THE IMPACT OF A RESILIENCE BUILDING PROGRAM ON DEPRESSION, ANXIETY AND STRESS AMONG YOUNG ADULTS

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Abstract

The effectiveness of a resilience building module developed by the researcher was studied to examine its effects on the mental health of young adults. The sample consisted of 64 young adults, using purposive sampling, pursuing their second-year undergraduate program, from Arts and Science colleges in Chennai city, India, aged 18-20 years. The Connor Davidson Resilience Scale (Connor & Davidson, 2003) and DASS, Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995) were the tools used for the study. The Quasi Experimental design was used (pre-test – post-test control group design) to find the effectiveness of the intervention program on reducing depression, anxiety and stress among young adults. The paired t test was used to find out if the intervention program had enhanced the mental health of young adults, by reducing depression, anxiety and stress. The findings showed that while the intervention program was effective in bringing about an immediate improvement in depression, anxiety and stress, it took longer for the changes to be evident in resilience.

Keywords: Resilience building, depression, anxiety, stress, positive mental health, young adults

Running head: Resilience building to enhance mental health among young adults

Introduction

Resilience describes a process whereby people bounce back from hardships and move on in life. It is a dynamic process greatly influenced by protective factors such as healthy skills and abilities that can exist within the individual or in the interpersonal or family environment. The balance between risk and protective factors is a dynamic process and need to be considered concurrently as factors that predispose an individual to vulnerability and those that protect or buffer him from harm. Resilience is described as "the developable psychological capacity to rebound, or bounce back from adversity, conflict, failure or even positive events, progress and increased responsibility" (Luthans, 2002).

Khanlou & Wray (2014) consider resilience as a process which varies across time. They also view it as a continuum, depending on the support systems available and challenges faced over time. It is also considered as a global concept, where there may be specific domains of resilience, such as academic resilience, social resilience, etc., rather than a global concept of resilience. Global resilience includes specific domains of interpersonal adjustment, behaviour adjustment, educational performance and physical health.

Resilience literature reveals the need to target risk factors in college students and also promote resilience bybuilding protective factors to reduce the effects of risk. Services that focus on enhancing students' resilience, may help to alleviate the undesirable consequences of stress and reduce the risk of depression.

Mental Health in young adults

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. (World Health Organization, 2001). Positive mental health can be promoted for individuals and communities at the individual, community and system level.

The current study has included the common mental health issues of depression, anxiety and stress as conceptualised by the Depression Anxiety Stress Scale (DASS), which measures these variables. Depression is characterized by low positive affect, loss of self-esteem and incentive, and a sense of hopelessness (absence of positive affect); Anxiety is characterized by autonomic arousal and fearfulness (physiological hyperarousal); and stress is characterized by persistent tension, irritability and a low threshold for becoming upset or frustrated (negative affect) (Lovibond & Lovibond, 1995).

The years in college is a developmentally challenging transition to adulthood, and untreated mental illness can significantly affect areas such as academic success, productivity, substance use and social relationships. Due to their scholarly nature, colleges are also well positioned to develop, evaluate, and disseminate best practices. Therefore, colleges offer a unique opportunity to address mental health problems among older adolescents and young adults.

The Penn Resiliency Program and Learned Optimism

The Penn Resiliency Program (PRP) is an evidence- based training program for late elementary and middle school students, designed by Seligman and colleagues in Pennsylvania University in 1999 and has been used by researchers worldwide. Learned Optimism is flexible optimism, defined by Martin Seligman (1990). Optimism and Pessimism are habits of thinking or explanatory styles for behaviour, which are learned patterns of thought, which signifies that optimistic thinking can also be taught. Optimists believe that situations or bad luck or other people are responsible for bad events, that the defeat experienced is temporary and that the effects are limited to this specific area of their life. There are three dimensions of habitual thinking – permanence, pervasiveness and personalisation.

Sankaranarayanan & Cycil (2014) studied the effectiveness of the Penn Resiliency Program (PRP), and found it to be successful in changing children's negative attributional style of life events among upper-class Indian school children. Therefore, the present study included a resilience building intervention for the college population to reduce depression, stress and anxiety.

Review of Literature

Gloria and Steinhardt (2016) suggested that resilience mediated the link between stress, trait anxiety and depressive symptoms in postdoctoral fellows and found that positive emotions boost resilience through coping.

Anand and Nagle (2016) conducted a study on perceived stress and psychological wellbeing among Indian college students. Their interrelationship revealed that perceived stress had significant negative relation with all the six dimensions of psychological wellbeing. Early interventions are needed to improve the quality of life and reduce the stress among student in order to better psychological health and wellbeing.

Beiter, Nash, McCrady, Rhoades, Linscomb, Clarahan and Sammut (2015), concluded that the top three problems in a sample of college students between the ages of 18 and 24s group were academic performance, pressure to succeed and post-graduation plans. Among demographic factors, the most stressed, anxious, and depressed students were transfers, upperclassmen, and those living off-campus.

Hamdan-Mansour and Hamdan-Mansour (2015) conducted a study on University students in Jordan. Results indicated that 50% of the university students had moderate to high levels of resilience, 70% had certain degree of depressive feelings, and about 50% had had high level of perception of social support from family, friends, and others. The significant predictors of resilience were depression and perceived social support from friends.

Peng, Li, Zuo, Miao, Chen, Yu, Liu and Wang (2014) explored the effects of the Penn Resiliency Program (PRP) among Chinese medical students and found that the training significantly enhanced resilience, positive emotion, and cognitive appraisal scores of the lowresilience experimental group increased significantly after training, while negative emotion and expression suppression scores significantly decreased. The above-mentioned review of research studies revealed the need to formulate the research hypotheses for the present study.

Research Methodology

The Quasi Experimental design was used to find the effectiveness of the resilience building intervention program on depression, anxiety and stress. There were three phases of testing, pre-test, post-test and follow-up. The post test was conducted one month after the intervention modules were taught to the students and the follow-up measures were collected one month after the post-test period. The intervention on resilience building was conducted on the experimental group and results statistically compared with a control group of women college students.

Sample

The sample consisted of 64, second year undergraduate women college students from 2 Arts and Science Colleges in Chennai city, using purposive sampling. The questionnaires used for the study were administered to them, after briefing them about the study and receiving informed consent. These students had obtained low scores in the resilience questionnaire administered. These students were assigned to the experimental and control group using the random sampling method. The intervention module on resilience building was then given to 32 participants of the experimental group, while 32 participants were assigned to the control group.

Tools

1. Personal Data sheet

A personal data sheet was used to measure the demographic details of the sample.

2. Connor Davidson Resilience Scale (Connor & Davidson, 2003)

The Connor Davidson Resilience Scale (CD-RISC) is a self-rating scale. Each question has to be responded with reference to the previous month, understanding that if a particular situation has not arisen in this time, then the response should be determined by how the person thinks they would have reacted. The CD-RISC measures the following factors: personal competence, trust in one's instincts or tolerance of negative effects, positive acceptance of change, control and spiritual influences. Each item is scored from 0-4, and the total score is obtained by summing the scores obtained on all items. The full range is therefore from 0 to 100, with higher scores reflecting greater resilience. Connor and Davidson showed acceptable test-retest reliability for the full CD-RISC (r=0.87).

3. DASS, Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995)

The Depression, Anxiety, and Stress Scale (DASS) is a self-report, 4 point Likert scale was developed by researchers at the University of New South Wales, Australia, to measure the negative emotional states of depression, anxiety and stress. The DASS-21 assesses participants to reflect on the thoughts, feelings and behaviour in the past week on each of the three factors with a 7-item subscale that. Responses on each item range from 0 (did not apply to me at all) to 3 (applied to me very much). The intensity of any of the three conditions is defined by the sum scores of responses to its 7-item subscale. The DASS is suited for individual and group administration and for research purposes. DASS can be utilized for screening normal adolescents and adults as the tool was constructed using non-clinical samples. Cronbach's alpha for the DASS-21 subscales have been examined in clinical and nonclinical samples and found to be 0.94 for Depression, 0.87 for Anxiety, and 0.91 for Stress.

Intervention

The intervention on resilience building was conducted in 12 sessions, each session lasting for one hour thirty minutes each. The sessions were conducted over a period of six

weeks, two sessions being conducted in a week with a gap of two days. The intervention included cognitive and behavioral components. The cognitive component included the Seligman's learned optimism model and Ellis' ABC model of disputing irrational thoughts. Students were taught to challenge negative automatic thoughts by evaluating evidence and thus move from pessimistic to optimistic explanatory styles. The behavioral component included time management, study skills and stress management. Activities included challenging and questioning their own habits, routines and reviewing. Students were encouraged to understand their behavioural responses to stress and manage them using visualization techniques and deep breathing.

Statistical Analysis

The paired t test was used on the data obtained from the quasi experimental research, to find out if the intervention program on resilience building, brought about an improvement in the mean scores of the variables studied, within groups, namely the pre-test, post-test and follow-up of the experimental and control groups.

Results and Discussion

Table I

Paired t test to measure equality of means between pre-test, post-test and follow-up on resilience in the experimental group (N=32)

Resilience	Mean	SD	t
Pre-test	52.22	15.89	1 CCNS
Post-test	57.94	15.54	1.00
Post-test	57.94	15.54	2 00**
Follow-up	62.75	13.37	5.09
Pre-test	52.22	15.89	2 66**
Follow-up	57.94	15.54	5.00***

** p<.01, Significant at 0.01 level

NS - Not Significant



Figure 1. Comparison of the pre-test, post-test and follow-up scores of resilience in the experimental group.

Table 1 shows that there is no significant difference in the pre-test (M=52.22, SD=15.89) and post-test (M=57.94, SD=15.54) resilience scores, though an increase in the mean scores is seen, the t value shows no significance (t=1.66). However, there is a significant difference in the post-test (M=57.94, SD=15.54) and follow-up scores (M=62.75, SD=13.37), (t=3.09, p<.01, two-tailed) and during the post-test(M=57.94, SD=15.54) and the follow-up(M=62.75, SD=13.37), (t=3.66, p<.01, two-tailed). Though the impact of the intervention was not evident from the pre-test to post-test, the students have been able to incorporate the skills learnt which was evidenced in the follow-up period.

Table 2

Depression	Mean	SD	t
Pre-test	19.47	7.59	
Post-test	14.69	7.85	2.92**
Post-test	14.69	7.85	
Follow-up	15.22	7.97	.45 ^{NS}
Pre-test	19.47	7.59	
Follow-up	15.22	7.97	2.66**

Paired t test to measure equality of means between pre-test, post-test and follow-up on depression in the experimental group (N=32)

NS – Not Significant



Figure 2. Comparison of the pre-test, post-test and follow-up scores of depression in the experimental group.

Table 2 shows a significant difference in depression between pre-test scores (M=19.47, SD=7.59) and post-test (M=14.69, SD=7.85), (t=2.92, p<.01, two-tailed) and from pre-test scores(M=19.47, SD=7.59) to follow-up(M=15.22, SD=7.97), (t=2.66, p<.01, two-tailed). The depression mean scores among the experimental group has significantly decreased after the intervention, indicating that the components in the intervention module have been effective

^{**} p<.01, Significant at 0.01 level

in reducing the students' depression. However, there is no significant difference in depression from post-test (M=14.69, SD=7.85) to follow-up (M=15.22, SD=7.97, (t=0.45).

A study conducted by Buchanan and Seligman (1995) showed that teaching learned optimism strategies significantly reduced depression in a class of college freshmen. Teaching students to analyze their attributional styles could help them be aware of pessimistic styles and change them to more optimistic ones, thereby, lowering or preventing depression.

Table 3

Paired t test to measure equality of means between pre-test, post-test and follow-up on anxiety in the experimental group (N=32)

Anxiety	Mean	SD	t
Pre-test	18.34	8.10	
Post-test	15.13	6.72	2.17*
Post-test	15.13	6.72	
Follow-up	14.41	7.91	.69 ^{NS}
Pre-test	18.34	8.10	
Follow-up	14.41	7.91	2.40*

* p< .05 Significant at 0.05 level

NS - Not Significant



Figure 3. Comparison of the pre-test, post-test and follow-up scores of anxiety in the experimental group.

With regard to table 3, there is a significant difference in anxiety from pre-test (M=18.34, SD=8.10) to post-test scores (M=15.13, SD=6.72), (t=2.17, p<.05, two-tailed). This indicates that the modules have been effective in lowering the anxiety of the students, especially anxiety related to their academic performance. This indicates that the anxiety levels among the experimental group has significantly decreased after the intervention but has not reduced significantly between the post-test (M=15.13, SD=6.72), (t=0.69) and the follow-up period(M=14.41, SD=7.91). However, there is a significant lowering of anxiety

between the pre-test(M=18.34, SD=8.10) and follow-up period(M=14.41, SD=7.91), (t=2.40, p < .05, two-tailed)..

Bitsika, Sharpley and Peters (2010) concluded that university students could be taught to build their self-confidence and develop a sense of optimism early in life, in order to reduce anxiety and depression.

Table 4

Paired t test to measure equality of means between pre-test, post-test and follow-up on stress in the experimental group (N=32)

Stress	Mean	SD	t
Pre-test	20.50	7.76	
Post-test	16.28	7.12	2.91**
Post-test	16.28	7.12	
Follow-up	15.34	8.14	.78 ^{NS}
Pre-test	20.50	7.76	
Follow-up	15.34	8.14	3.03**

** p<.01, Significant at 0.01 level

NS - Not Significant



Figure 4. Comparison of the pre-test, post-test and follow-up scores of stress in the experimental group.

With regard to Table 4, there is a significant difference in stress scores from pre-test scores (M=20.5, SD=7.76) to post-test scores(M=16.28, SD=7.12), (t=2.91, p<.01, two-tailed), but not between post-test(M=16.28, SD=7.12) to follow-up test scores(M=15.34, SD=8.14, (t=0.78). However, there is a significant difference in the pre-test scores (M=20.5, SD=7.76) and follow-up scores (M=15.34, SD=8.14), (t=3.03, p<.01, two-tailed) of stress. These results indicate that stress among the experimental group has significantly reduced after

the intervention. This shows that the components in the intervention module have been effective in helping students handle their stress, especially during their tests.

The significant reduction in experiencing depression, anxiety and stress in the experimental group showed that building resilience resulted in a realistic appraisal of situations, especially test taking situations. This was also reported by Forsyth and Macmillan (1991) who found that some of the harmful motivational and emotional consequences of failures could be reversed by reshaping negative attributions.

Table 5

Paired t test to measure equality of means between pre-test, post-test and follow-up on resilience in the control group (N=32)

Resilience	Mean	SD	t
Pre-test	55.03	15.67	1.83 ^{NS}
Post-test	61.03	15.52	
Post-test	61.03	15.52	1 10NS
Follow-up	59.22	16.15	1.19
Pre-test	55.03	15.67	1 40 ^{NS}
Follow-up	59.22	16.15	1.47



NS – Not Significant

Figure 5. Comparison of the pre-test, post-test and follow-up scores of resilience in the control group.

Table 5 shows the paired t ratios for resilience from pre-test (M=55.03, SD=15.67) to post-test(M=61.03, SD=15.52) for the control group of college students. Results indicate that there is no significant difference in resilience from pre-test(M=20.5, SD=16.15) to post-test

scores(M=61.03, SD=15.52), post to follow-up(M=59.22, SD=7.76) and pre to follow-up(M=59.22, SD=7.76) in resilience.

Table 6

Paired t test to measure equality of means between pre-test, post-test and follow-up on depression in the control group (N=32).

Depression	Mean	SD	Т
Pre-test	17.75	9.04	۸ ANS
Post-test	17.09	8.96	44
Post-test	17.09	8.96	26NS
Follow-up	16.78	8.71	20
Pre-test	17.75	9.04	CANS
Follow-up	16.78	8.71	.04

NS - Not Significant



Figure 6. Comparison of the pre-test, post-test and follow-up scores of depressions in the control group.

Table 6 shows that there is no significant difference from pre-test(M=17.75, SD=9.04) to post-test (M=17.09, SD=8.96), from post-test (M=17.09, SD=8.96) to follow-up(M=16.78, SD=8.71) and from pre-test(M=17.75, SD=9.04) to follow-up scores (M=16.78, SD=8.71) with regard to the depression of the control group.

Table 7

Paired t test to measure equality of means between pre-test, post-test and follow-up on anxiety in the control group (N=32).

Anxiety	Mean	SD	t
Pre-test	17.06	7.32	75NS
Post-test	18.09	8.13	75
Post-test	18.09	8.13	16 ^{NS}
Follow-up	17.94	8.05	.10
Pre-test	17.06	7.32	62NS
Follow-up	17.94	8.05	05

NS - Not Significant



Figure 7. Comparison of the pre-test, post-test and follow-up scores of anxiety in the control group.

Table 7 shows that there is no significant difference from pre-test (M=17.06, SD=7.32) to post-test (M=18.09, SD=8.13), from post-test(M=18.09, SD=8.13), to follow-up (M=17.94, SD=8.05) and from pre-test(M=17.06, SD=7.32) to follow-up scores (M=17.94, SD=8.05) with regard to the anxiety of the control group.

Table 8

Paired t test to measure equality of means between pre-test, post-test and follow-up on stress in the control group (N=32).

Stress	Mean	SD	t
Pre-test	19.84	6.80	27 NS
Post-test	19.47	7.33	.27
Post-test	19.47	7.33	1 cNS
Follow-up	19.28	7.18	.10
Pre-test	19.84	6.80	A1NS
Follow-up	19.28	7.18	17.

NS - Not Significant



Figure 8. Comparison of the pre-test, post-test and follow-up scores of stress in the control group.

Table 8 shows that there is no significant difference from pre-test(M=19.84, SD=6.80) to post-test(M=19.47, SD=7.33), from post-test(M=19.47, SD=7.33), to follow-up(M=19.28, SD=7.18) and from pre-test (M=19.84, SD=6.80) to follow-up scores(M=19.28, SD=7.18) with regard to the stress levels of the control group.

Conclusions

Depression, anxiety and stress mean scores among the experimental group showed a significant decrease in mean scores after the intervention from pre-test to post-test and pre-test to follow-up. Resilience showed significant improvement from post-test to follow-up and pre-test to follow-up.

When timely intervention is given to students who are at risk, it can prevent in developing an attitude of hopelessness and learned helplessness, due to experiences of failure. This could contribute to further deterioration, such as a breakdown in functioning or personality dysfunction. Thus, the present study has positive implications on the need for promoting positive mental health in educational institutions and include it as part of their curriculum. Teaching optimism involves restructuring what we say and what we think about ourselves when faced with failure. Building resilience in young adults can serve as a powerful tool in equipping them to face, not only current challenges, but also future encounters of risks and failures.

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