

## Perception of Stress in Physiotherapy and Nursing Students of DMIMS during Exam Period

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### Abstract

**Background:** Stress is one of the fundamental problems throughout human life. Stress could be considering one of the factors that has effect on attainment of goal of human. It can affect physical and mental health. Academic stress can affect students' performance. Previous studies showed that the stress negatively related to academic performance and grades of students. Longitudinal study medical students concluded that greater academic stress is associated with lower grades and student's burnout and negatively associated with academic performance before and during medical school. **Aims and Objective:** To investigate the perception of stress in Physiotherapy and Nursing students of DMIMS during exam period. **Methodology:** The institution ethics committee clearance was obtained. 278 participants were selected randomly from RNPC, AVBRH and Nursing College, DMIMS as per the inclusion and exclusion criteria. The informed consent was obtained. They had provided with Perceived Stress Scale (PSS). **Result:** This study showed non-significant effect of stress on Physiotherapy and Nursing students of DMIMS during exam period. (Age wise: 6.62, p-value=0.88, NS, p>0.05 & Gender wise: 2.66, p-value=0.26, NS, p>0.05). **Conclusion:** This study concluded that there is a Non-Significant amount of effect of exam on Stress in physiotherapy and nursing students with respect to Age and Gender.

**KEYWORDS:** Perceived Stress, Physiotherapy students, Nursing students, Exam period, DMIMS.

### INTRODUCTION:

Stress is one of the fundamental problems throughout human life. Stress could be considering one of the factors that has effect on attainment of goal of human. It can affect physical and mental health.

Academic stress can affect students' performance. Previous studies showed that the stress negatively related to academic performance and grades of students. A longitudinal study medical student concluded that greater academic stress is associated with lower grades and students burnout and negatively associated with academic performance before and during medical school.

The way students cope with the academic related stress and their examination related self-efficiency may affect the association between stress experienced during exam period and academic achievement.

Stress phenomenon has become an important area of research in medicine and psychology, and in management, development, seminars and workshops in Nigeria and elsewhere. It has become a trendy topic for headlines cover stories. Internationally, United Kingdom, stress is believed to trigger 70% of visits to doctors and 85% of serious illnesses. There is a clear indication from literature that stress related disorders are quickly becoming the most prevalent reason for workers disability. This is of particular concern as the leading cause of sickness and can be reduced by the adoption of practices that will help alleviate stress for administrative staff of tertiary institutions. People attempt to manage their stress conditions and their strategies differ from person to person and situation to situation

Indeed stress symptoms can affect our body, thoughts, feelings & behavior. Being able to recognize common stress symptoms can give a jump on managing them. Stress that's left unchecked can contribute too many health problems such as high blood pressure, heart disease, obesity & diabetes.

Having known the effects of STRESS; in this particular research work entitled, "Perception Of Stress During Examination Period In Students Of DMIMS", we have tried to analyse the amount of stress a student undergoes during & before the examination period by preparing an appropriate questionnaire which was answered by every single research participant & hence analysing the amount of stress through Perceived Stress Scale.

**Need for the study/Rationale:** to find out perception of stress in Physiotherapy and Nursing students of DMIMS during exam period.

**AIMS AND OBJECTIVE:** To investigate the perception of stress in Physiotherapy and Nursing students of DMIMS during exam period.

#### **MATERIAL AND METHODOLOGY:**

The institution ethics committee clearance was obtained. 278 participants were selected randomly from RNPC, AVBRH and Nursing College, DMIMS as per the inclusion and exclusion criteria. The informed consent was obtained. They had provided with Perceived Stress Scale (PSS).

#### **Material:**

1. Perceived Stress Scale (PSS).

#### **Methodology:**

**Study design:** Observational study.

**Sampling technique:** Simple random sampling technique.

**Study setting:** RNPC, AVBRH, & Nursing College, DMIMS, Sawangi (Meghe), Wardha.

**Sample size:** 278.

**Study duration:** 1 year.

#### **Inclusion Criteria:**

1. Exam going students of Physiotherapy and Nursing College, DMIMS.

2. Age between 19-30 Years.
3. Male and female both.

#### **Exclusion Criteria:**

1. Students other than Physiotherapy and Nursing College.
2. Age below 19 years and above 30 years.

#### **Procedure:**

The institution ethics committee clearance was obtained. 278 participants were selected randomly from RNPC, AVBRH and Nursing College, DMIMS as per the inclusion and exclusion criteria. The informed consent was obtained. They had provided with a Perceived Stress Scale (PSS).

#### **Outcome measure:**

1. Perceived Stress Scale (PSS).

#### **STATISTICAL ANALYSIS:**

Statistical analysis was done by using descriptive and inferential statistics using chi-square test and software used in the analysis were SPSS 22.0 version and Graph Pad Prism 6.0 version and  $p < 0.05$  is considered as level of significance.

#### **RESULT:**

This study showed non-significant effect of stress on Physiotherapy and Nursing students of DMIMS during exam period. (Age wise: 6.62,  $p$ -value=0.88, NS,  $p > 0.05$  & Gender wise: 2.66,  $p$ -value=0.26, NS,  $p > 0.05$ ).

**Table 1:-** Represents the age wise distribution of stress level among 278 students between age 18-27. In which the group of students between age 18-20 years shows the significant level of stress level. And the age group 21-27 shows a low level of stress which is non-significant. The data analysis on basis of Age shows Non Significant ( $p$ -value=0.88, NS,  $p > 0.05$ ) amount of effect of exam on Stress in physiotherapy and nursing students.

**Table 2:-** Represents the gender wise distribution of stress level among 278 students between age 18-27. In which the number of male students are 36 and number of female students are 242. The data which is analyzed on the basis of Gender it shows that Non-Significant ( $p$ -value=0.26, NS,  $p > 0.05$ ) amount of effect of exam on Stress in physiotherapy and nursing students.

**Table 3:-** Represent assessment of stress with perceived stress scale questionnaire score. In which 15 (5.4%) student experience Low Stress out of 278. And 216 (77.7%) student experience Moderate stress. And High stresses were experienced by 47 (16%) students.

**Table 4:-** Represent correlation of age in years with perceived stress scale questionnaire score. The 18 yr of age student were 71 (25%) out of which 5 (7%) student experience low stress. 53 (74%) student of 18 year experience moderate stress. 13 (18%) student of 18 year experience high stress. The second column is of 19 yr student which were 106 (38%) out of which 4 (3.77%) student experience low stress. 82 (77.36%) student experience moderate stress and 20 (18.87%) student experience high stress. The third column is of 20 yr student which were 64 (23%) out of which 3 (4.69%) student experience low stress, 52 (81.25%) student experience

moderate stress and 9(14.06%) student experience high stress. The column four is of 21yr student which were 22(7.9%) out of which 2(9.09%) student experience low stress ,17(77.27%) student experience moderate stress and 3(13.64%) student experience high stress. The column five is of 22yr student which were 5(1.9%) out of which none of the student experience low stress ,4(80%) student experience moderate stress and 1(20%) student experience high stress. The table six is of 23yr student which were 6(2.2%) out of which none of the student experience low stress,5(83.33%) student experience moderate stress and 1(16.67%) student experience high stress the table six is of age more than 23 which were 4(1.4%) out of which 1(25%) experience low stress ,3(75%) student experience moderate stress and no student had high stress. The analyzed data shows p-value =0.88, NS,  $p > 0.05$ .

**Table 5:-** Represent correlation of gender with perceived stress scale questionnaire score .In it the male student were 36 out of which 4(11.11%) student experience low stress,26(72.22%) student experience moderate stress and 6(16.67%) student experience high stress. Female student were 242(87.1%) out of which 11(4.55%) student experience low stress ,190(78.51%) student experience moderate stress and 41 (16.94%) student experience high stress analyzed data show p-value =0.26, NS,  $p > 0.05$

**Table 6:-** Represent Item wise analysis with perceived stress scale questionnaire score. In, 126(45.3%) student with score 2, 68(24.5%) student with score 3 and 17(6.1%) student

**Item 1:-** 24 (8.6%) student with score 0, 43 (15.5%) student with score 1 with score 4.

**Item 2:-** 27(9.7%) student with score 0, 31(11%) with score 1, 121(43%) student with score 2 ,84(30.5%) student with score 3 and 15(5.4%) student with score 4.

**Item 3:-** 17(6.1%) student with score 0, 25(9%) student with score 1 ,107 (38.5%) student with score 2, 82 (29.5%) student with score 3 and 47(16.9) student with score 4.

**Item 4:-** 10(3.6%) student with score 0, 21(7.6%) student with score 1, 99(35.6%) student with score 2 ,108 (38.8%) student with score 3 and 40(14.4%) student with score 4.

**Item 5:-** 17(6.1%) student with score 0, 46(16.5%) student with score 1, 121(43.5%) student with score 2 ,78 (28.1%) student with score 3 and 16(5.8%) student with score 4.

**Item 6:-** 13(4.7%) student with score 0, 49(17.6%) student with score 1, 127(45.7%) student with score 2 ,78 (28.1%) student with score 3 and 11(4%) student with score 4.

**Item 7:-** 15(5.4%) student with score 0, 37(13.3%) student with score 1, 98(35.3%) student with score 2 ,100 (36%) student with score 3 and 28(10.1%) student with score 4.

**Item 8:-** 13(4.7%) student with score 0, 46(16.5%) student with score 1, 141(50.7%) student with score 2 ,62 (22.3%) student with score 3 and 16(5.8%) student with score 4.

**Item 9:-** 20(7.1%) student with score 0, 37(13.3%) student with score 1, 102(36.7%) student with score 2 ,87 (31.3%) student with score 3 and 32(11.5%) student with score 4.

**Item 10:-** 21(7.6%) student with score 0, 55(19.8%) student with score 1, 124(44.6%) student with score 2 ,68 (24.5%) student with score 3 and 10(3.6%) student with score 4.

## DISCUSSION

Our study showed a non-significant effect of examination on stress in physiotherapy and nursing student of DMIMS. These findings are in contradiction to other author.

**Shah C., et al.** confirmed the general impression that there is a considerable amount of stress among medical student.

**Sajjun K., et al.** conducted study which found that there is significant stress in occupation therapy student.

**Balkishan Sharma et al.**, conducted a study which showed that stress level indicated by Zung self-rating depression scale was very high and girls had more stress as compared boys.

**Shah M., et al.**, study reported that stress level as found by questionnaires is more in female.

But, according to present study, the data which is analyzed on the basis of Gender it showed that **Non –significant effect of exam on stress** in physiotherapy and nursing student in DMIMS. (p-value=0.26, NS, p>0.05).

In supportive to our study, **Supre A Net. al.**, studied that stress level were not significantly different between the male and female in medical student at Seth GS college.

Also, **Ganesh pradhan et al.**, showed increased in stress score in pre-examination setting irrespective of gender.

According to our study the data analyzed on the basis of Age showed **that Non-significant effect of exam** on stress in physiotherapy and nursing student in DMIMS. (p-value =0.88, NS, p>0.05)

**Jain P, et. al.**, showed that the stress is common among the first year medical student due to exam which is contradictory to our study.

**Reem Rachel A. et al., (2009)** reported that the stress among first year medical student in INDIA is significantly high.

**Crego A., et al** study showed significant effect of exam on stress level in dental student.

**Koschel TL., et al** analyzed effect of exam on stress at end of semester among the student were significant with poor physical activity and poor mental health.

**Simic N., et al** assesses the effect of previous exam experience and after repeated exam experience. It showed a significant effect of exam on student stress level.

**Zunhammer M., et al** compare the correlation between level of stress, sleep quality, stress and the role of alcohol, nicotine and caffeine consumption during exam. The stress level, caffeine consumption were significantly increases and sleep quality significantly decrease during exam.

**Wang HF** analyzed stress, coping and psychological health of high school nursing students associated with competitive exam shows significant interaction between perceived stress and problem focused coping behavior.

## CONCLUSION:

This study concluded that there is a Non-Significant amount of effect of exam on Stress in physiotherapy and nursing students with respect to Age and Gender.

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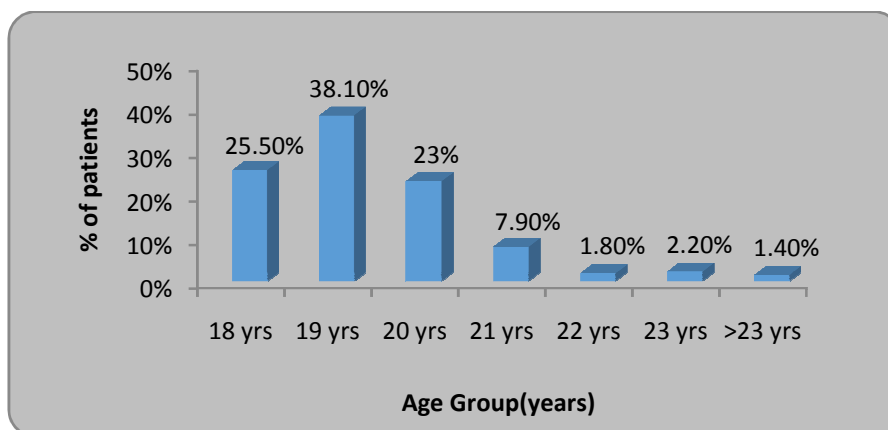
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### Tables and Graphical Presentation:

**Table 1: Age wise distribution of patients**

Age Group (years)	No of patients	Percentage (%)
18	71	25.5
19	106	38.1
20	64	23.0
21	22	7.9
22	5	1.8
23	6	2.2
>23	4	1.4
Total	278	100.0
Mean±SD	19.36±1.33(18-27 years)	

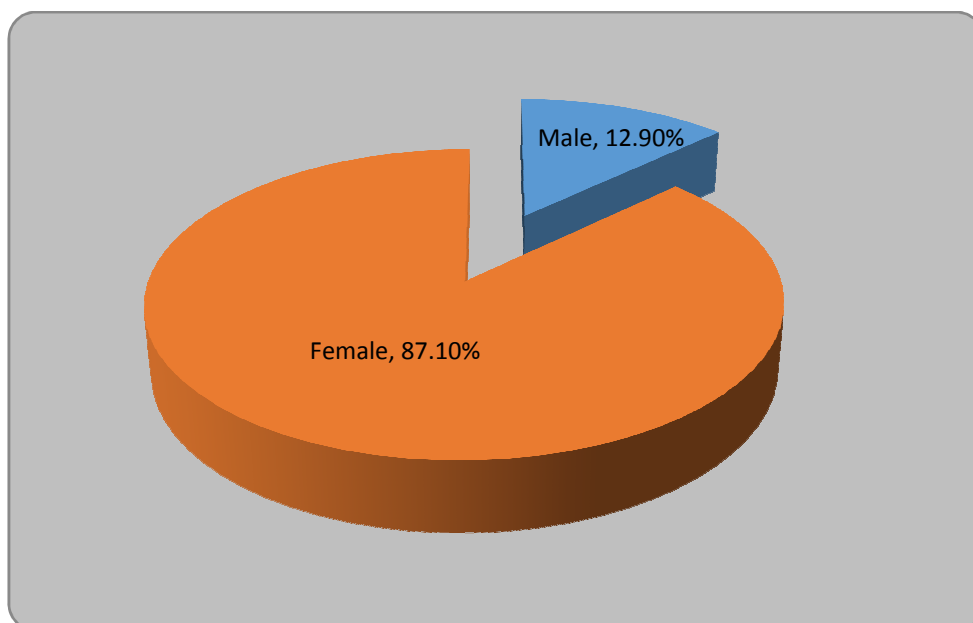
**Graph 1: Age wise distribution of patients**



**Table 2: Gender wise distribution of patients**

Gender	No of patients	Percentage (%)
Male	36	12.9
Female	242	87.1
Total	278	100.0

**Graph 2: Gender wise distribution of patients**

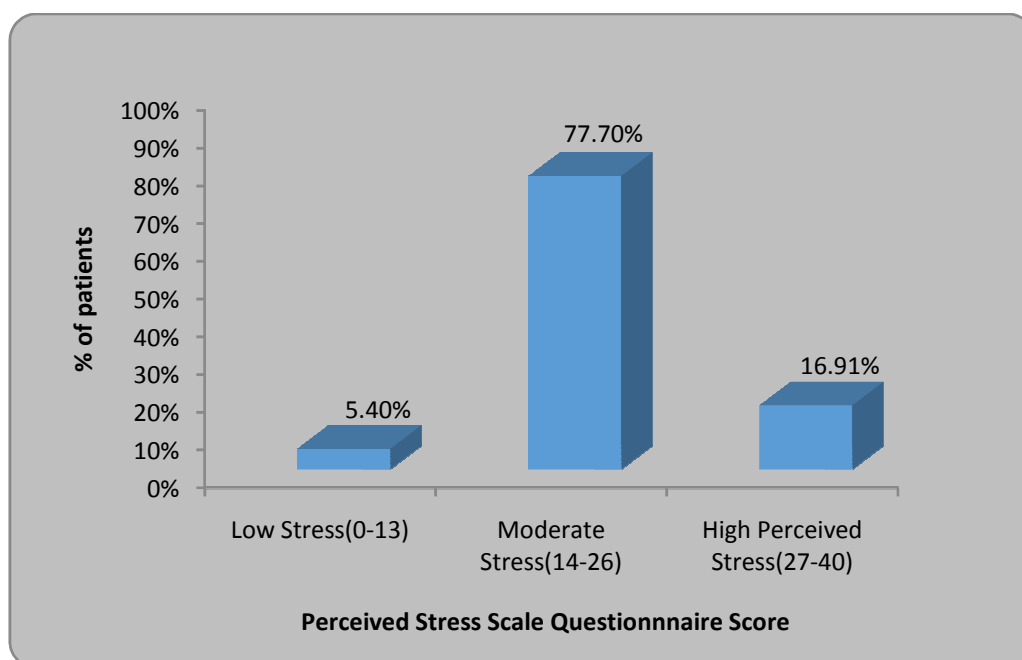




**Table 3: Assessment with perceived stress scale questionnaire score**

Stress	No of patients	Percentage (%)
Low Stress(0-13)	15	5.40
Moderate Stress(14-26)	216	77.70
High Perceived Stress(27-40)	47	16.91
Total	278	100.0
Mean±SD	19.36±1.33(18-27 yrs)	

**Graph 3: Assessment with perceived stress scale questionnaire score**

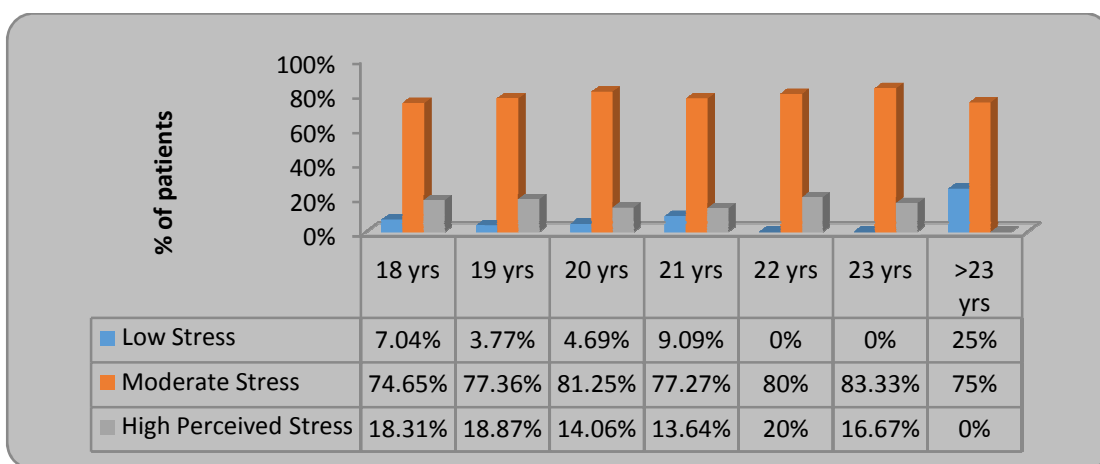


**Table 4: Correlation of age in years with perceived stress scale questionnaire score**

Age Group (years)	No of patients	Low Stress (0-13)	Moderate Stress(14-26)	High Perceived Stress(27-40)
18	71(25.5%)	5(7.04%)	53(74.65%)	13(18.31%)
19	106(38.1%)	4(3.77%)	82(77.36%)	20(18.87%)
20	64(23%)	3(4.69%)	52(81.25%)	9(14.06%)
21	22(7.9%)	2(9.09%)	17(77.27%)	3(13.64%)

22	5(1.9%)	0(0%)	4(80%)	1(20%)
23	6(2.2%)	0(0%)	5(83.33%)	1(16.67%)
>23	4(1.4%)	1(25%)	3(75%)	0(0%)
Total	278(%)	15(5.40%)	216(77.70%)	47(16.91%)
$\chi^2$ -value	6.62,p-value=0.88,NS,p>0.05			

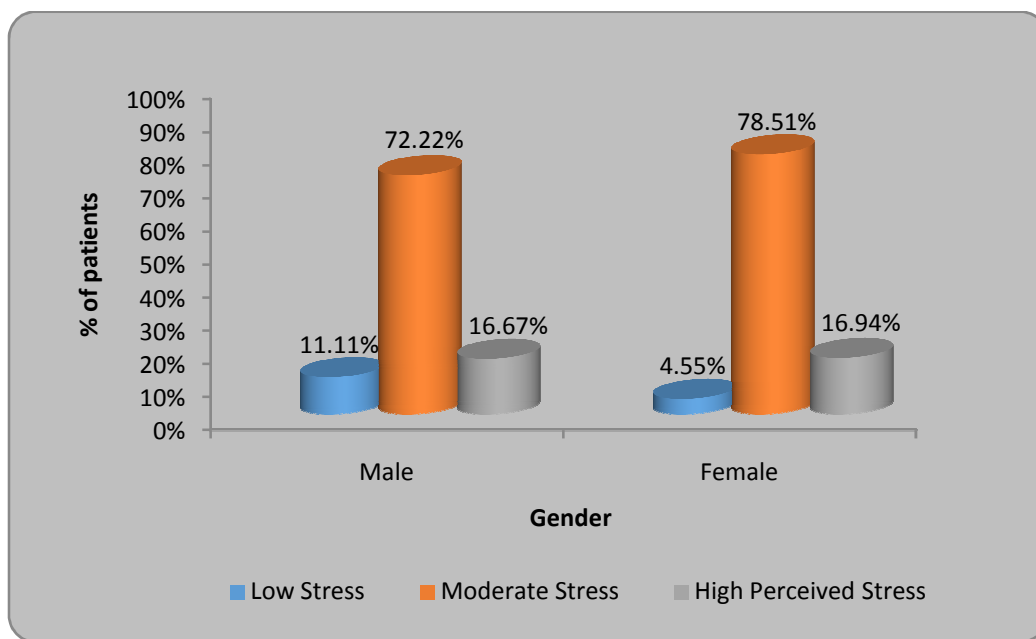
**Graph 4: Correlation of age in years with perceived stress scale questionnaire score**



**Table 5: Correlation of gender with perceived stress scale questionnaire score**

Gender	No of patients	Low Stress (0-13)	Moderate Stress(14-26)	High Perceived Stress(27-40)
Male	36(12.9%)	4(11.11%)	26(72.22%)	6(16.67%)
Female	242(87.1%)	11(4.55%)	190(78.51%)	41(16.94%)
Total	278(%)	15(5.40%)	216(77.70%)	47(16.91%)
$\chi^2$ -value	2.66,p-value=0.26,NS,p>0.05			

**Graph 5: Correlation of gender with perceived stress scale questionnaire score**



**Table 6: Item wise analysis with perceived stress scale questionnaire score**

Item	Score 0		Score 1		Score 2		Score 3		Score 4	
	N	%	N	%	N	%	N	%	N	%
1	24	8.6	43	15.5	126	45.3	68	24.5	17	6.1
2	27	9.7	31	11.2	121	43.5	84	30.5	15	5.4
3	17	6.1	25	9	107	38.5	82	29.5	47	16.9
4	10	3.6	21	7.6	99	35.6	108	38.8	40	14.4
5	17	6.1	46	16.5	121	43.5	78	28.1	16	5.8
6	13	4.7	49	17.6	127	45.7	78	28.1	11	4
7	15	5.4	37	13.3	98	35.3	100	36	28	10.1
8	13	4.7	46	16.5	141	50.7	62	22.3	16	5.8
9	20	7.2	37	13.3	102	36.7	87	31.3	32	11.5
10	21	7.6	55	19.8	124	44.6	68	24.5	10	3.6

**Graph 6: Item wise analysis with perceived stress scale questionnaire score**

