30.7
>30	1	7.7
Work experience in psychiatric wards (years)		
6 months to 1 year	4	30.8
1.1 to 2 years	7	53.8
>2 years	2	15.4
Workplace		
Government hospital	8	61.5
Private hospital	5	38.5

High, moderate, and low levels of the emotional exhaustion scores were present among 1 (7.7%), 3 (23.1%), and 9 (69.2%) participants respectively. High, moderate, and low levels of the depersonalization scores were present among 4 (30.8%), 3 (23.1%), and 6 (46.1%) participants respectively. High, moderate, and low levels of reduced personal accomplishment scores were present among 5 (38.5%), 2 (15.4%), and 6 (46.1%) participants respectively.

There was no significant correlation between the age of the participants with scores obtained under the emotional exhaustion ($r_s = 0.067, p = 0.829$), the depersonalization ($r_s = -0.283, p = 0.349$), and the reduced personal accomplishment ($r_s = 0.004, p = 0.989$) component of occupational burnout.

There was no association of gender, marital status, educational qualification, type of family, and place of residence of participants with any of the components of occupational burnout.

There was no significant correlation between years of work experience among participants with their scores obtained under the emotional exhaustion scale ($r_s = -0.133, p = 0.666$), the depersonalization scale ($r_s = -0.501, p = 0.081$), and the

reduced personal accomplishment scale ($r_s = 0.273, p = 0.367$) of occupational burnout.

There was no significant correlation between the years of work experience in providing nursing care for admitted psychiatric patients and their scores obtained under the emotional exhaustion scale ($r_s = 0.331, p = 0.269$) and reduced personal accomplishment scale ($r_s = -0.306, p = 0.309$) of occupational burnout among participants.

However, scores obtained in the depersonalization scale were significantly but negatively correlated with years of work experience of participants in providing nursing care for admitted psychiatric patients ($r_s = -0.548, p = 0.05$).

Median scores of the emotional exhaustion scale ($p = 0.047$) and of the depersonalization scale ($p = 0.016$) were significantly higher among participants working at the government hospital. (Table 2)

FINDINGS FROM “FREE LISTING” AND “PILE SORTING” PROCEDURES

The major cause of stress perceived by the nurses working in the psychiatric wards was the poor infrastructure and treatment facilities with a salience score of 0.154. (Table 3)

TABLE 2: ASSOCIATION BETWEEN WORKPLACE OF PARTICIPANTS WITH VARIOUS COMPONENTS OF OCCUPATIONAL BURNOUT (N=13)

Characteristics	Median scores of emotional exhaustion scale (Q1, Q3)	Z value	p value
Workplace			
Government hospital (n=8)	18.5 (10.7, 25.2)	1.987	0.047
Private hospital (n=5)	7 (6.5, 12.5)		
Workplace	Median scores of depersonalization scale (Q1, Q3)		

Government hospital (n=8)	12 (5.2, 16.7)	2.419	0.016
Private hospital (n=5)	3 (0.5, 6)		
	Median scores of reduced personal accomplishment scale (Q1, Q3)		
Workplace			
Government hospital (n=8)	34.5 (23.7, 46.2)	0.881	0.378
Private hospital (n=5)	44 (35, 46)		

TABLE 3: CAUSES OF OCCUPATIONAL STRESS REPORTED AMONG PARTICIPANTS AT THEIR WORK SETTING (N=13)

Causes of occupational stress	Salience
Poor infrastructure and treatment facilities	0.154
Handling suicidal patients	0.115
Shortage of manpower	0.077
Handling aggressive patients	0.077
Depressed patients are hard to handle	0.077
No separate wards for male and female patients	0.077
Shortage of male nurses	0.077
High work pressure	0.077
Communication difficulties	0.077
Anxiety about patient's well-being	0.077
Lack of sufficient Group D workers (Peons)	0.077
Handling violent patients	0.077
Lack of adequate security staff	0.062
Inadequate salary	0.038
Long working hours	0.019

Cognitive mapping revealed the distribution of various causes of occupational stress into four major categories (Figure 1).

The participants grouped the salient items into categories according to their own will.

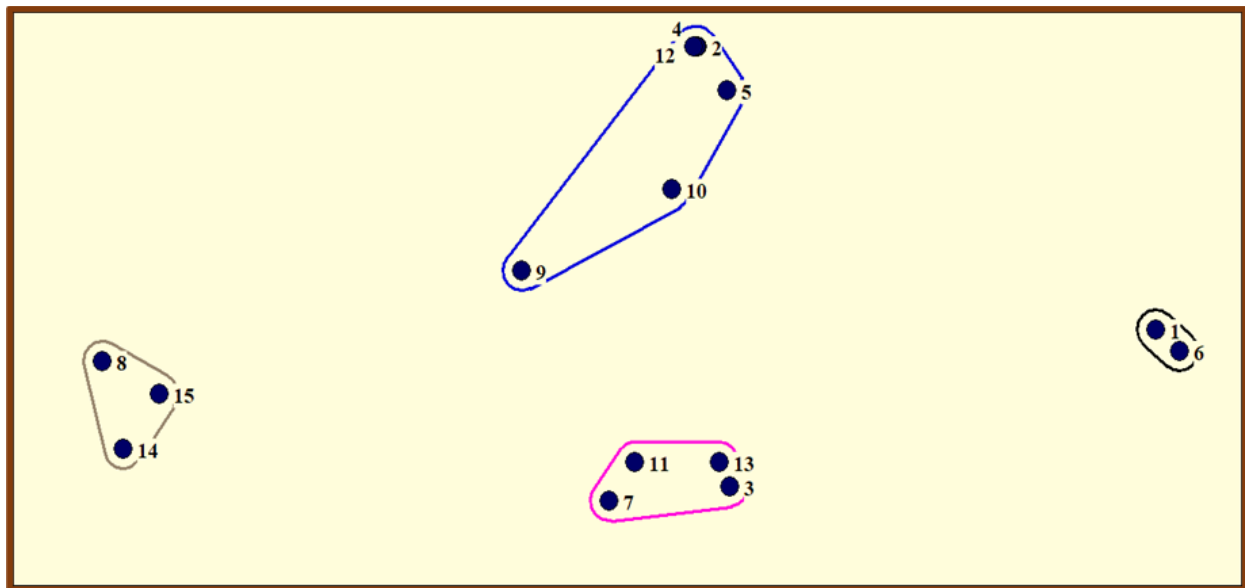
Pile 1: Poor infrastructure and treatment facilities and no separate wards for male and female patients piled under the title "infrastructural deficits".

Pile 2: This pile includes the various "difficulties faced while dealing with patients", such as handling depressed, suicidal, aggressive, and violent patients, anxiety about patients' well-being, and communication difficulties with the patients.

Pile 3: Lack of group D workers (peons), security staff, male nurses, and shortage of manpower are all sorted under "lack of supportive measures".

Pile 4: The nurses categorized high work pressure, inadequate salary, and long working hours under "high workload with poor remuneration". (Figure 1)

FIGURE 1: COGNITIVE MAP SHOWING CAUSES OF OCCUPATIONAL STRESS AMONG NURSES WORKING IN THE PSYCHIATRIC WARDS (N=13).



1. Poor infrastructure and treatment facilities, 2. Handling suicidal patients, 3. Shortage of manpower, 4. Handling aggressive patients, 5. Depressed patients are hard to handle, 6. No separate wards for male and female patients, 7. Shortage of male nurses, 8. High work pressure 9. Communication difficulty, 10. Anxiety about patient's well-being 11. Lack of sufficient group D workers (Peons) 12. Handling violent patients, 13. Lack of adequate security staff, 14. Inadequate salary 15. Long working hours

Reading books with a salience score of 0.128 was the most commonly adopted coping strategy to tide over occupational stress among the participants (Table 4).

TABLE 4: DISTRIBUTION OF COPING STRATEGIES ADOPTED BY THE PARTICIPANTS TO TIDE OVER VARIOUS STRESSORS REPORTED AT THEIR WORK SETTING (N=13).

Coping strategies	Salience
Reading books	0.128
Meditation	0.109
Attending stress management classes organized by the hospital	0.077
Take security's support to deal with aggressive patients	0.077
Taking help from other nursing staff	0.077
Talking to family members and friends	0.077
Seeking consultation from a psychiatrist	0.077
Striving to communicate better with the patients and offering them good care	0.077
Improving awareness about the problems faced by the patients and understanding the source of these problems	0.077
Seeking help from the nursing superintendent	0.077
Seeking support from other hospital staff when dealing with a difficult patient	0.077

Prioritizing work and maintaining proper timings	0.077
Periodically listening to music	0.077
Playing chess	0.077
Trying to solve problems with a positive approach	0.019

Cognitive mapping revealed the distribution of various strategies used for coping with occupational stress among participants into four major categories (Figure 2).

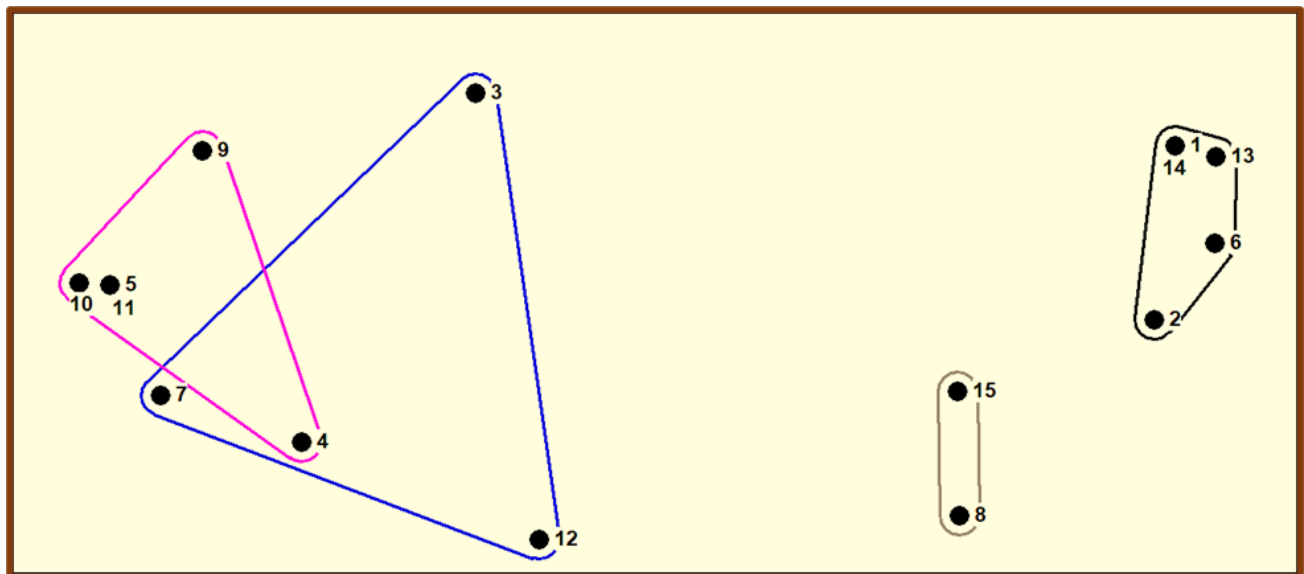
Pile 1: This pile includes reading books, meditation, playing chess, periodically listening to music, and talking to family and friends, and it is titled "rest and recreation".

Pile 2: This pile consists of strategies like trying a positive approach, communicating better with the patients, and taking good care of them that helped the participants to relieve stress. It is titled "caring for the patients".

Pile 3: This pile titled, "self-discipline and professional help" includes the following measures to reduce stress: attending stress management classes organized by the hospital, seeking help and support from the security, consulting the psychiatrist, and at the same time maintaining proper timing and prioritizing work.

Pile 4: This pile includes improving awareness about the problems faced by the patients and the source of the problems and seeking help from the nursing superintendent, colleagues, other staff, and security when dealing with a difficult or aggressive patient. It talks about "creating a support network" to handle challenging situations in the workplace to reduce occupational stress. (Figure 2)

FIGURE 2: COGNITIVE MAP SHOWING THE VARIOUS COPING STRATEGIES USED BY THE NURSES TO DEAL WITH THE STRESSORS FACED BY THEM AT THEIR WORKPLACE (N=13).



1. Reading books, 2. Meditation, 3. Attending stress management classes organized by the hospital 4. Take security's support to deal with aggressive patients, 5. Taking help from other nursing staff, 6. Talking to family members and friends, 7. Seeking consultation from a psychiatrist, 8. Striving to communicate better with the patients and offering them good care, 9. Improving awareness about the problems faced by the patients and understanding the source of these problems, 10. Seeking help from the nursing superintendent, 11. Seeking support from other hospital staff when dealing with a difficult patient 12. Prioritising work and maintaining proper timings, 13. Periodically listening to music, 14. Playing chess, 15. Trying to solve problems with a positive approach

DISCUSSION AND CONCLUSION

In this study the majority of the nurses had low scores under the emotional exhaustion, the depersonalization, and high scores under the personal accomplishment component,

indicating a low level of burnout. Similarly, studies done in the United Kingdom among psychiatry nurses reported that 21.6% [13] and 41% [14] had high scores under the emotional exhaustion scale, 7.1% [13] and 20.5% [14] had high scores under the depersonalization scale and 21.7%

[14] and 33.1% [13] had low scores under the personal accomplishment component. The majority of psychiatry nurses experiencing low occupational burnout in the present study and in other studies could be because of the various coping strategies.

In another study done among psychiatric nurses in Japan, female nurses experienced higher stress levels than male nurses, especially in areas of nursing care, attitude towards work, fatigue, and anxiety [15]. On the contrary, the present study found no significant differences in the occupational burnout scores with gender, marital status, education, type of family, and place of residence of participants.

The years of work experience were negatively correlated with the depersonalization scores. This implies that with more extended work experience, one learns newer and easier ways to deal with situations resulting in occupational burnout, which helps them understand patients better. Less experienced nurses might not be able to relate to patients' problems and hence prefer to dissociate or depersonalize themselves to deal with such situations. In a study done in Sangli, India, nurses with more than five years of work experience in psychiatry units reported significantly greater job satisfaction than the less experienced ones [16].

In this study, it was found that occupational burnout under subscale emotional exhaustion and depersonalization were significantly higher among the nurses working in the government work setting than in the private setting. This could be due to the higher patient load in the government setting.

The qualitative aspect of the study was achieved through the "free listing" and the "pile sorting" methods to obtain a deeper perspective on the causes of occupational stress at the workplace and the various coping strategies used by the participants.

The major cause of occupational stress among the participants in the present study was poor infrastructure and treatment facilities. Present findings were consistent with a study done among psychiatric nurses in Cairo [6] and Ireland [17]. In the study done in Sangli, India workplace support was reported to be sufficient by 95.1% of nurses working in psychiatry units. As many as 63.7% of them reported high job satisfaction. The significant positive correlation between the two meant that extrinsic factors

like a good workplace favored job satisfaction among them [16]. Hence psychiatric nurses had more concern for organizational relationships than client-related difficulties or high workload as also observed in the Irish study [17].

In this study, the most common methods of coping with stress among participants were reading books followed by meditation and attending stress management classes organized by the hospital. In another study done in Ireland, the common coping methods among psychiatric nurses were reflecting on the problems personally and with their family, friends, supervisors, or counsellors [18]. Apart from this, taking courses to gain more education or training and dealing more professionally and empathetically with patients was found to relieve occupational stress among them [18]. In a study done in the USA, psychiatric nurses preferred having pastimes and hobbies outside work life to help them deal with stress [19].

Several studies have stated that educational interventions significantly reduced perceived stress among nurses working in psychiatry wards [20-22]. These interventions were in the form of communication skills, stress education, time management skills, taking leisure breaks, assertiveness training, negotiation skills, responding to criticism, problem-solving skills, and humor. Apart from lectures, various active learning methods like behavior rehearsal, role play, and group work were used to deliver this training [21]. Effective stress management at the workplace further influenced their general well-being and reduced sickness absenteeism from work [22].

Some of the other suggested preventive self-care strategies to destress are spiritual practices, meditation, relaxation techniques, healthy lifestyle practices like eating healthy food, adequate sleep, regular exercise, recreational activities, and hobbies [23].

Nursing supervisors need to periodically organize and conduct such training programs to reinforce stress management among nurses, particularly for those posted in psychiatry wards. Asking experienced nurses to mentor the work of novice nurses in real time will help increase their interest while dealing with patients with various mental illnesses [24]. Apart from these measures, nurses also need to utilize informal channels like peer-to-peer support to help one another through the process of debriefing their experiences and discussing possible solutions amongst their peer group through group discussions [25]. Workplace

stress management has also been emphasized under the National Mental Health Programme [26].

In studies done in Iran, nurses posted in psychiatry wards reported non-disclosure of their workplace to their family members and friends [24, 27]. This was because others had a poor understanding of psychiatry illnesses and a negative attitude towards psychiatric nurses. This also reduced their interest in working with psychiatry patients [24, 28]. Hence the social stigmatization and misconceptions of people towards mental illnesses and their negative attitude towards psychiatric nurses need to be corrected by educational programmes among the general population by policymakers.

Media-based interventions can help bring this change in public attitudes towards psychiatric patients and their healthcare providers. The same must be inculcated in the working environment of the hospital by the hospital administrators. They need to lead by example by promoting a work culture of transparency, empathy, support, destressing facilities, safety, duty rotation policies, and adequate leave opportunities for nurses posted in psychiatry wards [29].

A future area of research would be to implement all these suggested interventions and conduct an experimental study among the same population. Then assess whether there has been any significant reduction in their occupational burnout and stress.

From the findings from this study, we conclude that the majority of the nurses working in the psychiatric wards in this study reported a low level of occupational burnout.

Among the various components of occupational burnout, the depersonalization sub-scale was negatively correlated with the years of work experience of participants. This implies that the longer their work experience, the better their ability to understand and empathize more with the patients and build a better nurse-patient relationship.

Two components of occupational burnout were found to be higher among nurses working in the government hospital. The main causes of occupational stress among the participants were poor infrastructure and treatment facilities. The low level of occupational burnout experienced by the majority of the nurses might be due to

the various coping strategies. The most common being recreational activities like reading books and meditation.

LIMITATION

There is a possibility of non-reporting of information by participants in this study. This because the healthcare providers may fear disclosure of information and seeking of mental healthcare as a threat to their careers. The participants in this study were enrolled non-randomly. Added to this, the sample size was small. Therefore, the results of the study may not be generalizable to other settings.

FUNDING:

This work was supported by the Indian Council of Medical Research Short Term Studentship research grants (grant number 2020-02276).

ACKNOWLEDGEMENTS:

We authors thank all the staff nurses who took part in this study.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE:

This was obtained from the institutional ethics committee of Kasturba Medical College, Magalore, Manipal Academy of Higher Education, Manipal, India, with reference number IEC KMC MLR 11-19/538 dated 20th November 2019. Written informed consent to participate was taken from the participants.

AVAILABILITY OF DATA AND MATERIALS:

The excel sheet containing the data of this research study is available at the following repository:

Figshare. 'Assessment of occupational burnout and its determinants, causes of occupational stress, and its coping strategies among nurses working in the psychiatric wards: A mixed-method study'

<https://figshare.com/s/a6dd19305390571a0ea6>

References

1. World Health Organization. Occupational Health: Stress at the workplace [Internet]. WHO;2020 [Updated 2020 Oct 19; Cited 2021 Feb 8]. Available from: https://www.who.int/occupational_health/topics/stressatwp/en/
2. Chaudhari AP, Mazumdar K, Motwani YM, Ramadas D. A profile of occupational stress in nurses. *Ann Indian Psychiatry*. 2018;2:109-14.

3. Cox T, Griffiths A, Cox S. Work-related stress in nursing: Controlling the risk to health. Geneva: International Labour Office; 1996.
4. Edwards D, Burnard P. A systematic review of stress and stress management interventions for mental health nurses. *J Adv Nurs*.2013;42:169-200.
5. Mathew J, Ram D, Bhattacharjee D, Sharma A. Self-esteem, job satisfaction, and burnout between general and psychiatric nursing staff: a comparative study. *J Health Manag*. 2013;15:595-612
6. Zaki RA. Job stress and self-efficacy among psychiatric nursing working in mental health hospitals at Cairo, Egypt. *J Edu Pract*. 2016;7:103-13.
7. Parikh P, Taukari A, Bhattacharya T. Occupational stress and coping among nurses. *J Health Manag*. 2004;6:115-127.
8. Bowman GD, Stern M. Adjustment to occupational stress: The relationship of perceived control to effectiveness of coping strategies. *J Couns Psychol*. 1995;42:294-303.
9. Florio GA, Donnelly JP, Zevon MA. The structure of work-related stress and coping among oncology nurses in high-stress medical settings: A transactional analysis. *J Occup Health Psychol*. 1998;3:227-242.
10. Hasan AA, Elsayed S, Tumah H. Occupational stress, coping strategies, and psychological- related outcomes of nurses working in psychiatric hospitals. *Perspect Psychiatr Care*. 2018 ;54:514-22.
11. Nascimento LCN, Souza TV, Oliveira ICDS, Moraes JRMM, Aguiar RCB, Silva LFD. Theoretical saturation in qualitative research: an experience report in interview with schoolchildren. *Rev Bras Enferm*. 2018;71:228-33.
12. Maslach C, Jackson SE, Leiter MP. Maslach Burnout Inventory 3rd edn. In: Zalaquett CP & Wood RJ (Eds.), *Evaluating stress: A book of resources*. Scarecrow Education; 1997. p. 191-218.
13. Kilfedder CJ, Power KG, Wells TJ. Burnout in psychiatric nursing. *J Adv Nurs*. 2001;34:383-96.
14. Sherring S, Knight D. An exploration of burnout among city mental health nurses. *Br J Nurs*. 2009;18:1234-40.
15. Yada H, Abe H, Omori H, Matsuo H, Masaki O, Ishida Y, et al. Differences in job stress experienced by female and male Japanese psychiatric nurses. *Int J Ment Health Nurs*. 2014;23:468-76.
16. Gedugol B, Ghorpade NK, Gaikwad RW, Bergeri AS, Kamble SW. Study to assess the support at workplace and job satisfaction among the nurses working in psychiatric units of selected hospitals. *Journal of Clinical Otorhinolaryngology, Head, and Neck Surgery* 2023;27:80-92.
17. McTiernan K, McDonald N. Occupational stressors, burnout and coping strategies between hospital and community psychiatric nurses in a Dublin region: Stressors, coping burnout. *J Psychiatr Ment Health Nurs*. 2015;22:208-18.
18. Deady R, McCarthy J. A study of the situations, features, and coping mechanisms experienced by Irish psychiatric nurses experiencing moral distress. *Perspect Psychiatr Care*. 2010;46:209-20.
19. White RA. Perceived stressors, coping strategies, and burnout pertaining to psychiatric nurses working on locked psychiatric units [Dissertation]. Ypsilanti: Eastern Michigan University; 2006.
20. Ghazavi Z, Lohrasbi F, Mehrabi T. Effect of communication skill training using group psychoeducation method on the stress level of psychiatry ward nurses. *Iran J Nurs Midwifery Res*. 2010;15:395-400.
21. Sailaxmi G, Lalitha K. Impact of a stress management program on stress perception of nurses working with psychiatric patients. *Asian J Psychiatr*. 2015;14:42-5.
22. Njume PE. Assisting psychiatric nurses in managing work stress and decreasing callouts and absenteeism [dissertation]. Minneapolis:Walden University;2020.
23. Sanchez-Reilly S, Morrison LJ, Carey E, Bernacki R, O'Neill L, Kapo J, et al. Caring for oneself to care for others: physicians and their self-care. *J Support Oncol*. 2013;11:75-81.
24. Rahmani N, Mohammadi E, Fallahi-Khoshknab M. Nurses' experiences of the causes of their lack of interest in working in psychiatric wards: a qualitative study. *BMC Nurs*. 2021;20:246.
25. Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ*. 2020;368:m1211.
26. Ministry of Health and Family Welfare, Government of India. Presentation Revised Operational Guidelines on National Mental Health Program [Internet]. MoH&FW;2011 [Updated 2011 Jun 6; Cited 2023 Sep 21] Available from: https://main.mohfw.gov.in/sites/default/files/ComprehensiveReport%20Part%202-83145794_1.pdf
27. Khankeh H, Khorasani-Zavareh D, Hoseini SA, Khodai-Ardekandi MR, Ekman SL, Bohm K, et al. The journey between ideal and real: Experiences of beginners

- psychiatric nurses. *Iran J Nurs Midwifery Res.* 2014;19:396-403.
28. Gouthro TJ. Recognizing and addressing the stigma associated with mental health nursing: a critical perspective. *Issues Ment Health Nurs.* 2009;30:669-76.
29. Søvold LE, Naslund JA, Kousoulis AA, Saxena S, Qoronfleh MW, Grobler C, et al. Prioritizing the Mental Health and Well-Being of Healthcare Workers: An Urgent Global Public Health Priority. *Front Public Health.* 2021;9:679397.
30. Yeh HW, Gajewski BJ, Perdue DG, Cully A, Cully L, Greiner KA, et al. Sorting it Out: Pile Sorting as a Mixed Methodology for Exploring Barriers to Cancer Screening. *Qual Quant.* 2014;48:2569-87.