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Assessing the Strategies for Coping with Academic Stress among the Undergraduate Students of TNAU

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Aims: College students experience stress from many different sources that ultimately have an impact on their academics. To cope with the academic stress, it is needed for them to undertake appropriate coping strategies. This study aimed to identify the extent of various strategies used among the students to cope with the academic stress and to compare coping strategies used by the male and female students.

Study Design: Ex post facto research design was used in this study.

Place and Duration of Study: Study area: Four Constituent colleges of Tamil Nadu Agricultural University viz., Coimbatore, Madurai, Trichy and Killikulam. Sample: Third-year B.Sc. (Hons.) Agriculture Undergraduate degree programme students.

Methodology: Sample: 180 students (90 male and 90 female) from the four colleges were chosen based on employing proportionate random sampling. The coping strategies were classified into five

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categories namely relaxation, social support, personal, diet and exercise and psychological strategies. The most preferred coping strategies were identified by computing mean scores and Mann Whitney U - test was employed to find the gender difference in terms of major stress coping strategies.

Results: The findings from the study showed that listening to music, seeking out friends for conversation, consulting with parents and relatives, using past experience to handle problems, getting enough sleep, look at the bright side of the things with mean scores of 2.48, 2.3, 2.29, 2.37, 1.99 and 2.35 respectively. There also existed a significant difference between male and female undergraduate students concerning relaxation and personal strategies at a 1% significance level.

Conclusion: It could be concluded that the students should regularly be encouraged and motivated to get involved and take up better-suited and also scientifically approved coping strategies to handle and get relieved from their academic stress.

Keywords: Stress; academic stress; undergraduate students; coping strategies.

1. INTRODUCTION

Modern life moves at a faster pace than ever before. We are frequently overwhelmed by the huge list of things to do each day. Stress has become a part of our daily life, and it affects everyone. A study by Anspaugh, Hamrick and Rosato [1] found that stress takes different forms and affects different types of people at different ages and walks of life. It's a unique experience. What may appear to be a straightforward encounter to one person may be a source of worry for another. Stress has become an important topic in academic circles. Students today are facing new challenges in education, calling for greater effort from students. Young students, 15 to 22 years of age, are often more vulnerable to academic stress as they experience a transition in life [2]. The term "stress" refers to an individual's internal state as a result of an infuriating or unpleasant situation. According to Selye [3], stress is caused by physiological, psychological, and environmental demands.

Academic stress is mental distress concerning some anticipated frustration associated with academic failure or even unawareness of the possibility of such failure [4]. Over the last few years, academic pressure has intensified; students must undergo tests, coursework, and a variety of other activities. Expectations are also raised for students to be all-rounders. Students' move from high school to university or college is a significant milestone in their lives. The stress experienced by male and female students is also different under various circumstances. Learning to manage stress may help students cope with everyday social and academic pressures, and have a better college experience. Having to cope with stress is critical for students to attempt to manage the waves and sail through. Coiro, Bettis

and Compas [5] explained that successful coping involves an accurate understanding of the level of control over the stressor as well as selecting an appropriate coping mechanism to handle the stressor. College students tend to utilize "healthy" coping mechanisms like listening to music, socializing with friends or family, sitting alone in a quiet place, and exercising [6]. A Study conducted by Ermasova. N, Ermasova. E and Rekhter [7], found that female students are more likely to experience stress than male students. male students are more likely than female students to use exercise to alleviate stress, but they are also more likely to smoke and agree that using a psychologist leads to a perception of weakness. female students are more likely than male students to agree that support services were not a priority on campus, and male students are more likely than female students to prefer talking to friends over talking to a psychologist.

Agriculture is the backbone of our nation and is important to look after the stress faced by the upcoming undergraduate students studying agriculture courses since they are believed to improve the economy and well-being of society. The present study was conducted to achieve the following objectives: to identify the extent of various strategies used among the students to cope with academic stress and to compare coping strategies used by male and female students to overcome academic stress.

2. METHODOLOGY

Ex post facto research design was used for this study. The study was purposively selected and conducted in the Constituent colleges of Tamil Nadu Agricultural University (TNAU) and among the third-year Agricultural students. The four campuses viz., Agricultural College & Research

Institute Coimbatore, Agricultural College & Research Institute Madurai, Agricultural College and Research Institute Killikulam and Anbil Dharmalingam Agricultural College and Research Institute Trichy offering B.Sc. (Hons.) Agriculture degree programme were taken. The third-year students (2019 – 2023 batch) were chosen for the study because they are in the process of deciding and finalizing their future after completing their degree programme. It was also assumed that they would be able to better analyze the stress they had experienced in their academics in their previous semesters and provide a better coping activity. Among the 530 students who had registered in the B.Sc. (Hons.) Agriculture degree programme at TNAU's selected four Constituent colleges, 180 students which are almost one-third of the population were decided to be selected and fixed as respondents. Boys and girls were taken in equal numbers (90 boys and 90 girls) to ensure equality by using the proportionate random sampling method.

A well-structured and pre-tested interview schedule was used to collect data. The scale developed and followed by Anjali Negi [8] for managing stress was taken with slight modification for the study. The responses of the students were scored on a three-point scale: Always, Sometimes and Never. The extent of stress coping strategies was determined by computing mean scores for each item connected to the relevant outcomes, which are summarized below. Mann-Whitney U test was used to identify the gender-based difference between male and female students regarding the coping strategies they undertake to overcome the academic stress since the test is a non – parametric alternative to t-test to compare means that comes from the same population.

3. RESULTS AND DISCUSSION

3.1 Extent of Stress Coping Strategies

Coping is seen as a stabilizing factor that may support an individual in psychosocial adaptation during stressful situations [9]. To obtain the results based on the objective, the various stress coping strategies of students for handling stress was reported in terms of the five categories namely: relaxation strategies, social support strategies, personal strategies, diet and exercise strategies and psychological strategies.

3.1.1 Relaxation strategies

Relaxation strategies refer to the methods or activities that students use to relieve themselves from stressful situations. A total of 11 items were considered under this strategy.

From the data in Table 1, it could be understood that the most preferred relaxation technique among Undergraduate students was “listening to music” with a mean score of 2.48, followed by “taking a nap” and “going for a walk or drive” with mean scores of 2.23 and 2.13, respectively. The relaxation strategies “do yoga or meditation” and “write the problem in a diary” were the least used with mean scores of 1.61 and 1.52 respectively.

It was observed from the findings of the study that the obtained results were in congruence with the result of the study conducted by Anjali Negi and Knawaljit Kaur [10] where students preferred listening to music as the major coping activity to release their stress and doing yoga was the least preferred one.

3.1.2 Social support strategies

Social support strategies are the social activities that students engage in to seek assistance during stress. A total of 7 items were considered under this strategy.

From the data in Table 2, it could be interpreted that the most preferred social support strategies among students were “seek out friends for conversation” and “consult with parents and relatives” with mean scores of 2.3 and 2.29 respectively. “Getting professional counseling” was the least used social support strategy used by the students with a mean score of 1.51.

Thus, seeking out friends, parents and relatives for conversation and consultation were found to be major social support strategies preferred among the students. The results obtained were also found to be in congruence with the findings from the study conducted by Chew et al. [11].

3.1.3 Personal strategies

Those activities through which students engage themselves on a personal level to cope with stressful situations are personal strategies that are adopted to overcome academic stress. A total of 16 items were considered under this strategy.

Table 1. Distribution of respondents according to the usage of Relaxation strategies to overcome Academic stress (n=180)

S. No	Relaxation Strategies	Extent of relaxation strategies				S.D
		Always f (%)	Sometimes f (%)	Never f (%)	Mean score	
1	Listen to music	93 (51.7)	82 (45.6)	5 (2.8)	2.48	0.55
2	Watch favorite TV serials	30 (16.7)	94 (52.2)	56 (31.1)	1.85	0.67
3	Go out for movies	22 (12.2)	93 (51.7)	65 (36.1)	1.76	0.65
4	Take a nap	62 (34.4)	99 (55)	19 (10.6)	2.23	0.62
5	Read favorite novels and books	31 (17.2)	94 (52.2)	55 (30.6)	1.86	0.68
6	Go for a walk or drive	36 (20)	84 (46.7)	60 (33.3)	2.13	0.72
7	Travel on holidays	40 (22.2)	92 (51.1)	48 (26.7)	1.95	0.69
8	Write a problem on a dairy	18 (10)	59 (32.8)	103 (57.2)	1.52	0.67
9	Spend time with loved ones	58 (32.2)	77 (42.8)	45 (25)	2.07	0.75
10	Join various recreational activities	22 (12.2)	99 (55)	59 (32.8)	1.79	0.64
11	Do yoga / Meditation	13 (7.2)	85 (47.2)	82 (45.6)	1.61	0.61

Table 2. Distribution of respondents according to the usage of social support strategies to overcome Academic stress (n=180)

S. No	Social support Strategies	The extent of Social support strategies				S.D
		Always f (%)	Sometimes f (%)	Never f (%)	Mean score	
1	Seek out friends for conversation	68 (37.6)	98 (54.1)	14 (7.7)	2.30	0.60
2	Go out shopping with friends	47 (26)	92 (50.8)	41 (22.7)	2.03	0.70
3	Consult with parents and relatives	82 (45.3)	69 (38.1)	29 (16)	2.29	0.73
4	Join in supportive groups	28 (15.5)	75 (41.4)	77 (42.5)	1.72	0.71
5	Get professional counseling	15 (8.3)	63 (34.8)	102 (56.4)	1.51	0.64
6	Online chatting	42 (23.2)	80 (44.2)	75 (41.4)	1.93	0.72
7	Visit relatives	25 (13.8)	80(44.2)	75 (41.4)	1.72	0.69

The data represented in the Table 3 showed that the most preferred personal strategies among students were "Use past experience to handle problems" with a mean score of 2.37 and is followed by "Making a plan of action" and "Sit alone in peaceful outdoors" with mean scores 2.33 each. It was also found that the least coping activities preferred by the students to overcome their stress were "Joining in religious activities and going on a pilgrimage" both with a mean score of 1.74 and "writing poetry" with a mean score of 1.59.

The findings are validated by the study conducted by Sami et al. [12] in designing a plan of action for coping activity.

3.1.4 Diet and Exercise strategies

Diet and exercise strategies are referred to as those numerous activities that students engage in to control their nutrition and body. A total of 5 items were considered under this strategy.

Data from Table 4 show that the major strategy that was undertaken by the students to overcome their stress was "Getting enough sleep" with a mean score of 1.99 and was followed by "taking a balanced diet" with a mean score of 1.94. The least preferred coping activity was "Consuming food more than usual" with a mean score of 1.70.

The results were found in accordance with the findings from the study of Anjali Negi and Knawaljit Kaur [10].

3.1.5 Psychological strategies

From the 11 items selected under this strategy for the study, it is found from the Table 5 that the most preferred psychological strategies by the students were "look at the bright side of the things" with a mean score of 2.35 and is followed by "accept things that are out of control or wait for the time to change" and "use the experience

of other people to deal with problems” with the mean score of 2.25 and 2.24 respectively. It was also found that “yelling at friends and people”, “have plants in the room” and “blame others” were the least preferred strategies with the mean scores of 1.87, 1.75, 1.47 respectively.

This shows that the students use positive forms of strategies to cope with the academic stress which was found similar to the results of the study performed by Sreeramareddy et al. [13].

As a result, from the Table 6, it is possible to conclude that the most preferred coping strategy by the students among the five different strategies taken for the study, has personal strategies, which ranked first and is followed by relaxation strategies, based on computing average mean score. Diet and exercise methods, on the other hand, were the least preferred coping strategies among students. This clearly showed that students indulge themselves highly in stress-relieving activities to cope with the academic stress experienced by them.

Table 3. Distribution of respondents according to the usage of personal strategies to overcome Academic stress (n=180)

S. No	Personal Strategies	The extent of Personal strategies				S.D
		Always f (%)	Sometimes f (%)	Never f (%)	Mean score	
1	Reset priorities and eliminate time-wasting activities	62 (34.4)	106 (58.9)	12 (6.7)	2.27	0.57
2	Work on a hobby	48 (26.7)	106 (58.9)	26 (14.4)	2.12	0.63
3	Sit alone in peaceful outdoors	79 (43.9)	82 (45.6)	19 (10.6)	2.33	0.66
4	Writing poetry	19 (10.6)	69 (38.3)	92 (51.1)	1.59	0.67
5	Organizing desk or work area	48 (26.7)	84 (46.7)	48 (26.7)	2.00	0.73
6	Reading religious books	27 (15)	54 (30)	99 (55)	1.60	0.74
7	Joining in religious activities	31 (17.2)	71 (39.4)	78 (43.3)	1.74	0.74
8	Go to pilgrimage	29 (16.1)	75 (41.7)	76 (42.2)	1.74	0.71
9	Pray daily	50 (27.8)	91 (50.6)	39 (21.7)	2.06	0.70
10	Try to anticipate the worst possible outcomes	36 (20)	107 (59.4)	37 (20.6)	1.99	0.63
11	Reframe problems	37 (20.6)	106 (58.9)	37 (20.6)	2.00	0.64
12	Set realistic goals	64 (35.6)	103 (57.2)	13 (7.2)	2.28	0.59
13	Make a plan of action	75 (41.7)	91 (50.6)	14 (7.8)	2.33	0.61
14	Try to come up with different possible solutions	61 (33.9)	109 (60.6)	10 (5.6)	2.28	0.56
15	Use past experience to handle problems	82 (45.6)	83 (46.1)	15 (8.3)	2.37	0.63
16	Fixing study hours	45 (25)	113 (62.8)	22 (12.2)	2.12	0.59

Table 4. Distribution of respondents according to the usage of Diet and Exercise strategies to overcome Academic stress (n=180)

S. No	Diet and Exercise Strategies	The extent of Diet and Exercise strategies				S.D
		Always f (%)	Sometimes f (%)	Never f (%)	Mean score	
1	Take balanced diet	35 (19.4)	100 (55.6)	45 (25)	1.94	0.66
2	Practice breathing exercise	24 (13.3)	84 (46.7)	72 (40)	1.73	0.68
3	Get enough sleep	42 (23.3)	95 (52.8)	43 (23.9)	1.99	0.69
4	Drink a lot of caffeinated beverages like tea and coffee	42 (23.3)	81 (45)	57 (31.7)	1.91	0.73
5	Consuming food more than usual	23 (12.8)	81 (45)	76 (42.2)	1.70	0.68

Table 5. Distribution of respondents according to the usage of psychological strategies to overcome Academic stress (n=180)

S. No	Psychological Strategies	Extent of Psychological strategies			Mean score	S.D
		Always f (%)	Sometimes f (%)	Never f (%)		
1	Look on the bright side of the things	77 (42.8)	89 (49.4)	14 (7.8)	2.35	0.62
2	Change the outlook of the problem	48 (26.7)	118 (65.6)	14 (7.8)	2.18	0.55
3	Accept things that are out of control/ Wait for the time to change	67 (37.2)	92 (51.1)	21 (11.7)	2.25	0.65
4	Use the experience of other people to deal with problems	61 (33.9)	102 (56.7)	17 (9.4)	2.24	0.61
5	Daydream	50 (27.8)	90 (50)	40 (22.2)	2.05	0.70
6	Have plants in the room	30 (16.7)	76 (42.2)	74 (41.1)	1.75	0.72
7	Being assertive	31 (17.2)	118 (65.6)	31 (17.2)	2.00	0.58
8	Yell at friends and people	28 (15.6)	101 (56.1)	51 (28.3)	1.87	0.65
9	Procrastinate work and duties	25 (13.9)	112 (62.2)	43 (23.9)	1.90	0.60
10	Cry excessively	31 (17.2)	98 (54.4)	51 (28.3)	1.88	0.66
11	Blame others	13 (7.2)	59 (32.8)	108 (60)	1.47	0.62

Table 6. Ranking of coping strategies

S. No.	Coping strategies	Mean score (Avg)	S.D	Rank
1	Relaxation strategies	1.94	0.05	II
2	Social support strategies	1.93	0.05	III
3	Personal strategies	2.05	0.06	I
4	Diet and exercise strategies	1.85	0.03	V
5	Psychological strategies	1.90	0.05	IV

3.2 Comparison between Male and Female Students in Terms of Major Stress Coping Strategies

The computed data represented in the Table 7, revealed that at 1% level of significance (p -value = <0.01), both male and female students highly preferred to adopt the relaxation and personal strategies to overcome their stress. The Male

students with higher mean rank (107.5) tend to undertake more coping activities than female students with lower mean rank (73.85) to get out of their academic stress. Others like the social support strategy, diet and exercise strategy and the psychological strategy showed no significant difference between the male and female students.

Table 7. Comparison between Male and Female students in terms of major stress coping strategies (n=180)

S. No.	Coping strategies	Mean rank		Mann - Whitney U	P value
		Male	Female		
1	Relaxation strategies	123.05	57.95	1120.50	.000**
2	Social support strategies	88.76	92.24	3893.50	.65 ^{NS}
3	Personal strategies	104.01	76.99	2834.00	.000**
4	Diet and exercise strategies	95.10	85.90	3636.00	.23 ^{NS}
5	Psychological strategies	92.81	88.19	3842.50	.55 ^{NS}
	Overall coping strategies	107.15	73.85	2551.50	.000**

** : Significant at 0.01 (1%) level of probability

NS: Non-significant

4. CONCLUSION

Hence from the data collected it could be understood that, listening to music, taking a nap, going for a walk or driving as a relaxation strategy, consulting with parents and relatives as a social support strategy, using past experience to handle problems, making a plan of action, sitting alone in a peaceful environment as a personal strategy, getting enough sleep and eating a balanced diet is a diet and exercise strategy, and psychological strategies such as looking on the bright side, accepting the things that are out of control, and using past experience to handle the problems were found to be the most preferred coping activities among the undergraduate students. In terms of relaxation and personal strategies, it was discovered that there are significant differences in major stress coping strategies among undergraduate agriculture degree programme students based on their gender. The findings from the study showed that undergraduate students performing in agriculture degree programs were highly indulged in utilizing various stress-relieving activities to cope with the academic stress that needs to be handled by them throughout the completion of their degree.

It is necessary to motivate the students to adopt even the least preferred positive coping strategies for their betterment. The students could also be encouraged to participate in stress management courses consisting of Relaxation, Positive outlook towards work/responsibilities, Self-analysis through personality type test, Interpersonal skill development, Protection yoga cum meditation and time management [14].

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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