

A Study to Assess the Level of Stress, Stress Related Behaviour, Factors Causing Stress and the Coping Strategies Practiced by BSc Nursing Students to Manage Stress While Working in Isolation Unit of Covid 19 in Selected Metropolitan City

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ABSTRACT

Introduction:

The world is facing unprecedented challenges in the face of a global pandemic. Isolation unit, are risked for nursing students and family.

The objective to assess level of stress, related behaviour, factors causing stress and coping strategies practiced by Nursing students to manage stress in isolation unit of covid 19.

Methodology:

A non-experimental quantitative research approach, descriptive survey design. An online google survey was conducted using self reported rating scale and purposive sampling techniques from 120 nursing students.

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Results:

The demographic findings of study shows that 79 (65.8%) were aged between 20 – 24 years , most 104 (86.7%) of the students were from Basic Bsc. Nursing.111(92.5%) were given pre training whereas 113(94.2%) received prophylaxis treatment. Most 60(50%) students showed low stress related to behavior and 65(54.2%) students displayed moderate perceived stress. Among factors causing stress maximum mean percentage was depicted in Social media stress (32%), Nursing responsibility (29.1%), Personal protection and safety (27.5%) and Knowledge and skill deficiency (30.2%). Among coping strategies practiced by students maximum mean percentage was seen in Adaptive coping strategy (47%) and Confrontative coping strategy (44.8%) was the most used by students to combat stress. Correlation between stress and Coping strategies shows there is no statistical correlation between them. Stress is associated and dependent on Age, Nursing course, Prophylaxis treatment, Medical facility provided

Conclusion:

Moderate perceived stress related to Social media, Knowledge, skill deficiency and responsibility and Personal protection and safety stress.

Orientation, training programme and provision of personal safety and protection will definitely help to reduce stress. Recommended research needed for reducing level of stress by using innovative supervision technique and practices .

KEY WORDS:- Perceived Stress Coping Strategies.

Introduction:

“Stress is the trash of modern life we all generate it but if you don’t dispose of it properly, it will pile up and overtake your life. – Danzae Pace1

In January 2020 the World Health Organization (WHO) declared the outbreak of a new coronavirus disease, COVID-19, to be a Public Health Emergency of International Concern. WHO stated that there is a high risk of COVID-19 spreading to other countries around the world. In March 2020, WHO made the assessment that COVID-19 can be characterized as a pandemic. WHO and public health authorities around the world are acting to control the COVID-19 outbreak. However, this time of crisis is generating stress throughout the population.²

Health-care workers will go to clinics and hospitals, putting themselves at high risk from COVID-2019. Figures from China’s

National Health Commission show that more than 3300 health-care workers have been infected .according to local media, by the end of February at least 22 had died. In Italy, 20% of responding health-care workers were infected, and some have died. Reports from medical staff describe physical and mental exhaustion, the torment of difficult triage decisions, and the pain of losing patients and colleagues, all in addition to the infection risk. As the pandemic accelerates, access to personal protective equipment (PPE) for health workers is a key concern. Alongside concerns for their personal safety, health-care workers are anxious about passing the infection to their families. Health-care workers who care for elderly parents or young children will be drastically affected by school closures, social distancing policies, and disruption in the availability of food and other essentials.³

The world is facing unprecedented challenges in the face of a global pandemic. Isolation unit, are risked for nursing students and family.

Background of the Study

Health care personnel (HCP) worldwide are at-risk for contracting SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19). On 3 April 2020 in the People's Republic of China, 4.4% of those who fell ill were health care personnel. In Italy, the rate of infected health care personnel reached 20%. In the United States, more than 10,000 cases were registered among health care personnel in only the first two months of the pandemic. Among health care personnel, nurses are at a particularly high risk of illness and death from COVID-19 due to the physical proximity and duration of time spent providing direct care to patients.⁴

Need for the Study

prospective cohort study were to analyse the mental health and health related quality of life (HRQoL) of a broad sample of healthcare workers (HCWs) in Spain. 2089 HCWs who completed the Generalized Anxiety Disorder 7 item (GAD 7) Scale. Major findings of study shows that the group of HCWs suffering the worst mental state were nursing home workers.50.17% were nurses or auxiliaries; 80.42% of the health workers have directly treated patients with Covid 19 and 12.28% have themselves tested positive for Covid 19. 38.58% of HCWs had clinical depression; over half (51.75%) had clinical anxiety; 60.4% had clinical stress; and 21.57% had clinical insomnia. Older professionals (>55 years) reported lower rates of anxiety, depression, insomnia, and stress. study confirms that symptomatology of anxiety, depression, stress,

insomnia, and HRQoL were affected amongst HCW during the Covid 19 pandemic.⁵

The psychological impact of the 2003 outbreak of severe acute respiratory syndrome (SARS) on hospital employees in Beijing, China. Randomly selected employees 549 of a hospital in Beijing were surveyed concerning their exposure to the 2003 SARS outbreak. The findings shows 10% of the respondents had experienced high levels of post-traumatic stress (PTS) symptoms since the SARS outbreak. Perceptions of SARS-related risks were significantly positively associated with PTS symptom levels and partially mediated the effects of exposure.⁶

A descriptive correlational study to explore the relationship between job stress and coping strategies of Hong Kong nurses working in an acute surgical unit. Data were collected from 98 Hong Kong surgical nurses using the Nursing Stress Scale and the Jalowiec Coping Scale. Results showed that workload, lack of support and inadequate preparation are the most common stressors for Hong Kong surgical nurses. The most frequent strategies used by nurses to cope with stress can be characterized as evasive, confrontive, and optimistic. All of which are also rated as the most effective strategies in reducing stress levels. Only the confrontive, optimistic, supportant, and emotive coping strategies reveal significant correlations, with the stress levels of nurses. Recognizing the impacts of job-related stress and making use of effective coping methods play a vital role in reducing nurse's stress.

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Problem Statement

A study to assess the level of stress, stress related behaviour, factors causing stress and the coping strategies practised by Bsc Nursing students to manage stress while working in isolation unit of covid 19.

Objectives:

- 1) To assess the level of stress among the nursing students while working in isolation unit of covid 19.
- 2) To assess the stress related behaviour among nursing students while working in isolation unit of covid 19.
- 3) To assess the factors causing stress among nursing students while working in isolation unit of covid 19
- 4) To assess the coping strategies practised by students to manage stress while working in isolation unit of covid 19.
- 5) To find correlation of the coping strategies practised by students to manage stress while working in isolation unit of covid 19

- 6) To find out the association between selected demographic variables, factors causing stress and coping strategies practised by the nursing students while working in isolation unit of covid 19.

Hypothesis

H_0 - There will no correlation between level of stress among the nursing students while working in isolation unit of Covid19 and the coping strategies practiced by them.

H_1 - There will a correlation between level of stress among the nursing students while working in isolation unit of Covid19 and the coping strategies practiced by them.

Assumptions

High level of stress while working is leading to adopt negative coping strategies in student nurses.

High level of stress is leading to poor performance in clinical field in student nurses.

Review of Literature

Being novel corona virus very few literatures is available. Studies and articles reviewed are arranged under following headings.

- Studies and articles related to stress among the nursing students
- Studies about stress related behaviour, causes of stress in nursing profession and health impact of it .
- Studies related to various coping strategies adopted by nursing students .

Conceptual Frame Work :- Health Belief Model

The health belief model asserts that when a nursing students believes he or she is susceptible to a health problem with severe consequences, she will more likely conclude that the benefits outweigh the barriers associated with changing one's behavior to prevent the problem and Improve quality of life

Research Methodology

Quantitative Research Approach and non-experimental Descriptive Survey Design was used. 120 Sample of nursing students who has experience of working in covid19 isolation unit was selected by using purposive sampling technique .Technique and tool for data collection

used was stress related behaviour ,perceived stress score -10 points / statement , factors causing stress is five point rating scale with 34 items divided in social media, personal protection and safety support academic and financial ,nursing role and responsibility,knowledge and skill deficiency. Coping strategy used ;-46 statements are divided in to adaptive, emotional, confrontative, optimistic and evasive

Validity of the Tool

The validity of the tool was obtained by giving it to the experts in various fields. Various suggestions given by the experts were incorporated in the Demographic data, social stigma stress and coping strategies and Modification of objectives.

FINDINGS OF THE STUDY

SECTION I : This section analyses the demographic data of the nursing students while working in isolation unit of Covid19.

The data is represented as Table 1 in terms of frequency and percentage.

Table 1 - Distribution of Nursing students according to their demographic data like Age, Sex, BscNsg Batch and Medium

Sr. No.	Demographic characteristic	Frequency	Percentage
1	Age		
	18 – 20 years	39	32.5
	20 – 24 years	79	65.8
	Above 24 years	2	1.7
2	Sex		
	Male ()	0	0
	Female ()	120	100.0
3	Nursing course		
	RANM	16	13.3
	Basic Bsc. Nursing	104	86.7
4	Nursing course year		
	2nd year	56	46.7
	3rd year	40	33.3
	4th year	24	20.0
5	Whether training given to work in Covid unit		
	No	9	7.5
	Yes	111	92.5

6 Whether Prophylaxis treatment given		
No	7	94.2
Yes	113	5.8
7 Whether medical facility provided		
No	7	94.2
Yes	113	5.8

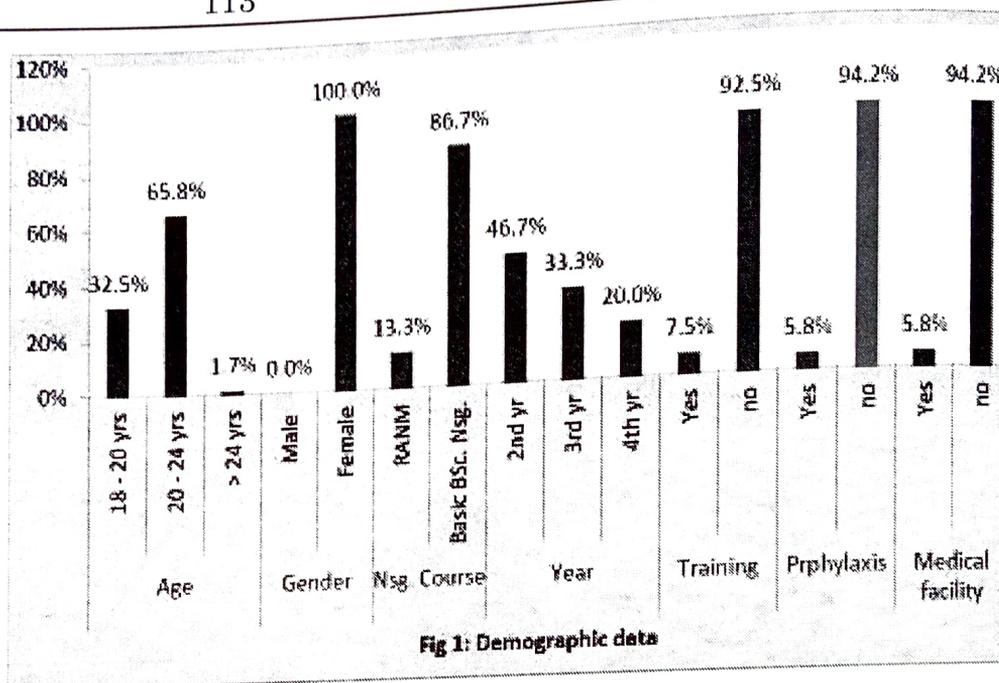


Table 1 and figure 1 represents the demographic data of the nursing students.

Data of age shows that maximum students 79 (65.8%) were aged between 20 – 24 years and 39 (32.5%) students were aged between 18 – 20 years. Only 2 (1.7 %) of the students were aged above 24 yrs.

Gender data shows that all the students 120 (100 %) were females and none were males.

Most of the 104 (86.7%) of the students had completed Basic B.sc. Nursing. Rest 16(13.3%) students had completed RANM Course. 47 (39.2%) students were in their 4th year, 52 (43.3%) students were in the 3rd year and rest 21 (17.5%) students were in their 2nd year.

111(92.5%) students were given training regarding working in Covid unit, 113(94.2%) students were given Prophylaxis treatment and 113 (94.2%) students said they were given medical facility.

SECTION II- This section assesses the level of stress faced by the nursing students while working in isolation unit of Covid19.

Table 2- Assessment of stress related behaviour and sign and symptoms among nursing students

<i>Sr. no.</i>	<i>Stress related behaviour and sign and symptoms</i>	<i>Frequency</i>	<i>Percentage</i>
1	Low stress related behaviour	60	50.0
2	Moderate stress related behaviour	45	37.5
3	High stress related behaviour	15	12.5
	Total	120	100

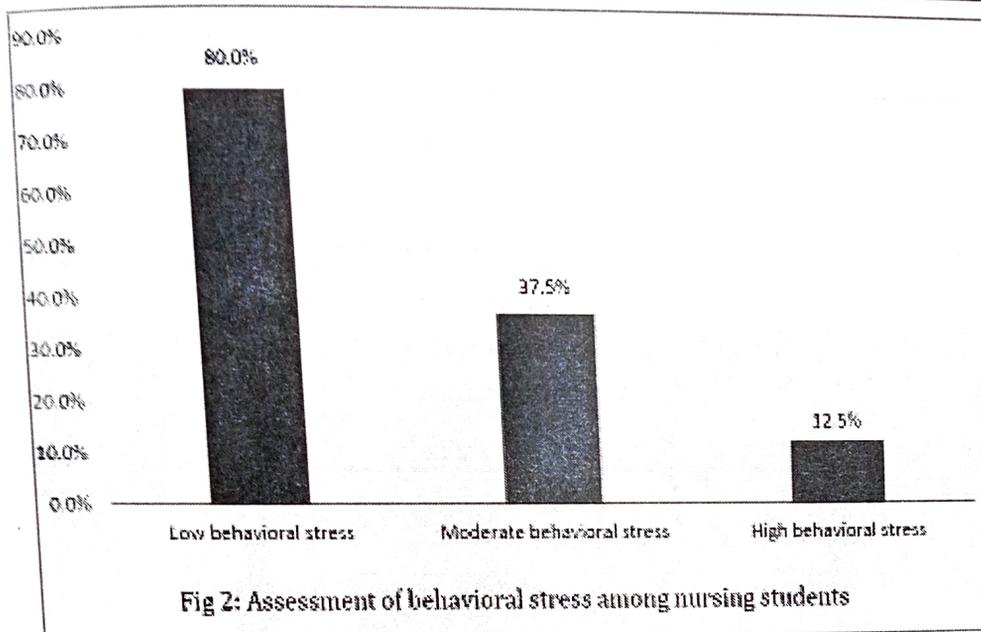


Table 2 and fig 2 focuses on Assessment of stress related behaviour and sign and symptoms among nursing students working in Covid Isolation unit. Most 60(50%) students displayed Low stress related behaviour and sign and symptoms, 45(37.5%) students displayed moderate stress related behaviour and sign and symptoms and rest 15(12.5%) students displayed high stress related behaviour and sign and symptoms.

Table 3- Assessment of Perceived stress scale among nursing students

<i>Sr. no.</i>	<i>Perceived stress scale</i>	<i>Frequency</i>	<i>Percentage</i>
1	Low perceived stress	51	42.5
2	Moderate perceived stress	65	54.2
3	High perceived stress	4	3.3
	Total	120	100

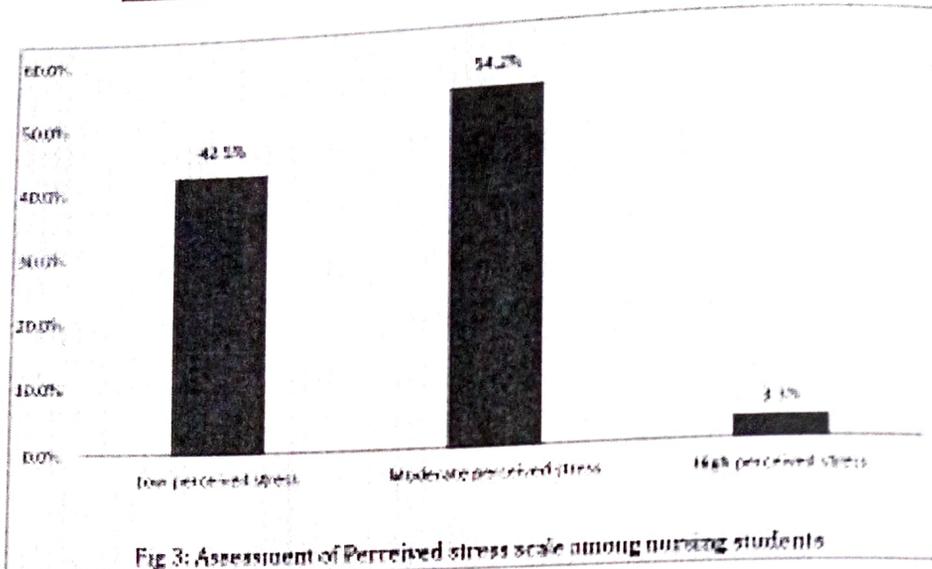


Table 3 and fig 3 displays assessment of Perceived stress scale among nursing students working in Covid Isolation unit. Most 65(54.2%) students displayed moderate Perceived stress scale, 51(42.5%) students displayed low Perceived stress scale and rest few 4(3.3%) students displayed high Perceived stress scale.

Table 4 - Assessment of factors causing stress among nursing students

Sr. no.	Factors causing stress	Max score	Mean	Mean Percentage
1	Social media stress	20	6.40	32.0
2	Personal protection and safety stress	32	8.79	27.5
3	Academic and financial stress	24	5.68	23.7
4	Nursing responsibility stress	32	9.31	29.1
5	Knowledge and skill deficiency stress	28	8.45	30.2

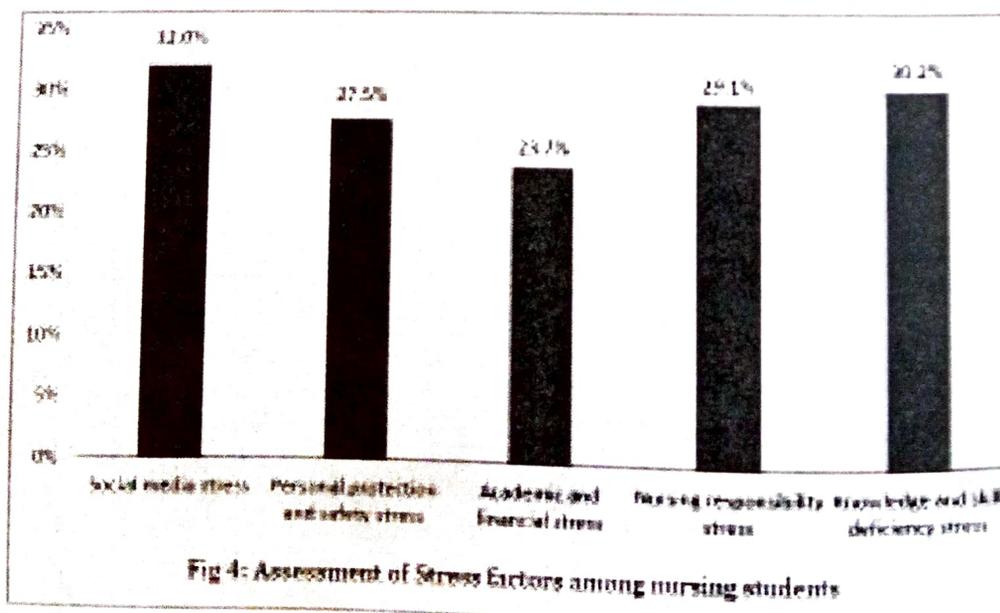


Table 4 and figure 4 shows assessment of Stress factors among nursing students while working in isolation unit of Covid19.

Social media stress area showed highest mean percent of 32. Then Knowledge and skill deficiency stress was 30.2 mean percent. Next Nursing role and responsibility stress was 29.1 mean percent. Personal protection and safety stress displayed 27.5 mean percent. Least mean percent of 23.7 was in area of Academic and financial stress.

SECTION III - This section assesses the Coping strategies practiced by the nursing students while working in isolation unit of Covid19.

Table 5 - Assessment of Coping strategies among nursing students

Sr. no.	Coping strategies	Max score	Mean	Mean Percentage
1	Adaptive coping	30	14.10	47.0
2	Optimistic coping	39	15.83	40.6
3	Evasive coping	24	9.97	41.5
4	Emotional coping	21	8.73	41.6
5	Confrontative coping	24	10.76	44.8

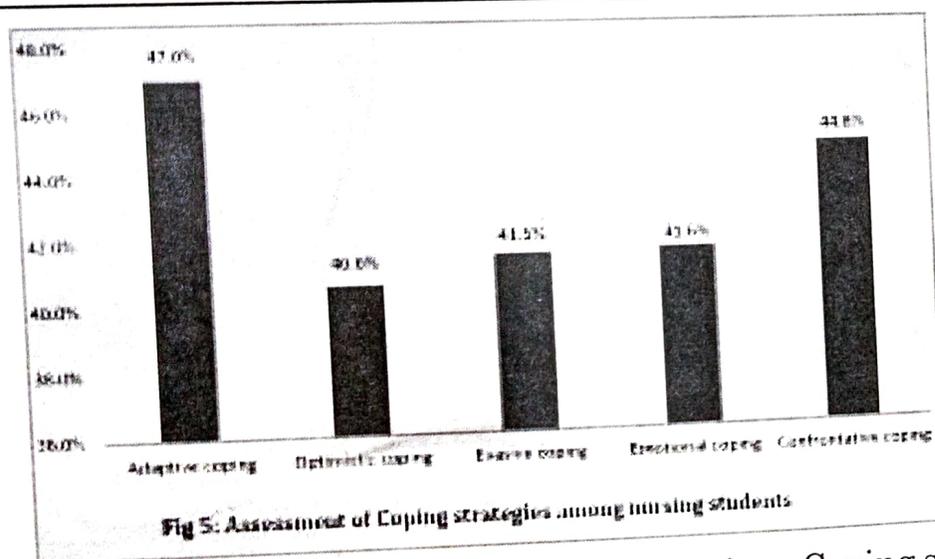


Table 5 and figure 5 shows assessment of various Coping strategies among nursing students while working in isolation unit of Covid19.

Maximum coping was seen in adaptive coping with 47 mean percent. Next 44.8 mean percent was seen in Confrontative coping. Then Optimistic coping showed mean percent of 40.6, Evasive coping showed mean percent of 41.5 and similarly 41.6 mean percent was seen in Emotional coping.

SECTION IV - The correlation between level of stress and Coping strategies among the nursing students working in Covid Isolation unit

is tested in this section. As the data being in nonparametric format, Spearman's correlation test is conducted to find the correlation

Table 6 –To determine the correlation between Stress and Coping strategies among nursing students.

Correlation	<i>n</i>	Spearman's correlation value <i>r</i>	Spearman's table value <i>r</i>	Significance
Stress	120	- 0.132	0.189	at 0.05 level <i>p</i>
Coping strategies	120			0.151

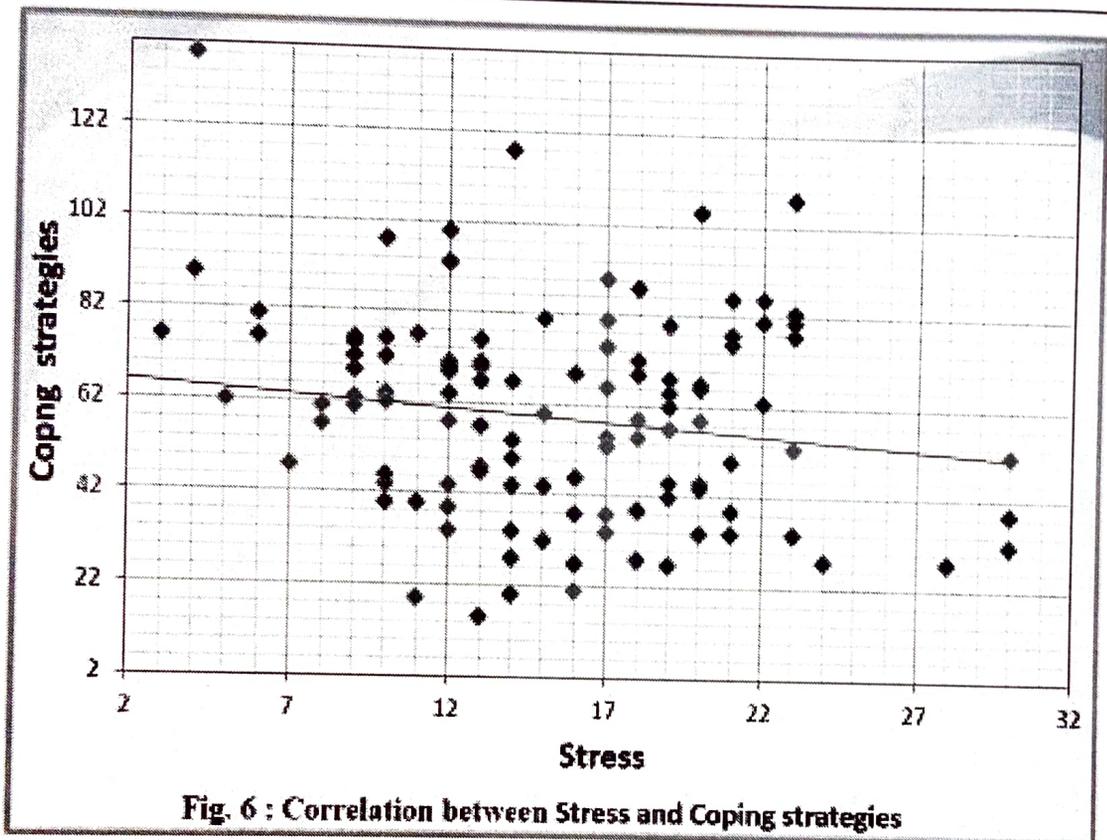


Table 6 and scatter plot 6 depicts the correlation between level of stress and Coping strategies among the nursing students working in Covid Isolation unit by Spearman's correlation method. It is seen that the Spearman's table (*rs*) table value is 0.189 at a level of significance 0.05 with no of pairs being 120.

The calculated '*rs*' value is - 0.132 which is less than the (*rs*) table value. Hence we can say that statistically there is no correlation between level of stress and Coping strategies. Thus it can be said that level of stress is not associated or correlated with Coping strategies among the nursing students working in Covid Isolation unit.

SECTION V – This section deals with Analysis and interpretation of data in order to find out association of Stress and coping strategies with selected demographic variables among nursing students working in Covid Isolation unit..

As the Stress and coping strategies data being in non parametric format, the Kruskal wallis Test is used to find out if any association exists between Stress and coping strategies with selected demographic variables.

Table 7 - Association of demographic variables with Stress among nursing students.

Association of demographic variable with Stress		n	Mean Rank	df	Calc. X^2 value	Table X^2 value	P value
Age	18 – 20 yrs	39	48.62	2	9.12	5.99	0.010
	20 – 24 yrs	79	67.18				
	Above 24 yrs	2	28.50				
Nursing course	RANM	16	40.70	1	6.92	3.84	0.011
	Basic Bsc. Nursing	104	62.94				
Nursing course year	2 nd year	56	46.48	2	4.71	5.99	0.095
	3 rd year	40	65.94				
	4 th year	24	60.74				
Training	No	9	58.17	1	0.04	3.84	0.834
	Yes	111	60.69				
Prophylaxis	No	7	24.64	1	7.93	3.84	0.005
	Yes	113	62.72				
Medical facility	No	7	27.93	1	6.54	3.84	0.011
	Yes	113	62.52				

Table 7 displays association of demographic variables with stress among nursing students working in Covid Isolation unit.

The Kruskal wallis test for independent samples was conducted to find the significant difference between groups of Age, Nursing course, Nursing course year, Whether training given, Whether Prophylaxis treatment given and Whether Medical facility was provided with respect to stress . The calculated X^2 value of stress for Age, Nursing course, Whether Prophylaxis treatment given and Whether Medical facility provided were more than the table value, hence significant at 0.05

level. Whereas the calculated X^2 value of stress for Nursing course year and Whether training given were less than the table value, hence not significant at 0.05 level

This shows that stress is independent of demographic variables Nursing course year and Whether training given. Whereas stress is associated and dependent on demographic variables Age, Nursing course, Whether Prophylaxis treatment given and Whether Medical facility provided.

Table 8 - Association of demographic variables with Coping strategies among nursing students.

Association of demographic variable with Coping strategy		n	Mean Rank	df	Calc. X^2 value	Table X^2 value	p value
Age	18 – 20 yrs	39	63.78	2	0.84	5.99	0.657
	20 – 24 yrs	79	58.57				
	Above 24 yrs	2	72.75				
Nursing course	RANM	16	63.10	1	1.11	3.84	0.374
	Basic Bsc. Nursing	104	59.79				
Nursing course year	2 nd year	56	63.67	2	0.46	5.99	0.794
	3 rd year	40	61.49				
	4 th year	24	57.99				
Training	No	9	67.72	1	0.42	3.84	0.517
	Yes	111	59.91				
Prophylaxis	No	7	74.86	1	1.27	3.84	0.260
	Yes	113	59.61				
Medical facility	No	7	71.36	1	0.73	3.84	0.395
	Yes	113	59.83				

Table 8 displays association of demographic variables with coping strategy among nursing students working in Covid Isolation unit.

The Kruskal wallis test for independent samples was conducted to find the significant difference between groups of demographic variables with respect to coping strategy. The calculated X^2 value of coping strategy for all the selected demographic was less than their respective table value, hence not significant at 0.05 level.

This shows that coping strategy is independent of demographic variables Age, Nursing course, Nursing course year, Whether training given, Whether Prophylaxis treatment given and Whether Medical facility was provided, hence not associated with them.

Conclusion:

Moderate perceived stress related to Social media, Knowledge, skill deficiency and responsibility and Personal protection and safety stress.

Orientation, training programme and provision of personal safety and protection will definitely help to reduce stress.

Recommendation

Research needed for reducing level of stress by using innovative supervision technique and practices. Need to study by practicing stress control measures, therapy.

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