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RESEARCH ARTICLE

ERGONOMICS ASSESSMENT OF BURNOUT LEVEL AMONG NURSES OF LUDHIANA CITY

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ABSTRACT

Burnout is described as feeling of emotional exhaustion, depersonalization and reduced personal accomplishment. It is well-known that burnout is a major problem for many professions. Nurses are considered to be particularly susceptible to this. Measuring burnout among nurses is important because their well-being has implications for stability in the healthcare workforce and for the quality of care provided. Therefore, the present study was undertaken to find out the various tasks performed by nurses in the hospitals of Ludhiana,to find out facilities provided for nurses by the hospital administration,to assess the burnout level of nurses by using subjective scales. Results showed that while performing different activities nurses faced psychological stress due to long working hours, shift work etc. Therefore, some remedial measures are provided by hospital management to reduce the burnout level of nurses.

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INTRODUCTION

Burnout is a specific type of occupational stress reaction prevalent among human service professionals. It occurs as a result of the demanding and emotionally charged relationships between caregivers and their recipients. Nursing is an inherently stressful occupation and researchers have found that the nursing population is at a high risk of burnout (Schaefer and Moos 1993).Burnout is the characteristic bundle of strain symptoms that was found primarily to help professions. It is not a symptom of work stress but the end result of unmanaged work stress. Cordes and Dougherty (1993) characterized the burnout as the depersonalization, emotional exhaustion and reduction of personal accomplishment. Emotional exhaustion is mainly involving the feel of emotional over extendedness and exhaustion done by one's work. Depersonalization can be explained as the development of the unfeeling and impersonal attitudes towards receiver of one's care, instruction, treatment and services. Maslach et al (1981) described the sense of reducing personal accomplishment as a situation in which the individual generally experiences a declining competence behavior and the achievement of success when working with people. So the present study was undertaken with the following objectives.

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- To find out the various tasks performed by respondents in the hospitals of ludhiana
- To find out facilities provided to nurses by the hospital administration
- To ergonomically assess the burnout level of nurses by using burnout assessment techniques

RESEARCH METHODS

The present study was undertaken to understandvarious tasks performed by nurses in the hospital and burnout level of nurses.It was conducted in multispecialty hospitals of Ludhiana city. Total numbers of 120 nurses were randomly selected. For collecting the relevant data, a pre-interview schedule was used to know various tasks performed by nurses in the hospital, facilities provided to nurses by the hospital administration and burnout level faced by nurses. The mean score were calculated to find burnout level faced by nurses on the basis of five point scale. Frequency, standard deviation and percentage were used to assess burnout level by using the following formula:

$$\text{Mean score} = \frac{\sum Sn}{N}$$

S= Score assigned to respondents, n=Frequency distribution, N=Total number of respondents. Further the ranks were given on the basis of mean score.

Frequency and Percentage

Frequency and percentage were worked out to find out the distribution of respondents according to burnout level of respondents.

RESEARCH FINDINGS AND DISCUSSION

The data collected on various aspects by respondents have been analyzed and presented in Table 1,2,3 and 4:Table 1 shows that large majority of the respondents (86.66%) were assisting the senior doctors. Whereas, 58-81 per cent respondents reported that they performed activities like pulse checking, BP checking, fever checking, inhalation, giving injections to the patients and resuscitation in operation theater. Further, it was observed that 49.16 per cent respondents were checking ECG, 35.83 per cent respondents were involved in cleaning of equipment, some respondents (30.83%) were doing dressing activity to the patients and 17.50 per cent respondents were managing equipment before any surgery in operation theater. It was observed from Table 1 that maximum number of respondents (81.66%) were giving injection to the patients. 75.83 per cent of respondents were involved in BP checking activity and 74.16 per cent respondents wereperforming the activity like giving medicines to the patients according to the given schedule. Whereas, 63.33 per cent respondents were doing catheterization, 42.50 per cent nebulization and 30.83 per cent of respondents were doing dressing of patients. Only 29.16 per cent respondents were creating awareness about hygiene in general ward. Datain Table 1 depicts thatmajority of respondents (78.33%) were performing the activities like resuscitation, 77.50 percent further inhalation and 63.33 percent catheterization respectively. Whereas, 51.66 percent respondents were doing nasogastric intubation and 42.50 percent were doing nebulization. Nearly half of respondents (44.16%) were managing food for patients and 30.83 per cent were doing dressing of patients. Only 17.50 per cent respondents were managing equipment like life support system in ICU. In laboratories, two types of main areas were involved where respondents' were performing their duties. First was the testing laboratories for doing various blood or urine tests and second was radiology laboratories where different radio diagnostics were done by means of x-ray or other radio chemical tracers.

Table 1. Tasks performed by respondents

n=120

Activities	Number	Percentage (%)
In operation theater		
Assisting the doctors	104	86.66
ECG checking	59	49.16
pulse checking	89	74.16
fever checking	70	58.33
BP checking	91	75.83
cleaning equipment	43	35.83
equipment management	21	17.50
Injecting	98	81.66
Inhalation	93	77.50
Resuscitation	94	78.33
Dressing	37	30.83
In general ward		
Injecting	98	81.66
BP checking	91	75.83
Medication	89	74.16
Creating awareness about hygiene	35	29.16
Dressing	37	30.83
Catheterization	76	63.33
Nebulization	51	42.50
In ICU		
management of equipment	21	17.50
Inhalation	93	77.50
Nebulization	51	42.50
nasogastric intubation	62	51.66
Resuscitation	94	78.33
Catheterization	76	63.33
Dressing	37	30.83
food management	53	44.16
In laboratories		
-in testing laboratory		
blood test/ urine test	34	28.34
Dressing	37	30.83
-in radiology laboratory		
medicine management	41	34.16
assisting doctors	53	44.16
Managing equipment	46	38.33
Miscellaneous		
to check the cleanness	32	26.66
check the proper functioning of equipment in different area	17	14.16
to check overall setting of operation theater	63	52.50
to keep the patients' record	49	40.83
working as a receptionist	9	7.50

*Multiple responses

Table 2. Facilities provided to the respondents by hospital administration

n=120

Facilities	Number	Percentage (%)
Conveyance	23	19.16
Nursing allowance	59	49.16
Canteen	42	34.16
Provision of protective clothing		
-gloves	109	90.83
-lab coat	93	77.50
- mask	109	90.83
Residence	NIL	NIL
Mobile	NIL	NIL
Insurance	NIL	NIL
Rest room	NIL	NIL
Separate toilet	113	94.16
Ergonomically designed equipment for patients		
-wheel chair	107	89.16
-stretcher	107	89.16
-patient transfer board	43	35.83

*Multiple responses

Table 3. Assessment of burnout level of respondents by using Copenhagen Burnout Inventory Scale Tage *et al.* (2005)

n=120

Level of burnout	Indications	Number	Percentage (%)
15-18	No sign of burnout	NIL	NIL
19-32	Little sign of burnout	7	5.83
33-49	Moderate risk of burnout	68	56.66
50-59	Severe risk of burnout	41	34.16
60-75	Very severe risk of burnout	4	3.33

*Multiple responses
Figure indicates Rank On the basis of 5 point scale from very often burnout (5) to not at all burnout (1)

Table 4. Assessment of burnout level of respondents by using Maslach Burnout Inventory Scale Maslach and Jackson (1981)

n=120

Level of burnout	Indications	Number	Percentage
15-18	No sign of burnout	NIL	NIL
19-32	Little sign of burnout	3	2.50
33-49	Moderate risk of burnout	73	60.83
50-59	Severe risk of burnout	44	36.66
60-75	Very severe risk of burnout	NIL	NIL

*Multiple responses
Figure indicates Rank On the basis of 5 point scale from not at all burnout (1) to very often burnout (1)

Table 1 indicates thatless than half of the respondents (30.83%) were providing dressing to the patient. Whereas, 28.34 per cent respondents were doing various blood/ urine tests in the laboratory. Table 1 further indicates that nearly half of the respondents (44.16%) were assisting their senior doctors. Whereas, 38.33 per cent respondents were managing equipment and 34.16 per cent respondents were managing the medicine dozes according to schedule and situation. Some miscellaneous activities were also performed by nurses which are presented in Table 1 It was found thatmore than half of the respondents **(**52.50%) were checking overall setting in operation theater and 40.83 per cent respondents were performing the duty to keep records of patients. Whereas, 26.66 per cent respondents were having the duty to check the overall cleanness in the hospital and 14.16 per cent respondents had duty to check the functioning of equipment in different wards. Only 7.50 per cent of respondents were working as a receptionist. Data also collected to know the various facilities provided by the hospital administration to respondents and are presented in Table 2. It was found that large majority of respondents (94.16%) had separate toilet facility to maintain the privacy from male staff.

Further, it was found that majority of respondents (89.16%) were provided with the ergonomically designed equipment like wheel chair and stretcher to move the patients from one place to another. Whereas, 35.83 per cent of respondents had transfer board (to transfer the patient) to ease their work and to increase their working efficiency and also to reduce their musculoskeletal problems. Nearly half of the respondents (49.16%) reported that they are taking nursing allowance alongwith their salary. Protective clothing like masks and gloves were provided to the 90.83 per cent of respondents and 77.50 per cent respondents were provided with lab coat so that they can protect themselves from chemicals, virus, germs, anesthetic gases and infections through needles. A little number of respondents (19.16%) had conveyance facility to travel from home to hospital. It was interesting to note that residence, insurance, separate rest room and mobile facilities were not provided by the hospital administration to any of the respondents which should otherwise be provided to increase them working efficiency.Table 3 shows that burnout level of nurses by using Copenhagen Burnout Inventory Scale. The CBI consists of three scales measuring personal burnout, work-related burnout and client-related burnout.

This scale was used to measure the fatigue along with psychological and personal well-being of the respondents through standard statements. This scale consists of 15 statements and each statement has five alternative responses namely not at all, rarely, sometimes, often, very often. Each statement has the weightage of 1, 2, 3, 4 and 5 score respectively on each item contribute to the total score.

The interpretation was 'No sign of burnout' to 'Very severe risk of burnout' ranging from 15-18 to 60-75. It is clear from Table 3 that little more than half of the respondents (56.66%) had moderate risk of burnout followed by severe risk (34.16%) and little sign of burnout (5.83%). A very less number of respondents (3.33%) were having very severe risk of burnout. Table 3 shows that burnout level of nurses by using Maslach Burnout Inventory Scale.The Maslach Burnout Inventory scale was used to measure level of stress burnout. This scale is designed to assess various aspects of the burnout syndrome. From this scale, data were collected on emotional exhaustion and personal accomplishment of respondents through psychometric analysis. This scale consists of 20 statements and each statement has five alternative responses namely not at all, rarely, sometimes, often, very often. Each statement has the weightage of 1, 2, 3, 4 and 5 score respectively on each item contribute to the total score. Table 4 shows that 60.83 per cent of respondents had moderate risk of burnout followed by severe risk (36.66%) and little risk (2.50%). No respondent was found with little sign of burnout. No respondent was found in the category of 'No sign of burnout. Therefore, it can be concluded that though respondents were having the symptoms of burnout but not of high risk of burnout and requires coping strategies with respect to prevention and management of burnout level. Joseph and Paniel (1986) also reported that burnout among hospital based nurses appears to be a serious problem affecting the delivery of health care.

Conclusion

On the basis of above findings it can be concluded that working in hospitals is stressful due to various risk factors like physical and psychological risk factors. It was observed that, large majority of respondents had separate toilet facility to maintain the privacy. Whereas, residence, insurance, separate rest room and mobile facilities were not provided by the hospital administration to any of the respondents which should otherwise be provided to increase them working efficiency. From thesubjective assessment techniquesused to assess burnout level of nurses, it was observed that maximum number of respondents showed moderate level of burnout level for which they should be made aware of coping strategies for prevention and management of burnout level.

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