



COMPARATIVE EFFICACY OF MODIFIED EMOTIONAL RESILIENCE TRAINING VERSUS STANDARD RESILIENCE TRAINING ON IMPULSE CONTROL AND ADJUSTMENT AMONG UNDERGRADUATE HEALTH SCIENCE STUDENTS- A PILOT STUDY

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ABSTRACT

Background: Emotional resilience is critical for managing stress, impulse control, and adjustment among undergraduate health science students. This pilot study evaluates the efficacy of a Modified Emotional Resilience Training (MERT) module compared to Standard Resilience Training (SRT). To assess the validity, reliability, and effectiveness of the MERT module for improving impulse control and adjustment among undergraduate health science students. **Methods:** A randomized control trial was conducted among undergraduate students from health science college in Wardha districts. Participants were randomly assigned to the experimental group (MERT) or the control group (SRT). Data collection tools included the Impulse Control Scale (BIS-11) and the Student Adjustment to College Questionnaire (SACQ). **Results:** The pilot study included 50 participants, with 25 in each group. Both groups showed significant improvements in SACQ and BIS-11 scores post-intervention. The experimental group (MERT) demonstrated greater improvements in impulse control and adjustment compared to the control group (SRT), with statistically significant differences ($p < 0.01$). **Conclusion:** The MERT module is a valid, reliable, and more effective intervention for enhancing impulse control and adjustment among undergraduate health science students compared to SRT. Further large-scale studies are warranted to confirm these findings.

KEYWORDS : Emotional Resilience, Impulse Control, Adjustment, Undergraduate Students, Health Science, Pilot Study, Randomized Control Trial

BACKGROUND

Emotional resilience is increasingly recognized as a critical factor in managing stress, enhancing well-being, and improving academic performance among students, particularly those in demanding fields such as health sciences [1,2]. Resilience is defined as the ability to adapt positively to adversity and stress, which is crucial for students who often face rigorous academic and clinical demands [3]. Developing resilience can help students maintain mental health, improve academic outcomes, and enhance their overall quality of life [4]. Impulse control and adjustment are two important aspects of emotional resilience. Impulse control refers to the ability to regulate one's emotions and behaviors in the face of temptations and urges, while adjustment refers to the process of adapting to new situations and challenges effectively [5]. Poor impulse control and inadequate adjustment can lead to various negative outcomes, including academic difficulties, mental health issues, and social problems. Therefore, enhancing these skills is essential for student success and well-being [6].

Traditional programs often lack specific components targeting impulse control and adjustment, which are particularly relevant for health science students [7]. The Modified Emotional Resilience Training (MERT) module was developed to address this gap by incorporating targeted strategies to enhance impulse control and adjustment [8]. The MERT module includes training on identifying and expressing feelings, nurturing a positive self-view, finding and expressing humor, adapting to change, and maintaining a hopeful outlook, all of which are designed to build comprehensive emotional resilience [9]. However, there is limited research on the effectiveness of modified resilience training programs that specifically target impulse control and adjustment among health science students [10].

MATERIAL AND METHOD

Study Design This pilot study utilized a randomized control trial (RCT) design to compare the efficacy of Modified Emotional Resilience Training (MERT) versus Standard Resilience Training (SRT) on impulse control and adjustment among undergraduate health science students. **Study Setting and Duration:** The study was conducted at Mahatma Gandhi

Ayurvedic Hospital, Meghe branch of Datta Meghe Institute of Higher Education & Research, Wardha, Maharashtra. The study period lasted one month, with data collection taking place one-month post-intervention. **Participants:** Participants were selected using cluster random sampling.

Ethical Considerations: The study received approval from the institutional ethBIS-11 committee of Datta Meghe Institute of Higher Education and Research. Informed consent was obtained from all participants after explaining the study's purpose and procedures.

Intervention

The experimental group underwent the Modified Emotional Resilience Training (MERT) module over a six-day period. This training module was specifically designed to enhance emotional resilience through several key components.

The first component of the MERT module focused on Identifying and Expressing Feelings. Participants received training on how to recognize and articulate their emotions effectively. This involved exercises and activities aimed at increasing emotional awareness and improving communication skills related to emotional expression. The second component is aimed at self-affirmation, helping students to Nurturing a Positive Self-View. Techniques were taught to help participants build and maintain a positive self-image. This included activities that encouraged self-reflection and see themselves in a more positive light. The third component involved Finding and Expressing Humor. Participants were encouraged to use humor as a coping mechanism. This part of the training included exercises designed to help students find humor in everyday situations and use it to alleviate stress and improve their mood. The fourth component focused on Adapting to Change. Strategies were provided to help participants accept and adapt to changes quickly and effectively. This included discussions and activities that promoted flexibility and resilience in the face of change. The fifth and final component was Maintaining a Hopeful Outlook. Methods were introduced to foster a positive and hopeful perspective on life. Participants engaged in exercises that helped them set goals, visualize positive outcomes, and maintain a hopeful attitude even in

challenging circumstances.

Data Collection Tools

To ensure a comprehensive assessment of the participants' demographic characteristics BIS-11, impulse control, and adjustment levels, data were collected using three primary tools. The first tool, the Demographic Information Sheet, was used to gather essential background information about each participant. The second tool employed was the Barratt Impulsiveness Scale (BIS-11), developed by Dr. E.S. Barratt. The BIS-11 consists of 30 Likert-type statements, each rated on a scale from 1 to 4 score total 120 marks score. This self-report measure is designed to assess various aspects of impulse control, providing a detailed profile of each participant's ability to manage impulses.

The third tool, the Student Adjustment to College Questionnaire (SACQ), measured how well students were adjusting to college life. The SACQ evaluates multiple dimensions of adjustment, including academic, social, personal-emotional, and institutional attachment. By assessing these areas, the SACQ provides a holistic view of each student's adaptation to the college environment. The SACQ's detailed evaluation of adjustment levels was instrumental in measuring the effectiveness of the Modified Emotional Resilience Training module with 67 items for 9 - point scale total 603 score .[12]

Pre-test Assessments (O1): On the first day of the study, all participants, both in the experimental and control groups, completed pretest assessments using the Impulse Control Scale (BIS-11) and the Student Adjustment to College Questionnaire (SACQ). These assessments were crucial in establishing baseline measures for each participant's impulse control and adjustment levels. The BIS-11 and SACQ provided comprehensive data on the students' initial status, ensuring that any changes observed post-intervention could be accurately attributed to the interventions rather than pre-existing differences.

Intervention Phase: Following the pretest assessments, the intervention phase commenced. The experimental group engaged in the MERT sessions over six consecutive days. These sessions included a variety of activities and exercises designed to enhance emotional resilience, focusing on key components such as identifying and expressing feelings, nurturing a positive self-view, finding and expressing humor, adapting to change, and maintaining a hopeful outlook. In contrast, the control group participated in a standard orientation and induction program lasting two days.

Post-test Assessments (O2): One month after the intervention phase, participants in both groups completed post-test assessments using the same BIS-11 and SACQ instruments. This follow-up assessment aimed to measure any changes in impulse control and adjustment that resulted from the interventions. By comparing the post-test results with the pretest baseline measures, the study could determine the efficacy of the MERT module relative to the standard orientation and induction program.

Statistical Analysis

Data were analyzed using both descriptive and inferential statistics BIS-11. Baseline characteristics BIS-11 for demographic variables were summarized using frequencies and percentages for categorical data and means and standard deviations for continuous data. Outcome variables were analyzed for normality using the Kolmogorov-Smirnov test. Parametric data were analyzed using t-tests, while non-parametric data were analyzed using Mann-Whitney tests. Chi-square tests were used to analyze categorical variables. Correlation analysis between SACQ and BIS-11 scores was performed using Pearson correlation coefficients.

RESULT

Table 1: Demographic Characteristics BIS-11 of Participants by Group

Category	Sub-category	Control	Experimental	Chi Sq	P-value
Age Group	18 Years	10 (40%)	9 (36%)	0.085	0.771
	19 Years	15 (60%)	16 (64%)		
Family Type	Joint	10 (40%)	12 (48%)	0.325	0.559
	Nuclear	15 (60%)	13 (52%)		
Birth Order	1 st	8 (32%)	8 (32%)	0.542	0.854
	2 nd	17 (68%)	17 (68%)		
Residency	Rural	3 (12%)	3 (12%)	0.952	0.685
	Urban	22 (88%)	22 (88%)		
Habits	No	15 (60%)	14 (48%)	1.111	0.774
	Alcohol and Smoking	4 (16%)	5 (20%)		
	Alcohol	4 (16%)	4 (16%)		
	Smoking	2 (8%)	4 (16%)		

Table 1 shows the demographic characteristics BIS-11 between the control and experimental groups show no significant differences. Age distribution, family type, birth order, residency, and habits are comparable between the groups, indicated by high p-values, all above 0.05.

Table 2: Intra Group Comparison of SACQ Scores Pre- and Post-Intervention by Group

Group	Variables	Assessment	Mean	Std. Deviation	Mean Diff.	T-test (Paired)	P-value
Control	SACQ	Pre	267.24	34.83	109.32	-11.465	<0.01
		Post	376.56	50.47			
Control	BIS - 11	Pre	64.96	19.17	15.2	10.456	<0.01
		Post	49.76	25.29			
Experimental	SACQ	Pre	263.16	37.85	230.2	-77.571	<0.01
		Post	493.36	44.01			
Experimental	BIS - 11	Pre	65.60	11.51	23.72	6.536	<0.01
		Post	41.88	15.93			

In the table 2 in both control and experimental groups, SACQ scores significantly increased post-intervention (Mean Diff. = 109.32, $p < 0.01$) and (Mean Diff. = 230.2, $p < 0.01$) indicating a rise in scores in control and experimental group respectively. BIS -11 for impulsivity also significantly improved (lowered down) (Mean Diff. = 15.2, $p < 0.01$) and (Mean Diff. = 23.72, $p < 0.01$), showing enhanced impulse control in control and experimental group respectively.

Table 3: Inter Comparison of Mean Difference Through Pre- and Post-Intervention I in SACQ Scores and Impulse Control Scores (IC) Between Control Against Experimental Group.

Variables	Group	Mean difference	Std. Deviation	t-test	P-value
SACQ	Control	109.32	47.67	12.10	<0.01
	Experimental	230.20	14.83		
BIS-11	Control	15.20	7.26	-2.179	0.034
	Experimental	23.72	18.14		

In the table 3 control group, there was a moderate positive correlation between pre- and post-intervention SACQ scores ($r = 0.423$, $p = 0.035$), and a strong positive correlation between pre- and post-intervention IC scores ($r = 0.665$, $p < 0.01$). In the experimental group, there was a very strong positive correlation between pre- and post-intervention SACQ scores ($r = 0.945$, $p < 0.01$) and a strong positive correlation between pre- and post-intervention IC scores ($r = 0.656$, $p < 0.01$).

DISCUSSION

Emotional expression has been linked to better mental health outcomes, as it allows individuals to process and manage their emotions more effectively [13]. The emphasis on nurturing a positive self-view in the MERT module aligns with research suggesting that self-esteem is a critical factor in resilience [14]. By encouraging students to find and express

humor, the MERT module leveraged humor as a coping mechanism, which has been shown to reduce stress and improve mood [15].

Adaptability to change was another focus of the MERT module. The ability to adapt to change is a core component of resilience, as it enables individuals to navigate challenges and transitions more effectively [16]. The significant improvements observed in the experimental group highlight the value of tailored resilience training programs.

The study's findings have several implications for educational institutions. Integrating resilience training modules like MERT into the curriculum could provide students with essential skills to manage stress, regulate impulses, and adjust to the demands of academic life. This could potentially lead to better academic performance and overall well-being among students.

Limitations

This pilot study has several limitations. The study's geographic focus may not reflect diverse cultural and educational contexts. Additionally, the control group's standard orientation program may not provide an adequate comparison to the specialized MERT intervention. Future studies should include larger, more diverse samples, extended follow-up periods, and more objective measures to enhance the validity and applicability of the results.

CONCLUSION

Results suggest that integrating such tailored resilience training programs into the curriculum could be highly beneficial for students in health science courses, potentially leading to better academic performance and overall well-being. Future research with larger sample sizes and longer follow-up periods is warranted to further validate these findings and explore the long-term benefits of the MERT module.

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