



Psychological Distress among Undergraduate Agriculture Students in Tamil Nadu

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(Received 08 October 2024, Revised 17 December 2024, Accepted 10 January 2025)

(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: Psychological distress is an adverse emotional state carried on by several events, such as tension, fear, anxiety, or psychological instability. Certain types of distress can even lead to major psychological issues like depression. Every college student may face three types of psychological distress namely academic distress, personal distress, and social distress. Psychological distress among college students has been unnoticed for a long time. Hence, this paper attempts to develop a likert scale for measuring psychological distress among undergraduate students in Tamil Nadu. A five-point continuum likert scale was developed considering three types of psychological distress. Initially, 50 statements were developed as a universal statement of the concurrence. After consulting with experts, 35 statements have been sent to 60 undergraduate agriculture students (non-sample respondents). After getting the response, item analysis has been carried out for all the statements and the t-value has been calculated. The first fifteen statements having the t-value of more than 1.75 have been selected for measuring psychological distress. Cronbach's alpha – Reliability of internal consistency was calculated as 0.712. The developed scale was found to be valid and reliable. The scale was developed and sent to 150 undergraduate agriculture students (sample respondents) pursuing B.Sc. (Hons) Agriculture at Tamil Nadu Agricultural University. The results revealed that major portion (36 per cent) of students are having a high level of academic distress. In case of personal distress, 41 per cent of students are having a high level of personal distress. It was also found that 41 per cent of students are having a low level of social distress. From this research, it is evident that undergraduate students are facing distress in many ways. To overcome these distress, few steps need to be taken which includes reducing the overburden of credit hours within the semester, to maintain the gap between the examinations, timely declaration of result, emphasis need to be done in counseling and capacity building of the students.

Keywords: Psychological distress, Academic distress, Personal distress, Social distress.

INTRODUCTION

Psychological distress occurs as the result of poor mental health characterized by symptoms ranging from anxiety to depression. Significant levels of psychological distress and other mental health-related disorders have been identified among college students all around the world. According to a recent survey, 44.59 percent of university students in Bangladesh suffer from severe anxiety, while 48.41 percent suffer from moderate anxiety (Dhar *et al.*, 2020). Zayas *et al.* (2021) reported that students' psychological distress is also influenced by a variety of other factors, such as their academic future, task overload, interpersonal conflicts, and restrictions on pleasurable forms of social contact. Furthermore, for the university population, the rate of suicide ideas and thoughts has risen to 17.8% (Martínez-Líbano and Cabrera 2021). Baena-Extremera *et al.* (2021) revealed that fear, tension, anxiety, and depression symptoms have a complicated link, and this scenario may prompt young people to seek professional care. Hersi *et al.* (2017) found that students who have a higher level of emotional anguish are more likely to

have negative effects such as reduced cognitive functioning, learning impairments, poor academic performance, and substance dependence. In Tanzania, mental health issues such as mental discomfort are not adequately recorded. Other studies have found significant rates of mental discomfort among undergraduate students at medical colleges, which may also be true among Tanzanian students (Punita *et al.*, 2016). In Asian and Sub-Saharan African countries, higher rates of mental discomfort among university students have also been documented (Oswalt and Riddock 2007). Kumari (2017) revealed that the students in general are under high level of academic stress. On a number of dimensions they are not matching the desires and needs of adolescents resulting in distress among them. Ruhela and Basheer (2020) highlighted that orientation to Social Networking Analytics increases the anxiety and distress in youth. Professional students are exposed to stress irrespective of the professional courses under study with the female proportion being higher. The most reported stressor in that study was academic factors followed by socio-psychological factors and then nutritional/ health

related factors (Femi Francis *et al.*, 2023). Agriculture is one of the professional degree which requires a lot of credit hours need to be completed. The psychological distress among undergraduate students need to be addressed. Hence this study was carried out with following objectives.

- (a) Developing a scale for measuring psychological distress among UG Agriculture students
- (b) Measuring psychological distress among UG Agricultural students
- (c) Suggestions to overcome psychological stress among UG Agriculture students

METHODOLOGY

Ex-post facto research design will be adopted in this study. Tamil Nadu Agricultural University (TNAU) will be purposively selected for this study. Undergraduate students pursuing B.Sc. (Hons) Agriculture will be selected as the respondents for this study. Based on the highest number of students enrolled, two colleges were selected viz., Agricultural College and Research Institute, Madurai and Agricultural College and Research Institute, Madurai. Among the list of students, 150 respondents were selected through proportionate random sampling method ensuring the equal and independent chance of being selected for measuring psychological distress.

A. Developing a scale for measuring psychological distress among UG Agriculture students

For measuring psychological distress among Undergraduate Agriculture students, 5 point continuum likert scale was developed (Edwards, 1957).

(i) Universal statement of concurrence. Initially 50 statements which are relevant to the psychological distress among UG Agriculture students will be collected for this study. After consultation with experts, 35 statements are finalized for the development of scale. Each statement has five response category viz., strongly agree, Agree, Undecided, Disagree and Strongly disagree. For positive statement the scoring pattern followed was 5, 4, 3, 2 and 1. For negative statement the scoring pattern followed was 1, 2, 3, 4 and 5.

(ii) Selection of respondents. The selected statements were sent to 60 non sample respondents who all are not included for measurement of psychological distress among Undergraduate Agriculture students through Google forms and the response was collected.

(iii) Scoring for respondents. The total score of each respondent is obtained by adding his scores that they received for separate statements was calculated. Then the total scores of respondents are arranged in array from lowest to highest or highest to lowest. Two extreme groups i.e. 25 per cent top and 25 per cent bottom were selected to represent most and least psychological distress.

(iv) Item analysis. Item analysis for this scale was done through 't' test. In this method, the frequency distribution of scores based upon the responses to all statements are considered. 25 per cent of the students with the highest total scores and the lowest total scores

each are taken and these two groups are assumed to be criteria groups.

Then, the t value is obtained by the following formula,

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sum(X_H - \bar{X}_H)^2 + \sum(X_L - \bar{X}_L)^2}{n(n-1)}}$$

$$\sum(X_H - \bar{X}_H)^2 = \sum X_H^2 - \frac{\sum(X_H)^2}{n}$$

$$\sum(X_L - \bar{X}_L)^2 = \sum X_L^2 - \frac{\sum(X_L)^2}{n}$$

where,

X_H = the mean score on a given statement for the high group

X_L = the mean score on the same statement for the low group

n_H = the number of subjects in the high group

n_L = the number of subjects in the low group

The value of 't' is a measure of the extent to which a given statement differentiates between the high and low groups.

(v) Selection of statements. For selection of statements, the magnitude of the difference between the means of high and low group on the individual statements was considered. The statements having t – value having more than 1.75 was considered for measuring psychological distress among Undergraduate Agriculture students which was shown in Table 1.

B. Measuring psychological distress among UG Agriculture students

The selected statements are sent to 150 undergraduate students pursuing B.Sc. (Hons) Agriculture in those two colleges. After getting response from the students, they are classified in to low, medium and high categories regarding academic, personal and social stress based on cumulative frequency method.

C. Suggestions to overcome psychological distress among UG Agriculture students

Suggestions from the students will be received for coping psychological distress and the suggestions are tabulated using percentage analysis method.

RESULT AND DISCUSSION

A. Developing a scale for measuring psychological distress among UG Agriculture students

Thirty five statements were sent to 60 non sample respondents. After getting the response, the scores of respondents are arranged from high to low. The statements are undergone item analysis for calculating t value. Out of 35 statements, 20 statements are having t – value more than 1.75. First fifteen statements having highest t – value was selected for measuring psychological distress among UG Agriculture students which was shown in Table 1.

(i) Standardization of developed scale:

Reliability: To determine the reliability of developed scale, these statements are sent to other 60 students to find out Cronsbach's alpha reliability of internal

consistency. Reliability index was found to be 0.712. This revealed that the scale was found to be valid.

Validity: Content validity was employed to determine the validity of developed scale. It was first tested by

submitting the statements to a panel of experts who assessed the scale's representation of the universe, as well as its relevance and appropriateness. This was found that the developed scale was valid.

Table 1: Calculated t – value of all statements.

Sr. No.	Statements	t – value	Selected/Rejected
1.	I feel fatigue while attending consecutive practical & theory classes without break*	3.125	Selected
2.	I used to forget all the important things usually*	2.623	Rejected
3.	I will get up early and feel fresh during morning practical class	2.801	Selected
4.	I won't be confused in doing my academic activities	3.024	Selected
5.	Attending the practical class without field visit makes boredom*	-0.451	Rejected
6.	I will be able to face and resolve my own conflicts	2.652	Rejected
7.	I will complete my record work enthusiastically before exams	0.442	Rejected
8.	At most, I prefer to do nothing and just think*	3.303	Selected
9.	I usually skip breakfast daily and feel drowsy*	2.452	Rejected
10.	My emotions are unpredictable to me itself*	2.235	Rejected
11.	I never feel sad for the marks scored in the examination	3.461	Selected
12.	I won't be judgmental towards anyone	2.295	Rejected
13.	I feel humiliated when I can't answer the question asked by teacher in class*	4.848	Selected
14.	I am having long lasting emotional issues regarding some people*	2.664	Rejected
15.	I am having a happy and healthy life in college environment	3.267	Selected
16.	I have not done any physical self harm as a result of distress	1.612	Rejected
17.	I will be worried a lot if I can't cover the syllabus before examination*	3.532	Selected
18.	I have not involved in any kind of aggressive behavior like fighting	-0.379	Rejected
19.	I am able to take things in a lighter manner either it be social or personal	1.682	Rejected
20.	I feel frustrated while I was bullied in the college*	2.604	Rejected
21.	I feel nervous while presenting my term paper*	2.812	Selected
22.	I have apprehension about getting a job after completing my degree*	0.730	Rejected
23.	I feel confident of attending viva voce during practical examination	3.214	Selected
24.	I will hide my emotions and won't show it usually	1.284	Rejected
25.	I will self doubt about myself during semester examination*	2.326	Rejected
26.	I won't do anything as a result of peer pressure	0.484	Rejected
27.	I feel comfortable while interacting with teachers	0.806	Rejected
28.	I fear about my family financial situation while studying*	2.423	Rejected
29.	I sweat a lot while writing examination*	3.242	Selected
30.	I will be scared a lot to attend the semester examination*	4.152	Selected
31.	I will participate in all the sports and cultural events that takes place in the college*	2.462	Rejected
32.	I will put forth my point of view clearly in a large group discussion	3.183	Selected
33.	I feel shy to perform in a cultural event in college*	4.712	Selected
34.	I will be very talkative with friends but remain silent in public environment*	3.902	Selected
35.	During field visits, I was able to interact with farmers easily and get to know about their problems	0.152	Rejected

* Negative statements to the concerned title

B. Measuring psychological distress among UG Agriculture students

The selected statements are sent to 150 undergraduate students pursuing B.Sc. (Hons) Agriculture in those two colleges. The developed scale comprises three types of distress viz., academic distress, personal distress and social distress.

For academic distress, it was found that 33 per cent of students have a low level of academic stress, 31 per cent of students are having a medium level of academic distress and 36 per cent of students are having a high level of academic distress which was shown in the Table 2. This was due to overburden of courses in a single semester, examination pressure, lack of confidence in themselves etc.,

In case of personal distress, 39 per cent of students are having a low level of distress, 20 per cent of students are having a medium level of personal distress and 41 per cent of students are having a high level of personal distress which was shown in Table 3. This was due to the intra personal factors such as perception, anxiety, personal feeling etc.

Table 2: Academic distress among UG Agriculture students.

Levels	Number	Percent
Low	50	33.00
Medium	46	31.00
High	54	36.00

Table 3: Personal distress among UG students.

Levels	Number	Percent
Low	59	39.00
Medium	30	20.00
High	61	41.00

It was also found that 41 per cent of students are having a low level of social distress, 24 per cent of students are having a medium level of social distress and 35 per cent of students are having a high level of social distress which was shown in Table 4. This was due to inter personal relationship of students, fear towards the society, peer group pressure etc.

Table 4: Social distress among UG students.

Levels	Number	Percent
Low	61	41.00
Medium	36	24.00
High	53	35.00

(i) Suggestions to overcome psychological distress among UG Agriculture students:

To overcome Academic distress: Academic system in Agricultural education is rigid. It need to be flexible. Ward counseling should be strengthened, so that students may open up their academic related stress.

To overcome Personal distress: Personal stress may be resulted due to intra personal problems. Lack of confidence in themselves also results in personal stress. Capacity building of students should be carried out to improve the confidence level of students.

To overcome Social distress: Social distress may be resulted due to inter-personal reasons. To overcome this kind of stress, students were encouraged to participate in sports, arts and cultural activities. This will improve their interpersonal relationship with other students.

Suggestions from the students: Suggestions will be received for coping psychological distress and the suggestions are tabulated. The students suggested that course overburden in the semester, timely declaration of results, study leave for semester examination, prioritizing mental health of students, recreational/refreshment activities, creating healthy classroom environment, capacity building for improving student's confidence and encouraging students to participate in sports and cultural activities will reduce the psychological distress among UG students which was shown in Table 4.

Table 5: Suggestions to overcome psychological distress among UG Agriculture students.

Sr. No	Suggestions to overcome psychological distress	Number	Percent	Rank
1.	Reduce the overburden of courses and credits in a single semester	98	81.70	I
2.	Timely declaration of result after examination	93	77.50	II
3.	Providing study leave during semester examination	82	68.30	III
4.	Mental health of students need to be concerned	79	65.80	IV
5.	Recreational/Refreshment activities need to be conducted	76	63.30	V
6.	Ward counseling are need to be emphasized empathically	71	59.20	VI
7.	Creating a healthy classroom environment where student can open up	68	56.70	VII
8.	Feeling free to interact with friends	65	54.20	VIII
9.	Capacity building of students to improve their confidence level	53	44.20	IX
10.	Encouraging students to participate in sports and cultural activities	49	40.80	X

CONCLUSIONS

A five point continuum likert scale was developed for measuring psychological distress among UG Agriculture students in Tamil Nadu. Initially 50 statements considering three types of psychological distress viz., academic, personal and social stress was collected. After consulting with experts, it was reduced to 35 statements and sent to 60 non sample respondents. Item analysis was carried out and t – value for all the statements were computed. The first fifteen statements having t – value more than 1.75 was used to measure psychological distress. Cronbach's alpha – Reliability of internal consistency was calculated as 0.712. The developed scale was found to be valid and reliable. The scale was developed and sent to 150 Undergraduates students pursuing B.Sc. (Hons) Agriculture at Tamil Nadu Agricultural University (TNAU). The results revealed that more than one third of students (36 per cent) are having a high level of academic distress. Nearly two fifth of the respondents (41 per cent) of students are having high level of personal distress and low level of social distress. Suggestions were collected from the respondents and tabulated. Ward counseling need to be strengthen to overcome academic stress. Capacity building of students should be carried out to improve the confidence level of students to overcome personal distress. To overcome social stress, students were encouraged to participate in sports, arts and cultural activities. This paper indicates that Undergraduate students are facing stress in academic, personal and social activities. This need to be concerned and change need to be done in curriculum level for the well being of students.

REFERENCES

- Baena-Extremiera, A., del Mar Ortiz-Camacho, M., Marfil-Sánchez, A. M. & Granero-Gallegos, A. (2021). Improvement of attention and stress levels in students through a mindfulness intervention program. *Revista de Psicodidáctica (English ed.)*, 26(2), 132-142.
- Dhar, B. K., Ayittey, F. K. & Sarkar, S. M. (2020). Impact of COVID-19 on psychology among the university students. *Global Challenges*, 4(11), 2000038.
- Femi Francis, Alimudeen S., Namratha Valsalan, Ditty Maria Dominic and Aswathy Chandrakumar (2023). Stress and its Sources among Professional Students of Kerala. *Biological Forum – An International Journal*, 15(6), 715-719.
- Edwards, A. L. (1957). Techniques of attitude scale construction. Appleton-century crofts, New York. pp: 172-198.
- Hersi, L., Tesfay, K., Gesesew, H., Krah, W., Ereg, D. & Tesfaye, M. (2017). Mental distress and associated factors among undergraduate students at the University of Hargeisa, Somaliland: a cross-sectional study. *International Journal of Mental Health Systems*, 11(1), 1-8.

- Kumari, M. (2017). A Study of Academic Achievement of Senior Secondary School Students in Relation to their Anxiety and School Environment. *International Journal on Arts, Management and Humanities*, 7(1), 4-9.
- Martínez-Líbano, J. & Cabrera, M. M. Y. (2021). Suicidal ideation and suicidal thoughts in university students during the COVID-19 pandemic: A systematic review. *Rev. Argent. Clin. Psicol*, 30, 390-405.
- Oswalt, S. B. & Riddock, C. C. (2007). What to do about being overwhelmed: Graduate students, stress and university services. *College Student Affairs Journal*, 27(1), 24-44.
- Punita, P., Saranya, K., & Kumar, S. S. (2016). Gender difference in heart rate variability in medical students and association with the level of stress. *National Journal of Physiology, Pharmacy and Pharmacology*, 6(5), 431-437.
- Ruhela, Sonakshi and Bashir, Raesa (2020). Impact of Social Networking Analytics on Anxiety and Distress amongst Youth. *International Journal on Emerging Technologies*, 11(1), 392–395.
- Zayas-Fundora, E., Padrón-González, M. M., Monet-Álvarez, D. E. & Mejjides-Mejias, C. (2021). Stress level during the COVID-19 pandemic in Cuban medical sciences students. *Revista Colombiana de Psiquiatría*, 50(3), 13-14.

How to cite this article: Mohammed Ghouse L., Karthikeyan C. and Padma S.R. (2025). Psychological Distress among Undergraduate Agriculture Students in Tamil Nadu. *International Journal of Theoretical & Applied Sciences*, 17(1): 27–31.