



# A STUDY TO EVALUATE DEPRESSION, ANXIETY AND STRESS AMONG UNDERGRADUATE PHYSIOTHERAPY STUDENTS - AN INSTITUTION BASED PILOT STUDY

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## ABSTRACT

**Introduction:** At colleges nationwide, large percentage of college students are feeling overwhelmed, sad, hopelessness and so depressed that they are unable to function well. It is seen that Anxiety disorders affect a lot to adults every year, and its levels among college students have been rising since long. The objective of the present study was to explore the severity of depression, anxiety and stress among undergraduate physiotherapy students.

**Methodology:** 246 undergraduate physiotherapy students from one institute have been selected for the study purpose. Questionnaire based survey study was done. A DASS 21 questionnaire was given to the students and the aim of the study was explain to them. Duly completed forms were taken away for research study purpose.

**Result:** Among all of total 246 students; Depression-145 were reported under normal category, 52 of them in mild, 35 in moderate level, 10 in severe category and 4 had fallen in the extremely severe category. The Anxiety scale reported 125 in normal, 34 in mild, 49 in moderate level, 20 in severe and 18 of them have been under extremely severe category. The study reported 159 normal cases for Stress scale, 35 were in mild, 31 in moderate, 20 in severe and 1 case in extremely severe score.

**Conclusion:** Present study revealed maximum number of students in the normal category and some student's in raised level of anxiety and stress among undergraduate Physiotherapy students.

**Discussion:** Consequently it is advised that the institute should take appropriate steps for reducing the level of depression and stress by undertaking counseling of the students and help them to cope up with their difficulties up to the institutional limit.

**Key Words:** DASS-Depression Anxiety Stress Scale, DASS21-Depression anxiety stress scale 21

## INTRODUCTION AND BACKGROUND

Physiotherapy College in Surat, Shree Swaminarayan Physiotherapy College has an intake capacity of 50 undergraduates Physiotherapy students per year. Physiotherapy course has four years of curriculum and 6 months of compulsory internship to get the best practical experience in this duration. These four years may be stressful for students to successfully realize their dreams. We have explored their level of depression, anxiety and stress through the Depression Anxiety Stress Scale (DASS21).

Depression has afflicted mankind ever since its inception. It has attracted public interest rather recently <sup>1</sup>. WHO rates depression to be the world's fourth most disabling health problems <sup>2</sup>. WHO has projected that depressive disorder will be ranked as second most disabling disorders, unless appropriate measures are taken for early diagnosis, prompt and effective treatment and prevention of depression. According to the National Depressive and Manic Depressive Association (NDMDA), depression is an undergraduate and undertreated disorder.<sup>3</sup> Untreated depression results in high morbidity and mortality. Proper diagnosis and treatment cannot be overemphasized.<sup>4</sup>

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Anxiety is experienced as an emotion by everybody in day to day life and it is defined as a state of fearful expectation or apprehension as a result of real external danger or intrapsychic conflict such as anxiety in the face of examination and before delivering a lecture. So this is called normal, physiological, adaptive or realistic anxiety. Contrary to that, anxiety as an abnormal state is pathological, maladaptive and unrealistic. Anxiety is often differentiated from fear, as fear is an apprehension in response to an external danger while in anxiety the danger is largely unknown (internal). Roughly about 5% of population suffers from anxiety disorder. Anxiety is a response to threatening experience, while depression is a reaction to a loss. They usually occur together because danger and loss are usually there in many cases.<sup>5</sup>

As Seyle noted, stress occurs as a response to a range of circumstances. Biologically, stress reactions evolved as an emergency response intended to prepare an individual for fight or flight-that is, either to defend oneself or try to run away from a threat. In psychological terms, stress is a response to the body to whatever is perceived as an emergency situation<sup>6</sup>.

Depression slows thinking, making it difficult to concentrate and remember. Depressed people frequently become dependent, passive, and helpless, at times covertly using their symptoms to manipulate others into meeting their needs. Even some medications may cause depression like adrenal steroids, Crabamazepine, L-dopa, reserpine, oral contraceptives, and etc. Depression may be associated with several psychiatric disorders that significantly affect its course, prognosis, and treatment. Suicide occurs most frequently in patients who are depressed and alcoholic. Suicide is a complication of up to 15% of cases of depression. Many demographic data (e.g.: being older, being male, experiencing social isolation, or having chronic or terminal illness.) have said to increase the risk.<sup>7</sup>

Anxiety is like fear in that it involves mental and physical mobilization to meet a perceived danger. Excessive levels of anxiety however paralyze mental resources in amorphous of continuous and futile mobilization of mind and body. Anxiety is manifested by mental, depletion, and in ability to rise to a challenge. Physical complaints, which usually represent heightened awareness of arousal of the sympathetic nervous system and motor tension, are common in anxious patients. Typical symptoms include insomnia, nausea, diarrhea, abdominal pain, difficulty swallowing, dry mouth, hot flashes, tremor, muscle tension and soreness, difficulty swallowing, urinary frequency, sexual dysfunction, faintness, tremor, fatigue, headaches, diaphoresis, cold, clammy hands, headaches. Hyperventilation produce by anxiety causes shortness of breath, dizziness, light-headedness, numbness and paraesthesias. Non-prescription drugs that may cause anxiety include caffeine, withdrawal from CNS depressants (e.g.:

alcohol, tranquilizers), any drug that clouds sensorium in hyper vigilant patients.<sup>7</sup>

Stress and excitement commonly cause insomnia by stimulating the arousal system, which easily becomes predominant over the sleep-inducing system<sup>7</sup>. Physiological signs and symptoms occur mostly as result of sympathetic nervous system and adrenal activity like dilated pupils, increased heart rate, increased rate and depth of respirations, skin pallor, decreased urinary output, dry mouth, and increased muscle tension, increased blood sugar. Psychological signs and symptoms include anxiety, fear, anger, depression, denial, etc.<sup>6</sup>

There is increasing concern about the stress in health, education and training especially in medical, dental, nursing and to certain extent physiotherapy education. Stress during Physiotherapy Education is inevitable. Although stress is not necessarily a symptom of more formal anxiety or depressive disorders it can be precursor to these problems. High level of depression, anxiety and stress may have a detrimental effect on the academic curriculum<sup>8</sup>. However there is deficit of the information regarding the depression, anxiety and stress among undergraduate physiotherapy students. So in present study would aim to evaluate depression, anxiety and stress in undergraduate physiotherapy students in SSPTC, Surat.

## MATERIALS AND METHODOLOGY

**Study Design:** In this questionnaire based survey study the samples were selected from Shree Swaminarayan Physiotherapy College students and were performed in the same institution only. Duration for this study was 6 months and this study comprises of 246 undergraduate female physiotherapy students. The students who were registered as undergraduate physiotherapy student in Shree Swaminarayan Physiotherapy College, in the age group of 18-23 years were only recruited. Students who are not in the field of under graduation Physiotherapy and who are undergoing post graduation in Physiotherapy, Students who were not conversant in English were excluded from this study. For collecting the data questionnaire method was used.

**Method:** This study was conducted in the Shree Swaminarayan Physiotherapy College, Kadodara, Surat, which is the one and only women's residential teaching institute for Physiotherapy in India. The data were collected from all four years and interns of B.P.T. of this college during 2015-16 academic years. Participation in the study was voluntary and an informed consent was obtained. The participating students were briefed about the aim of study and informed that their data would be safe and was guaranteed confidentiality. The DASS questionnaire was distributed among the students and was collected back for analysis once they were duly filled by

the participants. DASS baseline scores were collected during relaxed state when there were no exams.

The scale has been tested and found to possess excellent reliability, good validity and simple in language and required less time.

Severity	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely severe	28+	20+	34+

## RESULTS

Out of the 246 physiotherapy students: 198 were going through their academic performance while the rest 48 of them were rummaging through getting their new experiences according to the internship schedule.

When we analyzed, the depression score, among all of total 246 students; 145 were reported under normal category, 52 of them in mild, 35 were in moderate level, 10 in severe category and 4 had fallen in the extremely severe category.

The anxiety scale reported 125 in normal, 34 in mild, 49 have been in moderate level, 20 in severe and 18 of them have been under extremely severe category.

The study reported 159 normal cases for stress scale, 35 were in mild, 31 in moderate, 20 in severe and one case in extremely severe score.

## DISCUSSION

This study in Shree Swaminarayan Physiotherapy College has revealed that the students who had actively participated in this research, a total of 246 students, 4 were in extremely severe depression score, 18 were in extremely severe anxiety score and only 1 in extremely severe stress category. High amount of depression, anxiety and stress can be because of multiple reasons. It could be their personal reasons, environmental reasons and academic reasons. Different contributing factors to lead to abnormal depression, anxiety and stress among the students can be due to various factors like, physical factors, academic factors, social factors, emotional factors, personality factors, etc. Medical and Paramedical students are expected to learn and master a huge amount of knowledge, attitudes and skills for which they have to work hard which in turn put them under lots of stress.

Studies done by Balkishan Sharma, Rajshekhar Wavare on academic stress due to depression among medical and

Para-medical students in an Indian medical college identified that there was no difference between Mean Depression Score in the students of MBBS and physiotherapy course during their academic examination. It was also observed that academic examination for medical and Para-medical students are stressful and produces changes in vital parameters which affected their academic performance. Academics and examination are the most powerful stressors in medical and Para-medical students.<sup>9</sup>

First and Second year students have not been found in extreme depression or stress. This may be due to new arrival in the Para-medical field, they would find this as a new experience and they may seem it's easy.

Alternatively third year, final year and internship student were found to be more severe in depression, anxiety and stress. This could be due to their increased self study hours, increased level of study from previous years, aspiration of scoring more in academics, increasing concern about their profession as a carrier and lots more. In interns it could be due to their worry of getting job placement, treating the patients with complete and proper handling with full confidence and independently, new responsibilities they need to take now and so on. Consequently it is advised that the institute should take appropriate steps for reducing the level of depression and stress by undertaking counseling of the students and help them to cope up with their difficulties up to the institutional limit. Introducing some of such strategies to the college can help to achieve a normal level of depression, anxiety and stress among students. So the further same research again will show no severity of depression, anxiety and stress.

## CONCLUSION

After analyzing the DASS data which were collected from undergraduate physiotherapy students from Shree Swaminarayan Physiotherapy College, Kadodara, Surat, has revealed that maximum number of students are in the normal category of Depression, Anxiety and Stress and very few of them are in the extremely severe category.

## ETHICAL CLEARANCE

Ethical clearance for the present study was obtained from ethical committee of Shree Swaminarayan Physiotherapy College.

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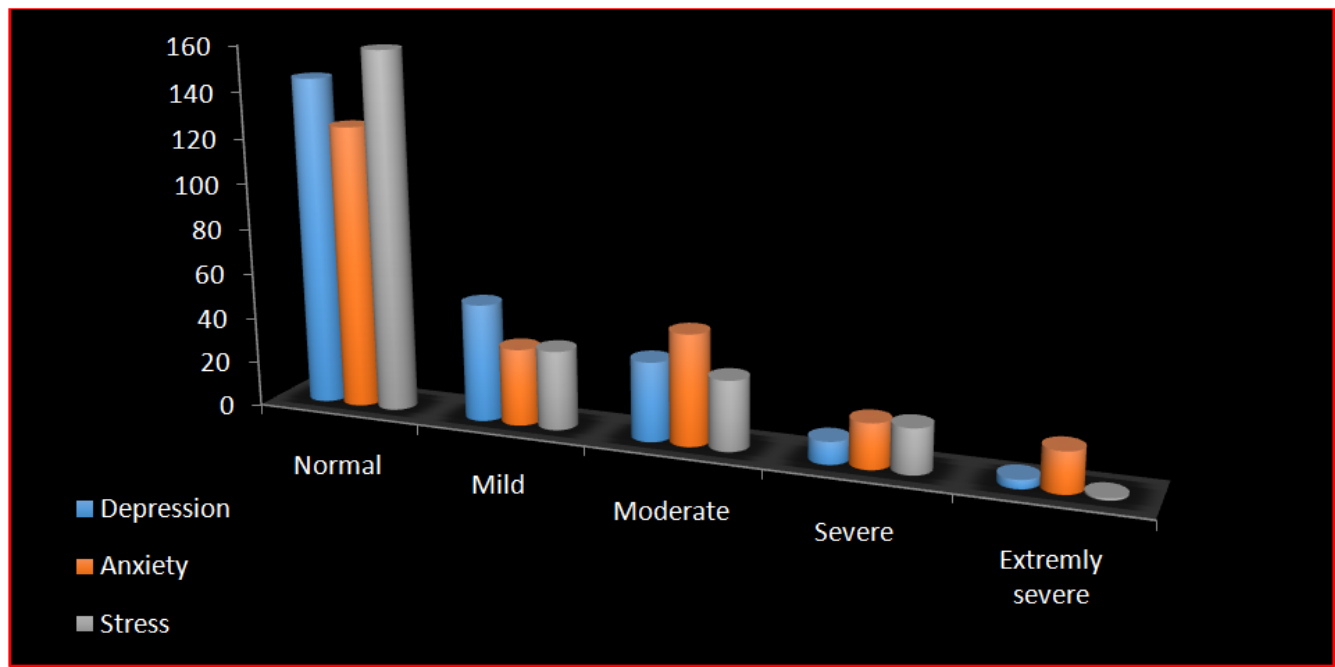
**Conflict of Interest**

There was no conflict of interest.

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**ANNEXURE 1**



**Figure 1:** Clustered cylindrical chart showing severity of DASS among undergraduate Physiotherapy students (n=246): N-Number of Undergraduate Physiotherapy students

## ANNEXURE 2

Severity distribution of DASS Score among undergraduate Physiotherapy students.

Subscale		Normal	Mild	Moderate	Severe	Extremely severe
<b>Depression</b>	Final year	32	8	7	2	1
	Third year	22	8	11	6	2
	Second year	34	11	3	1	0
	First year	29	15	6	0	0
	Internship	28	10	8	1	1
<b>Anxiety</b>	Final year	25	5	12	6	2
	Third year	15	11	9	3	11
	Second year	35	6	5	3	0
	First year	23	8	12	6	1
	Internship	27	4	11	2	4
<b>Stress</b>	Final year	31	10	4	4	1
	Third year	26	7	8	8	0
	Second year	36	7	5	1	0
	First year	36	2	7	5	0
	Internship	30	9	7	2	0