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RESEARCH ARTICLE

WORK RELATED STRESS AND STRESS REACTIONS AMONG STAFF NURSES

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ABSTRACT

People with different jobs encountered different types and quantities of stress. Nursing is one of the most stressful profession. Nursing is an occupation with a constellation of circumstances leading to stress. Nurses in India are overburdened as the nurse to patient ratio is low (1:2250). They are responsible along with other health care professionals – for the treatment, safety, and recovery of acutely or chronically ill, injured, health maintenance, treatment of life threatening emergencies and medical & nursing research. Nurses do not only assume the role of caregivers but are also administrators and supervisors of patients. These multiple work roles contribute to the significant amount of occupation related stress among nursing staff. Nurses in the so-called high stress areas such as Intensive Care Units may be expected more stress than nurses working in less stressful areas. The present study was conducted with the purpose to assess the relationship between work related stress and stress reactions among staff nurses. The objectives of the study were to identify the work related stress and stress reactions as reported by the staff nurses working in critical care units of Christian Medical College & Hospital, Ludhiana and to find correlation between the work-related stress and stress reactions. A three point Likert Scale on Work Related Stress and four point Likert Scale on Stress Reaction were developed and used. The pilot study was conducted to ensure the reliability of the tool and feasibility of the study. Data was collected from 60 staff nurses working in Critical Care Units of Christian Medical College & Hospital, Ludhiana, Punjab, by using non-probability, purposive sampling technique. The data was analyzed by using descriptive and inferential statistics, finding revealed that 60% of staff nurses had moderate level of work related stress & 65% staff nurses occasionally had stress reactions. The correlation between work -related stress and stress reactions was 0.57 which shows moderate positive correlation

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INTRODUCTION

Stress can be described as a dynamic and reciprocal relationship between the person and the environment. Stress, a term continually being redefined in the scientific study of disease and illness, is nevertheless a well proven and important factor in etiology and maintenance of many inflammatory diseases. Stress can be defined as "response state of organism to forces acting simultaneously on body which, if excessive, i.e. straining the capacity of adaptive processes beyond their

limits, led to diseases of exhaustion and death (Kshetrimayum Nandita, Bennadi Darshana, Siluvai Sibyl, 2019)¹. A study was conducted to investigate stress level among women nurses working in various nursing homes in Coimbatore city, Tamil Nadu. The study findings revealed that 52% had moderate stress in the area of conflict with supervisor and torture by higher authorities. It was found that 48.2% had moderate stress related to lack of recognition, insufficient equipment and work overload. Moderate stress was reported by 40.6% of respondents towards fear of making mistakes and

The study also found other areas of stress for women nurses. Sixteen problems were identified among which “conflict with team members” ranked first followed by others such as “insufficient training, shift duties problems and lack of security at workplace etc”. The study concluded that insufficient equipment and frequent change of work pattern do not affect women nurses (Eswari, M. & Saravanan, S. 2011)².

Need of the Study: People with different jobs encountered different types and quantities of stress. Nursing is one of the most stressful professions. Nurses were selected for the study because nursing is an occupation with a constellation of circumstances leading to stress. Stress affecting nurses across the globe has been convincingly documented in many literatures. Nurses in India are overburdened as the nurse to patient ratio is low (1:2250). They are responsible along with other health care professionals – for the treatment, safety, and recovery of acutely or chronically ill, injured, health maintenance, treatment of life threatening emergencies, and medical and nursing research. Nurses do not only assume the role of caregivers but are also administrators and supervisors of patients. These multiple work roles contribute to the significant amount of occupation related stress among nursing staff, particularly those working at the bottom of the hierarchy such as staff nurses and nursing sisters, who end up sharing most of the work burden. Shift duties, time pressures, lack of respect from patients, doctors as well as hospital administrators, inadequate staffing levels, interpersonal relationships, death of patient, and a low pay scale significantly add to their stress levels (Nizami A, Rafique I, Aslam F, Minhas FA, Najam N., 2006)³. These factors are intrinsic to nursing and are compounded by environmental factors such as difficult patients and their families, relationships with physicians and low institutional commitment to nursing etc (Olofsson B, Bengtsson C, Brink E., 2003)⁴.

Nurses in the so-called high stress areas such as Intensive Care Units may be expected more stress than nurses working in less stressful areas. While working as staff nurse, ward in-charge and clinical supervisor in Intensive Care Units, I have observed that most nurses complain about work related stress. Work-Related Stress and its relationship with Stress Reaction in nursing has received some attention of researchers and the present study is an attempt to identify the relationship between the Work -Related Stress and stress reactions.

This study therefore focuses on Work -Related Stress and stress reactions among staff nurses as a core concept.

Operational Definitions

Stress: can be defined as existing when a person describes definite changes in his/her usual ways of thinking, feeling and behavior. Stress may be either disruptive stimuli (stress situations) or the changes in the overt behavior, affect or attitude that are evoked by the disruptive stimuli (stress reactions).

Work -Related Stress: it refers to the expressed responses of staff nurses to the items of the research tool (three point scale on Work Related Stress) pertaining to the work -related stress. The work- related stress is categorized as: mild, moderate and severe stress as per the stress scores of the staff nurses.

Stress Reactions: it refers to the reported responses of staff nurses to the items of the research tool (four point scale on Stress Reaction) regarding physiological and psychological stress reactions. Stress reactions are categorized according to frequency of occurrence as: occurring never, rarely, occasionally and frequently as per the stress reaction scores of the staff nurses.

Critical Care Unit: Refers to adult care units which are a specialized section of a hospital where special medical equipment's & services are provided for the patients who are seriously injured or ill.

Staff Nurses: Male or female who have undergone four-year degree/ three-year diploma course & are registered with state nursing council & working in critical care units.

•Assumption

The assumption of the study is that staff nurses are exposed to stress in ICU settings.

•Aim of the study

To identify the work-related stress and stress reactions as reported by the staff nurses working in critical care units of CMC and Hospital, Ludhiana, Punjab, India

METHODOLOGY

•Research Approach and Design: A quantitative research approach and non-experimental research design used for the present study as it aimed at exploring the Work-Related Stress and its relationship with Stress Reaction of staff nurses working in Critical Care Units of Christian Medical College & Hospital, Ludhiana, Punjab.

•Research Setting and Target Population: The study was conducted in Critical Care Units and target population was all staff nurses working in Critical Care Units of Christian Medical College & Hospital, Ludhiana, Punjab.

•Sample & Sampling Technique: The sample of the study was 60 staff nurses working in Critical Care Units of Christian Medical College & Hospital, Ludhiana, Punjab, selected by using non-probability purposive sampling technique.

•Selection & Development of Tool: Self-structured three point likert scale was used to assess work related stress and four point likert scale was used to assess stress reactions experienced by staff nurses working in Critical Care Areas of Christian Medical College & Hospital, Ludhiana, Punjab.

Description of Tool: The research tool was made on Google Form

The tool was consisted of three parts.

Part-I: Sample characteristics of subjects in the sample.

Part-II: Work-Related Stress Scale

Part- III: Stress Reaction Scale.

•Validity of tool: The validity of the tool was established by experts of various fields of medical and nursing profession.

The changes were made and items were added, deleted or modified as per the suggestions.

•**Reliability of tool:** Reliability of the tool was ascertained by using split half method, Karl Pearson's coefficient of correlation and Spearman's Brown Prophecy formula. The reliability of scale on work related stress was ' $r=0.84$ and scale on stress reaction was ' $r=0.71$. hence , tools were reliable.

•**Data collection procedure:** A Google form was made to collect the data. Prior information was given to the staff nurses, WhatsApp numbers of staff nurses were collected by the researcher and link was sent to the nurses. The subjects were very cooperative and showed interest in filling the Google form.

•**Ethical consideration:** Approved by Research Ethical committee, College of Nursing, Christian Medical College & Hospital, Ludhiana, Punjab. Before the data collection formal permission from the concerned authorities and written consent was obtained from the participants.

Criterion Measure

Levels of Work Related Stress

Level	Score	Percentage (%)
Mild	≥ 66	≥ 33
Moderate	67-133	34 - 66
Severe	134 - 201	67 -100

Maximum score = 201
Minimum score = 0

Frequency of Occurrence of Stress Reaction

Frequency of Occurrence of Stress Reaction	Score	Percentage (%)
Never/ Rarely	01 - 25	01 - 24
Occasionally	26- 51	25 - 49
Frequently	52 - 77	50 - 74
Always	78 - 104	75 - 100

Maximum score = 104
Minimum score = 24

RESULTS

Descriptive and inferential statistics were used to analyze the data accordance with the objective

Table No.1 depicts the distribution of subjects according to Personal and Professional characteristics i.e. age, gender, professional qualification, professional experience, present working area, training institute, type of family, marital status, number of children, place of residence & family income, working in critical care units. It can be concluded that maximum of staff nurse were in the age group of 26-30 years of age, were females with G.N.M. training. Most of them had 1.1 - 5 years of professional experience, were working in critical care units of medicine, trained from C.O.N., C.M.C & Hospital, Ludhiana, Punjab. Maximum number of staff nurse live in nuclear family & are married.

SECTION I: Percentage Distribution of Personal and Professional characteristics

Table No. 1. Frequency and Percentage Distribution of Staff Nurses according to Personal and Professional characteristics

Personal and Professional characteristics	N=60	
	f	Percentage (%)
1. Age (in years)		
a) 21 - 25	8	13.3
b)26 - 30	24	40
c)31 - 35	15	25
d)> 35	13	21.7
2. Gender		
a) Male	13	21.7
b)Female	47	78.3
1. Professional qualification		
a) G.N.M.	27	45
b)Post Basic B.Sc. (N)	19	23.3
c)B.Sc. (N)	14	31.7
1. Professional experience (in years)		
a) 6 months - 1 year	3	5
b)1.1 - 5	24	40
c)5.1 - 10	15	25
d)> 10	18	30
5.Present working area		
a) Critical Care Units of Medicine	31	51.6
b)Critical Care Units of Surgery	29	48.4
1. Training institute		
C.O.N., C.M.C. & Hospital	38	63.3
b)Other than C.O.N., C.M.C. & Hospital	22	31.7
7.Type of family		
a) Joint	14	23.3
b)Nuclear	46	76.7
8.Marital status		
a) Unmarried	27	45
b)Married	32	53.4
c)Divorced	1	1.6
d)Widow	-	-
9.Number of children		
a) Not applicable (unmarried)	27	45
b)No child	8	13.3
c)One child	12	20
d)More than one child	13	21.7
10.Place of residence		
a) Hospital campus/Hostel	10	16.7
b)Outside hospital campus	50	83.3
11.Family income (per month)		
a) 10000 - 20000	13	21.7
b)21000 - 30000	24	40
c)31000 - 40000	15	25
d)> 40000	8	13.3

Most of staff nurses have no child, live outside hospital campus with family income of 21000 - 30000 per month.

SECTION II. Assessment of work-related stress and stress reactions as reported by the Staff Nurses working in critical care units.

Objective 2: To identify the level of work-related stress and stress reactions as reported by the staff nurses working in critical care units.

Table No. 2. Frequency and Percentage Distribution of Staff Nurses according to Level of work-related stress

Level of Work-related Stress	N=60		
	Score	f	%
Mild	≥ 66	16	26.6
Moderate	67 - 133	36	60
Severe	134 - 201	8	13.4

Maximum score = 201
Minimum score = 0

Table No. 2 depicts frequency and percentage distribution of staff nurses according to level of work-related stress in critical care units. 60% of staff nurses had moderate level of work-related stress, followed by 26.6% staff nurses had mild work-related stress & 13.4% staff nurses had severe work-related stress working in critical care units. It can be concluded that maximum i.e., 60% staff nurses had moderate level of work-related stress and 13.4 % staff nurses had severe level of work-related stress.

Table No. 2. Frequency and Percentage Distribution of Staff Nurses according to Level of stress reaction

Level of Stress-reaction	Score	N=60 Staff Nurses	
		f	%
Never/ Rarely	1 – 25	-	-
Occasionally	26 – 51	39	65
Frequently	52 – 77	19	31.6
Always	78 – 104	2	3.4

Maximum score = 104
Minimum score = 24

Table No. 2 depicts frequency and percentage distribution of stress reaction among staff nurses working in critical care units. 65% of staff nurses occasionally had stress reaction, followed by 31.6% staff nurses frequently had stress reaction & 3.4% staff nurses always had stress reactions while working in critical care units. It can be concluded that maximum staff nurses occasionally had stress reaction (65%) and 3.4% staff nurses always had stress reactions while working in critical care units.

SECTION III: Ascertain the Relationship between Work-related stress & Stress reaction

Objective 3: To find correlation between the work-related stress and stress reactions.

Table 4. Correlation between Work-related stress and Stress reaction Scores of staff nurses

Relationship between	Work-related stress & Stress reaction		
	Mean	SD	r
Work-related stress & Stress reaction	90.9	37.9	0.57
	46.7	12.7	

Maximum work-related stress score = 201
Minimum work-related stress score = 0
Maximum stress reaction score = 104
Minimum stress reaction score = 24

Table No. 4 depicts that staff nurses mean work-related stress score and mean stress reaction score was 90.9 and 46.7 respectively. The coefficient of correlation (r) between knowledge and attitude score was 0.57 which shows a moderate positive correlation. Therefore, it may be inferred that as work-related stress increases then stress reaction is also increasing and hence, there is a moderate positive correlation between work-related stress & stress reaction

- **Implications:** The findings of research study provide a basis which could be utilize by the management for planning programs related to prevention and control of work related stress among staff nurses working in critical care units of C.M.C. & Hospital, Ludhiana.
- **Recommendations:** In view of the results obtained from the study, it is recommended that furthermore researches

can be undertaken on a larger sample for making broad generalization.

DISCUSSION

Health professionals, very frequently experience work related stress and stress reactions in their day-to-day life.. The nurses reported a wide variation in stress experienced by them as they are not provided with any formal or informal training regarding how to cope up with stress.

Conclusion

Stress in nursing is an important aspect to be identified and considered by an individual nurse and administrators. Stress in nursing is unavoidable and often inter related with personal and professional factors. Nurse in the high stress areas such as critical care units should get special attention and guidance.

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