

# Assessment of Academic Stress and Adaptive Coping Strategy of Freshman Academicians

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## ABSTRACT

College students, especially freshmen are prone to stress due to the transitional nature of college life. In order to prevent severe stress which may lead to any psychological conflict among freshman students, effective stress management programs should be implemented. Hence, this study using the DEAL-based intervention was conducted to determine its effects on the freshman students' academic stress and coping strategies.

A quasi-experimental design was adopted using quantitative method and an intervention program on the 91 freshman students of Northern Samar. Academic stress and coping strategies were measured by Students Stress Inventory, and Brief Coping Orientation of Problem Experienced (Brief COPE). MANOVA was used to determine the significant difference between the pretest and posttest on academic stress and the coping strategies of the respondents. ANOVA repeated measures was used to determine the significance and the effect of the intervention across 5-time interval pretest and posttest assessments.

There are significant differences between the pretest and posttests results of participants on academic stress and adaptive coping strategy as a result of DEAL-based intervention program. DEAL-based intervention program had positive effects in lessening the academic stress of the students with severe academic stress. The positive effects of DEAL-based intervention on the adaptive coping strategies of the respondents with severe academic stress manifested only after two weeks from the intervention. The intervention had strengthen and enhanced the adaptive coping strategies of the respondents such as planning, positive reinterpretation, active coping and acceptance. DEAL-based intervention is very effective in lessening the academic stress of the students including the students with severe academic stress. The intervention has positive effects on the adaptive coping strategy of the respondents.

**KEYWORDS:** Academic stress, adaptive coping strategy, DEAL-based intervention

## INTRODUCTION

College students, especially freshmen are prone to stress due to the transitional nature of college life. They have to adjust to being away from their family for the first time. They maintain a higher academic performance, and adjust to a new social environment. The change in school curriculum by the implementation of the K to 12 program also added burden and caused stress among the students.

In order to prevent this severe stress which may lead to any psychological conflict among freshman students, effective stress management programs should be implemented and be part of the curriculum as mandated by the newly approved mental health law. Self-care strategies using a combination of stress management techniques could be learned by students as part of their curriculum. Being able to manage and control stress is a useful skill not only for life as a student, but also for life beyond university. A thorough understanding of what stress and depression mean and how to respond to these conditions could reduce the stigma attached to them. It will make the students aware and will lead them to come forward and seek medical treatment. Hence, this study using the DEAL based intervention was

conducted to determine the effect of this intervention on the freshman students' academic stress and coping strategies.

Most interventions require a substantial amount of time and resources, which makes them difficult for the schools to implement. This study adopted the DEAL model as stress management intervention because this entailed only a minimal amount of time and money. It did not require the researcher with rigorous training and manpower. Likewise, it was simple to implement and easily integrated in the academic schedule.

The DEAL model is a four (4) hour educational workshop which consists of four (4) components: Detection of stressors, evaluation of stressors, action towards stressors and learning from stressors through self-reflection. The four (4) guiding principles of the model are set to teach students to detect problems early and have a positive perception towards the problem; teach students to appraise problems positively and appropriately; teach them to cope with problems positively; and teach them to learn from problems for future self-improvement.

This study on 4-Time Intervals Post-Intervention Assessment of Academic Stress and Adaptive Coping Strategy of Freshmen Academicians generally aimed to evaluate how academic stress and coping strategies affected with the DEAL-based intervention. Specifically, it aimed to answer the following questions:

1. Are there significant differences between the pretest and posttest scores of participants, as a result of DEAL-based intervention program on the following measures:
  - 1.1. Academic stress
  - 1.2. Adaptive Coping strategies?
2. Does DEAL-based intervention program have significant effects on students with severe cases of academic stress?
3. Does DEAL-Based intervention program have significant effects on the adaptive coping strategies of students with severe cases of academic stress?

## Methods and Procedure

### Research Design

This is a quasi-experimental research conducted among selected freshman college students of the province of Northern Samar. This is an intervention study that examined the effects of the DEAL-based stress management intervention on freshman students' academic stress and coping strategies. The research was able to identify how freshman students' academic stress and coping strategies changed over time by comparing the data that were collected from a single group over 5- time point interval pretest and posttest intervention assessments.

### Subjects of the Study

The participants of this study were the 91 college freshman students in the province of Northern Samar enrolled during the school year of 2018-2019 from the clustered four (4) schools that were selected from among the eight (8) different tertiary schools in the province. A total of 754 freshman students from the chosen clustered schools participated the pretest, however, only 296 freshman students qualified the inclusion criteria on moderate to severe level of academic stress and practicing negative or dysfunctional coping strategies. All the students who qualified the inclusion criteria were invited to attend the orientation and the seminar workshop on stress management however, only 96 responded and consented to participate the intervention using the DEAL model. A total of 91 freshman students completed the 4-time post intervention assessments and were considered as the respondents of this study.

### Inclusion

The freshman students who got a moderate to severe level of stress, frequently practicing denial or avoidant coping strategies during the pretest were chosen as the participants and were invited to attend the stress management intervention program using the DEAL Model.

### Exclusion

Those students who had a normal to mild stress were excluded from this study. Those who refused to participate and did not give a written consent were also excluded as participants. The students who missed any post-intervention assessments were also excluded from the study.

### Sampling Technique

To achieve the purpose of this study, cluster sampling was used. The schools were clustered into state university, private schools, computer schools, and agri-tech vocational

schools. Primary data were collected from one school representing each and every cluster. Hence, the data were collected from one state-university which is the University of Eastern Philippines (UEP), main campus, one from private schools which includes the Eastern Visayas Central Colleges (EVCC), ASIA and Global College representing the computer schools, and San Isidro Balicutatro School of Agriculture and Trade representing the agro-tech vocational schools.

Due to the small number of students from the private schools, all the 354 freshman students from the clustered schools of private, computer and agri-tech vocational schools were chosen as participants in the pretest. The researcher, in consideration of the large number of freshman students of UEP (3,678) allocated 400 students to represent the state university with 50 students representing every college or department. Thus, a total of 754 freshman students were subjected to pretest as baseline measurement of this study.

### Measures

The participants answered the questionnaires comprised of two (2) well-validated and reliable measurement instruments. The Student Stress Inventory (SSI) is an instrument developed by Mohammad Aziz Shah Bin et al. (2015). SSI contains 40 negative items to measure 4 subscales (10 items for each subscale) which are sub scale 1: Physical (10 items), sub scale 2: Interpersonal relationship (10 items), sub scale 3: Academic (10 items) and subscale 4: Environmental factor (10 items). As for scoring, the SSI has an ordinal scale of the 'Never', 'Somewhat frequent', 'Frequent' and 'Always'. The value marks given for each choices are 1 for 'Never', 2 for 'Somewhat Frequent', 3 for 'Frequent' and 4 for 'Always'. The administration process approximately took 15 to 20 minutes only. SSI questionnaire had good content validity with an overall score of 0.805 (80.5%). The validity of the SSI subscales for a) Physical was 0.807 (80.7%); b) Interpersonal Relationship was 0.789 (78.9%); c) Academic was 0.822 (82.2%) and d) Environmental was 0.802 (80.2%). SSI had a high overall reliability coefficient of .857.

The Brief COPE was developed by Carver, C. S. (1997). It consists of 30 items describing coping methods and are rated under four (4) categories of responses (I haven't been doing this at all, I've been doing this a little bit, I've been doing this a medium amount, I've been doing this a lot) to indicate how frequent they have been doing what the items describe. There are three (3) coping strategies such as negative coping strategy, adaptive coping and accommodative coping strategies in the 15 domains. The reliability coefficients (Cronbach's Alpha) of the coping domains have ranged from 0.56 to 0.89.

### Stress Management Intervention Based on the DEAL Model

A stress management intervention was conducted based on the DEAL model developed by Muhamad Saiful Bahri Yusoff. The goal of the intervention was to help students in handling their stresses. The first part of the intervention was devoted to a general discussion on the importance of managing stress, the concepts of stress, the relationships between stress, stressors and coping strategies, and the impacts of unfavorable stress on individuals. The second part was allocated for hands-on where the participants were able to identify their individual stress level, stressors and coping strategies through simple psychometric assessments and the results were discussed in detail as well as the general overview of the ways of handling stressful situations. The

third part was allotted for group discussion on a scenario that was shown in the form of video clip. The session consolidated students' understanding on the previous inputs. The last part of the workshop was devoted to feedback and the students shared the experiences they have learned from the intervention and things to be improved in the future as a result of attending the intervention. The total time of the intervention was four (4) hours.

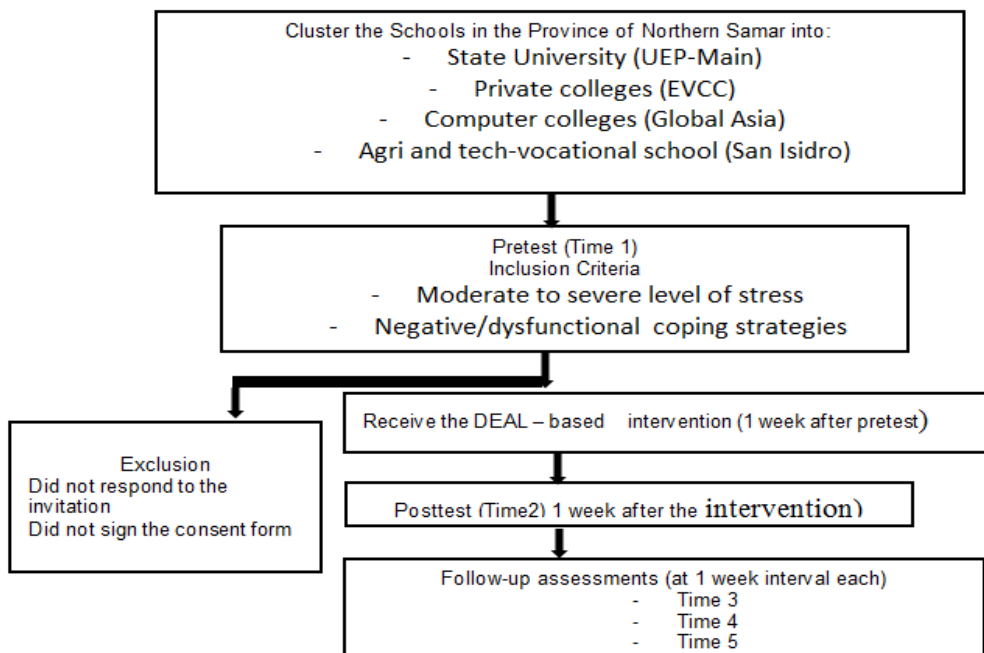
**Data Analysis**

Descriptive statistics was applied to calculate mean and standard deviation. MANOVA was used to determine the significance between the pretest and posttest on academic stress and the three coping strategies of the respondents. ANOVA repeated measures was used to determine the significance and the effect of the intervention across 5-time interval pretest and posttest assessments.

**Procedure and Ethical Considerations**

Data were collected from first week of November to third week of December 2018 after obtaining approval from the Dean of Student Affairs, the UEP President, School Administrators and the Ethics committee. The researcher

clustered first the school and then conducted the pretest to all the 354 freshman students from the clustered schools of private, computer and agri-tech vocational schools and the 400 freshman students from UEP. Thus, a total of 754 students were included in the pretest. Among the students who participated the pretest only 296 qualified the inclusion criteria. The selected subjects based on the inclusion criteria were then invited to attend a 3-hour briefing session on the study protocol and for the signing of an informed consent however, only 96 students responded and consented to attend the seminar workshop. After ensuring that each participant met the study inclusion criteria, the researcher personally provided them with the information about study aims, design, procedures, rights as participants, anticipated benefits, and possible adverse effects of participation. The participants were also informed that they were free to withdraw their consent anytime. The researcher then conducted a stress management workshop. The participants underwent a 4-hour stress management intervention using the DEAL Model. The posttest assessments were conducted at one (1) week interval for four (4) consecutive weeks.



**Figure 1**

A methodological framework showing the flow of the study on the effects of the DEAL-based intervention on freshman students' academic stress and coping strategies

**Results and Discussions**

MANOVA revealed that there are significant differences between the pretest and posttest scores of participants on academic stress and adaptive coping strategies as a result of DEAL-based intervention program. The academic stress and adaptive coping strategies had lowered down after the intervention.

**Table 1 Comparison of the Respondents' Pretest and Post-Intervention Tests according to Academic Stress and Adaptive Coping Strategy**

MANOVA PRETEST vs. POSTTEST (N = 91)

Criterion	Test Statistic	F	DF		P
			Num	Denom	
Wilks'	0.35977	78.744	4	177	0.000***
Lawley-Hotelling	1.77954	78.744	4	177	0.000***
Pillai's	0.64023	78.744	4	177	0.000***
Roy's	1.77954				

\*\*\*p<.001

DV = Academic Stress, Coping Strategies  
 IV = DEAL-Based Intervention Program  
 Measures = Pre-Test vs. Post-Test

Figure 2 shows that the academic stress of the students had lowered down after being subjected to the DEAL-based intervention.

**Figure 2 A Graph Showing the Academic Stress Before and After DEAL-Based Intervention Program**

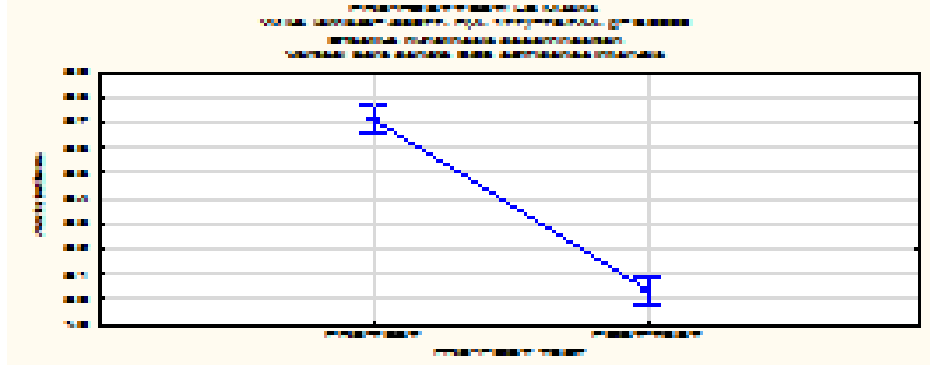
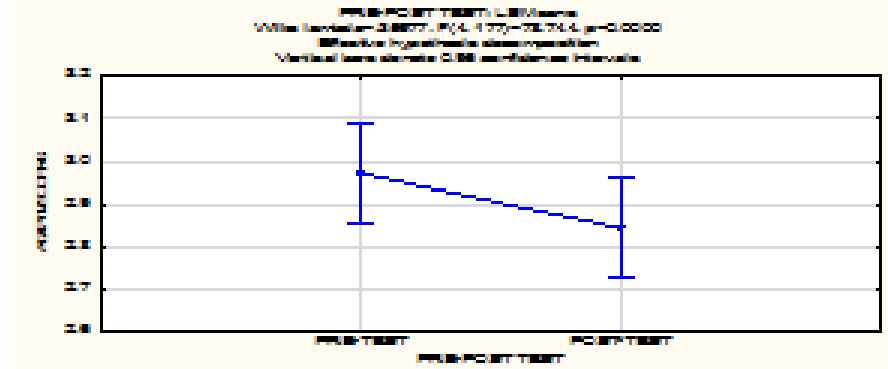


Figure 3 shows the significant difference between the pretest and posttest results of the respondents on adaptive coping strategy.

**Figure 3. Adaptive Coping Before and After DEAL-Based Intervention Program**



ANOVA repeated measures on table 2 shows that there are significant differences between the pretest and posttest scores of the participants as a result of DEAL-based intervention program. The DEAL-based intervention program had positive effects in lessening the academic stress of the students with severe academic stress as evident in the significant differences between the pretest (3.194) and posttest (2.350) scores on academic stress and on repeated measures in three (3) follow-up sessions ( $F1 = 2.325$ ;  $F2 = 2.293$ ;  $F3 = 2.325$ ).

**Table 2 Analysis of Variance for Academic Stress of Students with Severe Academic Stress**

Source	DF	SS	MS	F	P
PRE-POST TEST	1	20.6972	20.6972	285.432	0.000***
Error	180	13.0521	0.0725		
Total	181	33.7493			

\*\*\* $p < .001$   $N = 4$

Figure 4 shows the effects of the DEAL-based intervention on the academic stress of the respondents with severe academic stress. The result revealed that the DEAL-based intervention lowered down the academic stress of the respondents.

**Figure 4 A Graph Showing the Effects of DEAL-based Intervention on the Academic Stress of the Respondents with Severe Academic Stress**

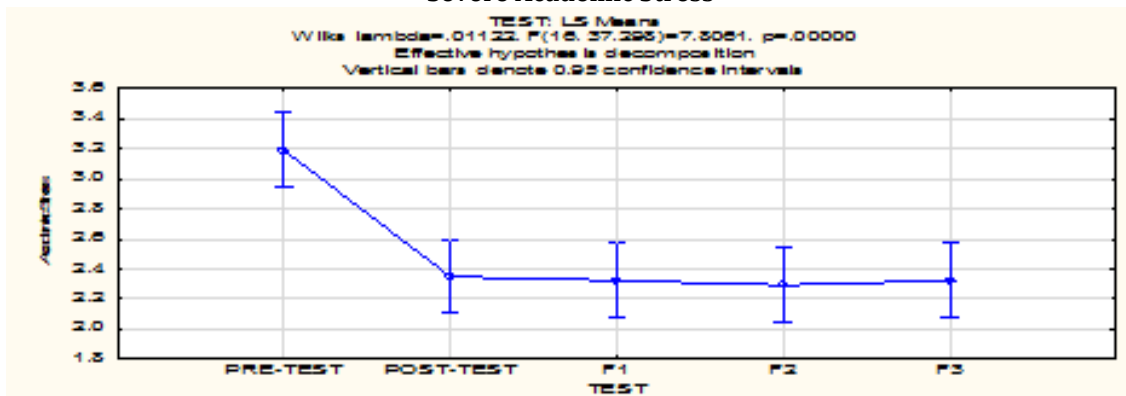


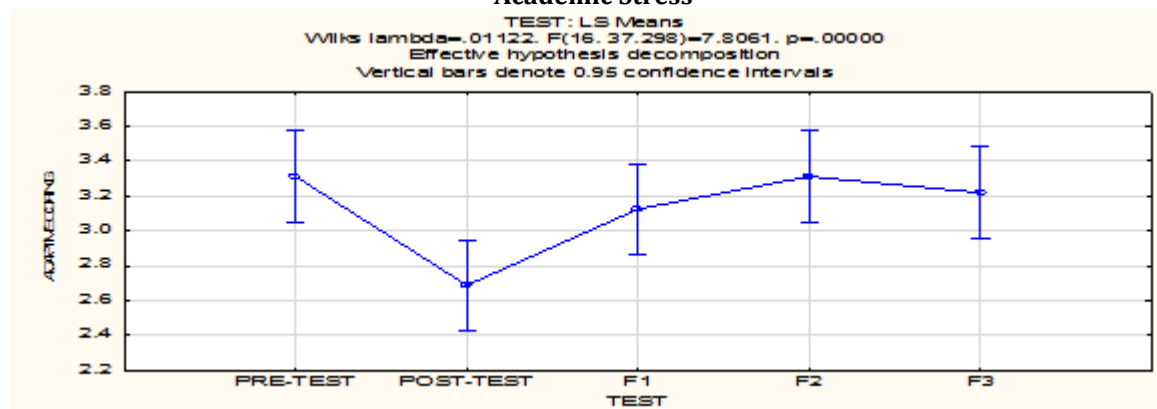
Table 3 shows that the DEAL-based intervention program initially had negative effect (decreasing) on the adaptive coping strategy of students with severe academic stress as evident in the significant differences between the pretest (3.312) and posttest (2.698) scores. However, on the three (3) follow-up sessions a significant increased on the students' adaptive coping strategy had been observed as compared to their posttest scores ( $F1 = 3.125$ ;  $F2 = 3.312$ ;  $F3 = 3.218$ ).

**Table 3 Analysis of Variance for Adaptive Coping Strategy of Students with Severe Academic Stress**

Source	DF	SS	MS	F	P
PRE-POST TEST	1	0.7266	0.7266	7.806	0.000***
Error	180	55.6380	0.3091		
Total	181	56.3647			

\*\*\* $p < .001$  N=4

Figure 5 shows the effects of the DEAL-based intervention on the adaptive coping strategies of respondents with severe academic stress. The result revealed that the DEAL-based intervention had positive effect on the adaptive coping strategies of the respondents only after two weeks from the intervention.

**Figure 5 Pretest and 4-time Post-Intervention Tests on Adaptive Coping Strategies of the Students with Severe Academic Stress**

## Discussions

Transition from pre-university to university life needs a period of adjustment as it has many challenges and difficulties. Social life along with school demands cause stress and depression among freshmen. Through early detection of symptoms, students would be able to seek assistance from administrators or university counsellors who could help prevent and minimize the effects of mental, emotional and physical morbidity. In the present study, it is worth observing that the academic stress of the respondents had lowered down after the intervention. The present study revealed that the intervention had lessen the academic stress of the freshman students including those with severe cases. This finding affirmed the finding in the study of Conley et al., (2015) that interventions among college students have shown promise in reducing symptoms of anxiety, depression, and general distress. It further stated that stress management intervention in college students have shown promise in reducing symptoms of anxiety, depression, and general distress (Conley, 2015).

The significant difference between the pretest and posttest results of the respondents on adaptive coping strategy also revealed that the frequency of practicing the adaptive coping strategy of the respondents such as planning, positive reinterpretation, active coping and acceptance had been minimized immediately after the intervention. This finding affirmed the transactional theory of Lazarus and Folkman (1988) that intervention helps people develop effective coping strategies and mitigate unproductive strategies. This also affirmed the findings of Yusoff (2015) finding DEAL-based intervention effective which modify the participants' coping strategies to effectively manage stress. This indicates that coping with the stress is a mixture of personality traits, attitudes, experiences and stressors for which a variety and a combination of different coping strategies is required. This finding affirms the theory of Lazarus (1987) that coping process is a slow process, so an individual may select one method of coping (i.e. adaptive coping) under one set of circumstance and a different strategy (i.e. accommodative) at

some other time, and such selection of strategies takes place as the situation changes.

In determining the effects of the intervention on the level of academic stress of the respondent with severe cases, it was observed that DEAL-based intervention program had positive effects in lessening the academic stress of the students with severe academic stress. This indicates that DEAL-based intervention is an appropriate intervention in reducing the academic stress of the students. This finding affirms the findings of Yusoff, et al. (2015) that the intervention successfully reduced the perceived academic stressors of the medical students. This also confirms the study of Conley, et al., (2015) that interventions among college students have shown promise in reducing symptoms of anxiety, depression and general distress.

## Conclusions

It can be inferred from this investigation that the results support the effectiveness of the brief stress management intervention on the freshman students' psychological wellbeing. DEAL-based intervention is very effective in lessening the academic stress of the students including the students with severe academic stress. The intervention has positive effect on the adaptive coping strategies of the respondents. The findings of this study affirm the findings of other studies demonstrating that intervention programs on stress management help the students deal with stress effectively.

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