

ORIGINAL ARTICLE

STRESS LEVELS REGARDING COVID-19 PANDEMIC AMONG NURSING STUDENTS AT UNIVERSITY OF SULAIMANI, KURDISTAN REGION, IRAQ

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ABSTRACT

The aim: The study aimed to assess prevalence levels of stress among undergraduate college of nursing students at university of Sulaimani, Kurdistan Region/Iraq.

Materials and methods: A total of 60 nursing students were selected from college of nursing Sulaimani University by convenience sampling used in their cross-sectional study. The perceived stress scale (PSS-10), and socio-demographic characteristics included in the self-reported questionnaire. The period of data collection started from October 25th, 2021 to November 25th, 2021. The data analysis performed by using SPSS version 25. Ethical approval was considered.

Results: The results of this study showed that the overall prevalence rate of stress was determined as 53.3 % of students at moderate level which was more prevalent among fresh man students within age 18-19 years old 93.4 %, while low level of stress observed among senior students within age 20-21 year old (25%) ($p < 0.01$). The other socio-demographic factors were not associated with levels of stress. The finding indicated that 40% of the students were infected with covid-19 in last period while the pandemic is still ongoing.

Conclusions: nursing students were experienced moderate to low level of stress regarding covid-19 pandemic regardless of socio-demographic characteristic, only age factor significantly associated with the variance of stress.

KEY WORDS: Stress, covid-19, nursing students

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INTRODUCTION

The covid-19 pandemic has separated across the world [1], and has had a key impact on people lives [2]. The covid-19 this disease represents a unique global challenge because of its contagiousness and the severity of respiratory infections it can causes, sometime lethal [3] along with it a considerable degree of psychological distress, specially, not only the danger of contagion but also various changes in habits due measures of self-isolation and social distancing [4-5]. The distress occurs when person's ability to cope with stressors is insufficiently in knowledge regarding control and inadequate treatment measures which effecting people's daily lives physically and psychologically and such challenges can rise stress [6]. Stress viewed as a condition in which the human system responds to changes in its normal balance as result from changes in the environments that is perceived as challenge, threat or danger [7]. The transactional theory of stress assumes that stress is a relationship between the person and the environment that is appraised by the person as taxing or exceeding his/her resources and end angering their wellbeing [8]. Moreover, a cognitive evaluation of the significance of the event or occurrence, the event precipitates response, on the part of the individual and the responses is influenced by one's perception of the event and the appraisal positive or negative transition and changes can be sources of stress [7-8]. Stress has different types that might people experience which includes acute

stress, chronic stress, episodic acute stress and eustress [9]. Stress often play an important role in precipitating physical and mental health problems in those who are predisposed, thus awareness of stressors and interventions helpful for suffering people to cope with stress itself [10]. These awareness and understanding the covid-19 disease in the context of mental health is the responsibility of the mental health professionals towards people. However Zhang [11] reported that the prevalence of depression, anxiety and stress related symptoms being 50.7%, 44.7% and 73.4% respectively, among medical team during out break period of covid-19 pandemic. College of nursing students experienced stress, intermittently in difficult times mainly due to perceived stress in turn as it is associated with virus transmission practically during practical training in various field of nursing in hospitals and considered as front line contact with patients in the line with presented evidence and to provide further richness to existing frame works of covid-19 disease on protective for mental health and assessment is the first step in mental health management, thus present study concern to assessing the levels of stress and the role of variables in contributing college of nursing student's stress at Sulaimani University in Kurdistan region of Iraq. To the best of author knowledge no previous study has investigated the prevalence levels of stress among such population that is nursing undergraduate students in Sulaimani city in Kurdistan Region of Iraq. Therefore

this study is important to identify vulnerability of student to stress, and protective measure could be taken, hence to limit negative psychological outcome among such group of students.

THE AIM

The study aimed to assess prevalence levels of stress among undergraduate college of nursing students at university of Sulaimani, Kurdistan Region/Iraq.

MATERIALS AND METHODS

STUDY DESIGN AND SETTING

Quantitative, cross-sectional design was carried out in college of nursing at Sulaimani University/Ministry of Higher Education and Scientific Research in Kurdistan Region/Iraq. The period of data collection started from October 25th, 2021 till November 25th, 2021.

SAMPLE SIZE ESTIMATION

The G-power correlation model was used for estimating the sample size with a 95% confidence interval (CI) with medium effect of 0.5-0.8 power and level of significance p-value of 0.05. The total sample was calculated to be 60 undergraduate students in college of nursing.

THE STUDY SAMPLE

Non-probability, convenience sampling technique was used to select 60 students were recruited from the college of nursing. The inclusion criteria for sample selection was the students agree to participate in this study, of both genders and about 15 students chosen in year first, second, third and fourth stage. The students who not interested to participate in this study were excluded.

THE STUDY INSTRUMENT

A self-reported questionnaire was constructed as an instrumental tool for data collection. it consisted of three parts. The first part includes student's socio demographic characteristics. The second part related to the student's infected or not of covid-19 disease. The third part was the perceived stress scale (pss-10). It is 10-items self-report standardized instruments measuring the degree to which situation in one's life are appraised as stressful. Each item scored on a 5-point Likert scale (never=0, almost never=1, sometime=2, fairly often=3, very often=4). The total score is obtained by summing all items and the higher the score the grater the perceived stress. The score are obtained by reversing responses to the items 4, 5, 7 and 8, the scoring ranging from 0-60. The guidelines scores ranging were from 0-19 considered low stress, 20-39 considered moderate, and the score from 40-60 considered high perceived stress. The questionnaire was translated to Kurdish

language through forward-backward procedure. The face validity of the questionnaire was determined through a panel of five experts, and reliability was determined by the computation of the interclass coefficient correlation by application of statistical package for social science program (SPSS-version 25), the result was 0.91 such estimation means the questionnaire be reliable.

PROCEDURE OF DATA COLLECTION

The administration of the questionnaire takes between 25 to 30 mints to complete. The self-reported technique of data collection includes close-ended items. The students asked to answer each item by writing on the questionnaire without mention personal name.

STATISTICAL ANALYSIS

The statistical data analyses were performed by using statistical package for social science software version 25. Descriptive statistics includes frequency and percentage and the inferential statistics includes chi-square χ^2 , fisher exact test are used to determine the significant relationship of socio demographic data with the level of stress among sample.

RESULTS

A total of 60 undergraduate nursing students participate in this study. Table I showed the student's socio demographic characteristics.

The result in this table revealed that the student's age ranged from 18 to 26 years, the majority of them was single (91.7%) with sufficient economic status (63.3%) and about two third of them 60% living in dormitory during data collection. The result of the present, table (II) indicated that more than one third of the students (40%) infected with covid-19 during the past year.

According to the severity of stress among the students, the results in table II showed that slightly more than half of student (53.3%) had a moderate level of stress, 45% low levels, and very little proportion of the students (1.7%) had sever level of stress. Table III showed the association between socio demographic variables with severity levels of stress, the results revealed that there are no statistical significant relationship ($p>0.05$) between levels of stress with genders ($p=0.336$), marital status ($p=0.887$), economic status ($p=0.347$), residency areas ($p=0.957$), infection of covid-19 ($p=0.769$), while the age factor had a significant relationship with levels of stress ($p>0.01$).

Moreover, table IV indicated that moderate level of stress was more prevalent among nursing students 23.4% within age group 18-19 years compared to 11.7% of students within age 20-21 years, 18.4% of them within age group 22-23 years and 0% of students in age group 24-25 years, furthermore the result of this table showed that low level of stress was more prevalent among nursing students within age 20-21 years compared to other groups of students (Fisher exact test 0.025, p-value 0.01).

Table I. Student's socio-demographic characteristics

	Characteristics	F	%
Age	18-19 years	18	30
	20-21 years	23	38.3
	22-23 years	17	28.2
	24-25 years	2	3.4
Gender	Female	30	%50
	Male	30	%50
Marital Married	Married	5	8.3
	Single	55	91.7
Economic status	Sufficient	38	63.3
	Barely-sufficient	21	35.0
	Insufficient	1	1.7
Residential area	Urban area	31	51.7
	Suburban	26	43.3
	Rural	3	5.0
Current residency	Current home	24	40
	Dormitory	36	60
Infected with covid-19	Yes	24	40
	No	36	60
	Total	60	100.0

Table II. Distribution of the stress according to stress levels

Stress level	F	%
Low	27	45.0
Moderate	32	53.3
Sever	1	1.7
Total	60	100.0

Table III. Association between socio demographic characteristics with stress level of students

Variables	Fisher exact test	p-value	Sig
Age	0.025	0.01	S
Gender	0.195	0.336	NS
Marital status	1.000	0.883	NS
economic status	0.797	0.347	NS
Residence	1.000	0.957	NS
Stage year	0.663	0.520	NS
Infected with covid-19 pandemic	0.343	0.764	NS

S= significant

NS= non-significant

DISCUSSION

The result of this study showed that the overall prevalence rate of stress levels was determined as 53.3% at moderate level in most general sense, stress is a condition that results when person-environment transaction lead the person to perceive a discrepancy, whether read or not, between the demands of situations and biological, psychological or social resources of the person [12] moderate level often encounter in something new or exciting, dangerous and hazard situations and sometimes lead to mental health problems of don't manage. This finding was similar to other previous studies [13-15] who reported that health professionals including nurses may be more impacted consequences of the covid-19 pandemic including psychological and physiological responses such as anxiety, stress, depression, and fear particularly among staff that were on the front line. This result on the line of study carried out by [16] showed that health professionals (n=906) who participated in a survey head moderate to severe depression and moderate to extremely severe

stress. Moreover the result of this study indicated that 40% of the samples were infected by covid-19 disease during last period. This finding suggested that nursing students are also most vulnerable population group of covid-19 infection, and thus presence of stress may be attributed of being infected or transferred to their family members and other people. Machado et al supported the result of this study and pointed that in previous meta-analysis study showed that forty-three articles were reported the presence of symptoms or mental problems the covid-19 pandemic, especially the most vulnerable populations group in elderly and health professionals [1]. Furthermore, the results of the current study revealed that moderate level of stress was significantly more prevalent among students within age group 18-19 years (28.4%, $p > 0.01$) as this group of students represented freshman students while low level of stress more prevalent among students with in age 20-21 years (25%) which may be represents scientific nursing students, as compared to other age groups (table IV). This finding was in agreement with some like

Table IV. Association between age groups with stress level

Age group	Stress levels					
	Low		Moderate		Sever	
	F	%	F	%	F	%
18-19	4	6.7	14	23.4%	0	0%
20-21	15	25	7	11.7%	1	1.7%
22-23	6	10	11	18.3%	0	0%
24-25	2	3.3	0	0%	0	0%
Total	27	45%	32	53.3%	1.0	1.7%

Fisher exact test = 0.025, p-value 0.01, significant

studies which reported that age consider independent variable associated with the variance levels of stress [17-18] furthermore, the result of this study showing that there was no significant association with stress levels with marital status, economic status, residential area, current residency and state of infection with covid-19 [19]. This result may be due to that covid-19 pandemic affected students regardless of most of their Sociodemographic characteristics, or the current finding may attributed to methodology and small sample size which influences the analysis of results; additionally their findings need further investigation. However, the present study build first step in management of covid-19 among nursing students while the pandemic is still ongoing.

CONCLUSIONS

The results of the current study detected that almost all college of nursing students were experienced moderate to low levels of stress during covid-19 pandemic, regardless of most of their socio demographic status, only age factor significantly with the variance of stress. The moderate level of stress more prevalent in freshman students within age group 18-19 years while low level of stress more prevalent among senior students within age 20-21 years old. Moreover the results revealed that tow-third of the students current of living in dormitory, and slightly more than one-third of them were infected with the covid-19 disease in the last period; while the pandemic is still ongoing.

RECOMMENDATION

This study recommended that mental health clinic should be established in the college for interventions and reduces psychological problems among students. And psycho education programs should be implemented to the nursing students to reduce stress and to change lifestyle, furthermore applying further protective measures including masks, gloves, avoiding crowded places particularly in dormitory and to be vaccinated against covid-19. The nursing students are in the front line and need to be psychological and social supported. Moreover encourage further epidemiological studies targeting mental health problem including stress among university students.

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This study was permitted by the scientific committee, and the council of college of nursing and by also the ethical committee of college of medicine at University of Sulaimani, Kurdistan Region of Iraq. Furthermore before starting data collection all participants are informed of the objective of the study, and getting free to withdraw from the study at negative, and privacy and anonymity are protected and the verbal consents were achieved from each participating student's.

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Conflict of interest:

The Author declare no conflict of interest.

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