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Effectiveness of Resilience Skills Building Training on Resilience of Adolescents: A Pre-Post Experimental Design

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The present research aimed to investigate the effectiveness of resilience skill building training for improving resilience as demonstrated by an increased sense of mastery and relatedness along with reduced emotional reactivity in adolescents. A total of 64 participants were selected through purposive sampling and divided equally into two groups i.e., experimental and wait list control groups. Matched group technique based on (age, gender, and grade) was used. The participants were selected from different private schools and colleges in Karachi. The experimental group received 12 training sessions twice a week. The waitlist control group participants received the same training after follow-up. The pre-post-training scores on resilience were measured by using Resiliency Scale for Children and Adolescents (RSCA; Prince-Embury, 2006). The results on ANOVA repeated measure showed that resilience skills building training significantly improved overall resilience as demonstrated by an increased sense of mastery and relatedness along with reduced emotional reactivity in adolescents, as indicated by increased resources and decreased vulnerability, while the results of an independent samples t-test showed that resilience-building training improved overall resilience as demonstrated by an increased sense of mastery and relatedness along with reduced emotional reactivity of in adolescents, as indicated by increased resources and decreased vulnerability in comparison with wait-list control groups. It can be concluded that resilience-building training is a beneficial strength-based strategy for overcoming obstacles, managing stress, and developing unique traits in adolescents. These programs can help adolescents to overcome setbacks and prepare them for adulthood.

Keywords. Effectiveness, resilience skills building training, adolescents, resilience

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Resilience is considered as "competence" or beneficial adaptation. It is now more widely recognized as a complex and multifaceted construct with neurobiological and psychosocial underpinnings that is perceptible in the emotional, cognitive, behavioral, social, and psychological domains of functioning. Thus, broadly speaking it can be characterized as adaptive functioning following adversity (Malhi et al., 2019). According to Siebert (2005) resilient individuals are those who can get over their pain, quickly adjust to the new reality and deal with critical obstacles. They recover and move forward, becoming stronger and better than before and feel optimistic.

Resilience has become an important subject as a learning outcome in higher education, it has become necessary to expand the range of learning outcomes to include transferable skills, like resilience, to better prepare students for successful and fruitful lives. Resilience, teamwork, time management, and work ethics are just a few of the personality, cognitive, and behavioral traits that represent transferable talents and are recognized to support academic and life success (Wood, 2022).

Resilience is taught in therapies as Beck has developed the cognitive strength behavioral counselling (CBT) technique, which focuses on mind experiences that confirm perception and dispel unfavorable beliefs and unhelpful viewpoints (Suranata et al., 2017). Along with CBT, strengths-based approach to counselling is one that develops from a positive psychology perspective and is focused on helping individuals to recognize their inner resources of strength to overcome challenges (Suranata, 2019). Moreover, positive psychology groups create a space for growth that is free from judgment and presents positive psychology notions in terms of virtues, hope, gratidude and mindfulness (Siu et al., 2013). Positive psychology interventions are becoming more widely accepted for use in the promotion and prevention of mental health as evidence of their effectiveness mounts. With such positive impact of positive psychology interventions, they are applicable to adolescents as well. Adolescents from all over the world can be taught methods for enhancing well-being and happiness due to the significantly increased frequency of emotional issues among them. The best time to train to improve emotional wellbeing is during adolescence because it is a defining moment in a person's life (Baños et al., 2017). Resources are similarly beneficial in helping adolescents manage risk. In addition, researchers have proposed that resilience and vulnerability are opposing poles on the same continuum, and how external resources may be a focus of change to help adolescents face risks and avert

consequences. Avoiding the issues related to being vulnerable is what resilience is all about (Fergus & Zimmerman, 2005).

Furthermore, at the onset of unfavorable events or conditions, emotional reactivity is often referred to as vulnerability or threshold of tolerance. The fundamental elements of reactivity via a conceptual framework of self-regulation include control over intensity, sensitivity, specificity, windows of tolerance, recuperation, access to awareness, and outward expression. Additionally, sensitivity may be described as the frequency and severity of a strong emotional reaction disrupting the respondent's balance (Siegel, 1999).

According to Reivich and Shatte (2003) there are four fundamental uses of resilience:

1. To overcome childhood challenges.
2. To guide us through the daily challenges that we face.
3. To recover and find a method to go on.
4. To stretch oneself so to accomplish full potential.

Resilience has been highlighted by Masten and Powell (2003) as a trait of normal development and is not limited to bad situations. According to them, fundamental systems, which are identified as traits of human functioning, play a significant adaptive role in dealing with a variety of stresses and dangerous circumstances. Prince-Embury proposed a three-component model of personal resiliency, which included two protection variables (mastery and relatedness with others) and one vulnerability factor (emotional reactivity; Saklofske et al., 2023). These three constructs are important in developing resilience theory and serve as the conceptual foundation for reliance in terms of sense of mastery, emotional reactivity, sense of relatedness as well as the interrelationships between these variables (Prince-Embury, 2006).

To understand resilience some concepts are important to understand which include mastery, optimism and adaptability. The concept of competence or self-mastery in children and teens was first presented by White in 1959 as the perception of cause-and-effect links in the environment. According to White, an inner curiosity that is intrinsically satisfying and the source of problem-solving abilities is what propel a sense of mastery, competence or effectiveness. Self-effectiveness may be thought of as a more detailed internal expectation about how actions would affect particular areas (Bandura, 1977). Furthermore, Seligman defines optimism as an optimistic outlook on one's own life as well as the world and life in general, both

now and in the future. Moreover, adaptability is the ability to be flexible in how one feels competent (Seligman, 1995).

Relatedness is an important concept in understanding resilience. Several developmental components, including trust, availability of assistance, comfort with others, and tolerance, serve as the foundation for a sense of relatedness. Erikson characterized fundamental trust as having its roots in an infant's oral style of functioning and later arising from cumulative experiences with the primary caregiver to establish the balance of trust and distrust inside the individual (Prince-Embury, 2010).

Based on the above mentioned contexts, several resilience-building programs were created and implemented in the educational setups based on cognitive behavioral therapy (CBT), such as Penn Resilience Program (PRP) which is based on skill training related to stress and depression. Another program is the READY: Resilience and Activity for everyday is based on Acceptance and Commitment Therapy (ACT), a third generation of CBT with an empirical foundation that promotes subjective well-being and is effective in reducing symptoms of stress and depression that are highly satisfying. These programs consistently demonstrate that the training program may assist kids in acquiring social and emotional skills, overcoming emotional illnesses, and resolving other psychological issues (Suranata et al., 2019).

American Psychological Association (2002) states that since most studies on adolescents are carried out in developed nations, it is uncertain if the conclusions drawn from them can be applied to underdeveloped ones. There is a vacuum of literature-based information about the prevalence of teenagers' mental well-being because the majority of adolescents worldwide live in underdeveloped nations. It reveals a gap and emphasizes the necessity of using highly researched, internationally used treatment techniques for fostering resilience in Pakistan. Therefore, the purpose of the current research is to establish empirical evidence in building resilience in adolescents to improve mental wellbeing by utilizing resilience skill building framework in Pakistan. The hypotheses were formulated as:

1. There will be a significant improvement in resilience demonstrated by an increased sense of mastery and relatedness along with reduced emotional reactivity of adolescents after receiving the resilience-building skill training in the pre to post test of the experimental group.
2. Adolescents exposed to resilience skills building training will show improvement in resilience as demonstrated by an

increased sense of mastery and relatedness along with reduced emotional reactivity as compared to adolescents in wait list control group.

Method

Research Design

Pre-Post-test experimental method was used to measure the effectiveness of resilience skills building training to improve resilience, demonstrated by an increased sense of mastery and relatedness along with reduced emotional reactivity.

Participants

A total sample of 64 participants with mean age 15.73 were recruited through purposive sampling into experimental and wait list control groups based on match group (gender, grade, and age). Participants were selected from different private schools and colleges in Karachi and divided into 32 participants in each group (experimental & wait list control groups). Participants of the experimental group were then further divided into 4 groups with 8 members each. The Individuals were selected based on the scores that they obtained; those that fell below the cut-off range in resource index, and high on vulnerability index on Resiliency Scale for Children and Adolescents (Prince-Embury, 2006) were selected. All the schools and colleges belonged to private sector and teaching medium was in English.

Inclusion and Exclusion Criteria

- Age between 15 to 18 years.
- Education level between 9 to 12th grade.
- Below on resource index and high on vulnerability index on RSCA.
- No pre-diagnosed psychological disorder(s).
- Capable to understand, reading, and speaking Urdu and English languages.
- Willing to undergo a resilience skill building program.
- Living with biological parents.

Participants who did not meet the above criteria were excluded from the research.

Instruments

The Resiliency Scale for Children and Adolescents (RSCA; Prince-Embury, 2006)

The Resiliency Scale for Children and Adolescents (RSCA) is an amalgam of three self-report scales Sense of Mastery, Sense of Relatedness, and Emotional Reactivity, a total of with 64 questions and two index scores (Resource & Vulnerability). Resource index Scores achieved by adding scores of mastery and relatedness whereas, vulnerability scores is achieved by subtracting resource scores from scores of emotional reactivity on 5-point liker scale in which 0 indicates never and 4 indicate almost always (Prince-Embury, 2006). the Cronbach's Alpha coefficient for the present research is the Cronbach Alpha for overall Resiliency Scale for Children and Adolescents (RSCA) is .815which shows that the scale is reliable. The Alpha coefficients of RSCA Mastery is .826, Relatedness .818, and Emotional Reactivity.833, respectively.

Procedure

The present research's therapeutic strategy was created by utilizing the Penn Resiliency Program (PRP). Permissions were taken from the PRP program developer Dr. Karen Reivich and for The Resiliency Scale for Children and Adolescents (RSCA) scale for research. Moreover, the approval was obtained from the Ethical Review Board of the University. Following the ethical review, permission was taken from different private schools and colleges of Karachi. Participants became part of the program by taking their consent for the research along with the consent of their parents and getting the demographic information form. Participants were briefed about the voluntary participation, their right to leave the research at any point, the confidentiality of their identity and personal information, and protection from any harm. After this, the RSCA was administered in classroom setting on 64 participants (32 male and 32 female) who were separated into two groups: experimental (32) and wait list control (32) groups. 4 sub-groups were further formed for the experimental group, each with 8 participants. The participants of the experimental group were given 12 resilience skill-building group sessions, 90 minutes each, conducted twice a week. After completion of resilience skill building training sessions, post-training resilience was measured by using the Resilience Scale for Children and Adolescents on both experimental and wait-list control groups within a week after training and later for follow-up after one month.

Participants were informed that they are not to take any other type of therapy during the interval period between post assessment and follow-up and were also told that they can contact the researcher personally if they felt any issues during that period. After follow-up, the wait-list control group participants were provided with the same training plan. At the end of training participants and concerned authorities of educational institutions were paid gratitude for their time and cooperation.

The hypotheses were tested using the Statistical Package for the Social Sciences (SPSS) version 21.

The aims, objectives and the outcomes of the skill training plan offered are as mentioned below:

Table 1: *Skill Training Plan for Building Resiliency Among Adolescents*

Sessions	Aims and Objectives	Outcomes
1	Gather information from participants. Ground rules setting which included, ethical considerations and maintaining confidentiality. To strengthen the trust and foster team cohesion.	Participants were divided into experimental and wait list control groups. Rapport building was accomplished and permission was sought to ascertain availability for Resiliency program.
2	To introduce the concept of resilience and its effects.	Participants became aware of the concept of resilience and its effects and established steady communication.
3	To introduce and differentiate between pessimistic and optimistic thinking for building self-effectiveness.	Participants became awarene of their beliefs, adverse events, and consequences of pessimistic beliefs.
4	To introduce thinking traps to enhance sense of mastery and practiced diaphragmic breathing for emotional regulation.	Participants were able to challenge thinking traps and were able to generate counterproductive thoughts and practiced “Diaphragmic breathing”.
5	To introduce styles of catastrophizing to enhance sense of mastery	Participants were made aware of styles of catastrophizing and were able to challenge them.

Continued…

Sessions	Aims and Objectives	Outcomes
6	To introduce worst case scenarios to understand the threshold of emotional reactivity. To introduce gratitude to acknowledge the sense of fulfillment.	Participants became aware of worst case scenarios, best case scenarios, probability, Action and practice. Participants made a personal gratitude jar
7	To introduce how to communicate and connect with others as fundamentals of resilience.	Participants were shown video on four-field scheme of communication and were able to practice through role play.
8	To introduce Progressive Muscle Relaxation to regulate emotional reactivity.	Progressive Muscle Relaxation (PMR) was practiced.
9	To introduce social skill training for effective relatedness.	Social skill training was practiced.
10	To introduce stress management plan to mobilize one's own resources to face stress.	Participants understood the main concepts of stress, symptoms, and resilience. Participants were able to identify stress and reason of the stressors. They were able to create a plan as a strategy.
11	To enhance sense of relatedness to generate resourcefulness and reduce vulnerability through mindfulness.	Participants practiced laughter therapy to break the resistance along with "Laughter Meditation."
12	To introduce Values in Action (VIA) Survey to maintain resilience and effectively use character strength for building strong and trusting relationships in future. Conduct post-test.	Participants became aware of their signature strengths through Values in Action (VIA) Survey. Post-test- RSCA tests were administered.

Statistical Analysis

The research results analysis was carried out using the Statistical Package for Social Sciences (SPSS 21). To determine the effectiveness of resilience-building skills, the independent samples *t*-test (within group) and repeated measure ANOVA were employed to investigate hypotheses for between and within-group comparison.

Results

The result comprised of descriptive statistics Repeated measure ANOVA and independent samples *t*-test.

Table 2: *Descriptive Statistics for Demographic Variables (N = 64)*

Value	*M*	*SD*	*f*	%
Age	15.73	0.87	-	-
Group				
Experimental	-	-	32	50
Control	-	-	32	50
Gender	-	-		
Male	-	-	32	50
Female	-	-	32	50
Family Structure				
Nuclear	-	-	52	81.3
Joint	-	-	12	18.8
Grade				
Nineth			33	51.6
Tenth			17	26.6
Eleventh			12	18.8
Twelvth			2	3.1

Table 2 shows the demographic variables of the participants in the research. There were 32 participants in the experimental group and 32 participants in the wait list control group.

Table 3: *Descriptive Statistics and Alpha Reliability Coefficient of Research Scale (N = 64)*

Variables	No of items	*α*	*M*	*SD*	*Sk*	*K*	Range	
							Actual	Potential
RSCA	64	.815	119.81	25.06	-.436	-.356	63-156	0-248
MAS	20	.826	38.34	12.83	-.237	.226	6-64	0-80
REL	24	.818	43.531	13.60	-.484	-.460	14-66	0-88
REA	20	.833	37.93	14.91	.393	-.229	11-74	0-80

Note. *RSCA = Resiliency Scale for Children and Adolescent MAS = Mastery, REL =* Relatedness, REA = Reactivity, M = Mean, SD = Standard Deviation, Sk = skewness, K = kurtosis. Skewness shows the normal distribution of the data.

The values of mean, standard deviation, skewness, and kurtosis show that the data is normally distributed.

Table 4(a): *Mean, Standard Deviation and Repeated Measures Analysis of Variance for Therapeutic Effects on Resiliency Scale of Children and Adolescents (N = 32)*

Variables	Pre-test		Post test		Follow up			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F(df)*	η^2
Mastery	38.34	12.83	55.68	9.26	54.21	9.36	34.70(1,54)***	.52
Relatedness	43.53	13.60	63.31	13.05	26.71	5.26	104.53(2,62)***	.77
Reactivity	37.93	14.91	25.90	13.58	23.46	14.24	15.27(2,62)***	.33
Resource	33.09	8.79	45.93	7.57	44.87	6.98	42.40(2,62)***	.57
Vulnerability	29.13	17.13	6.34	15.16	5.78	16.49	39.67(2,62)***	.56

Note. *** $p < .001$.

Table 4(a) shows mean, standard deviation and *F*- value for domains of resiliency across consecutive resilience skill building. Results indicated significant mean differences in Mastery in pretest to post test and insignificant in follow-up F (1.52) = 34.70, MSE = 96.75, p = .000, η^2 = .52 with medium effect size. The findings revealed that on scale of Mastery pretest score was (M = 38.34, SD = 12.83) in post-test the score was (M = 55.68, SD = 9.26) and showed stability in follow up scores (M = 54.21, SD = 9.36). Significant mean differences of Relatedness was observed in pretest and post-test however it was insignificant in follow-up F (2.62) = 104.53, MSE = 102.71, p = .000, η^2 = .77, with large effect size. The findings revealed that on scale of Relatedness, pretest scores (M = 43.53, SD = 13.60) were less as compared to scores on post-test (M = 63.31, SD = 13.05) and scores showed stability in follow up (M = 23.46, SD = 5.26). Significant mean difference was observed on Reactivity in pretest to post test and insignificant in follow-up F (2.62) = 15.27, MSE = 125.68, p = .000, η^2 = .33 with large effect size. The findings revealed that on scale of Reactivity, pretest scores (M = 37.93, SD = 14.91) were higher than post-test (M = 25.90, SD = 13.58) and showed stability in follow up (M = 23.46, SD = 14.24). Significant mean differences of Resource in pretest to post test and insignificant in follow-up F (2.62) = 42.40, MSE = 38.34, p = .000, η^2 = .57 with large effect size. The findings revealed that on scale of Resource, pretest scores (M = 33.09, SD = 8.79) were less than post-test score (M = 45.93, SD = 7.57) and showed stability in follow up (M = 44.87, SD = 6.98). Significant mean differences of

Vulnerability were observed in pretest to post test and insignificant in follow-up F (2.62) = 39.67, MSE = 143, 06, p = .000, η^2 = .56 with large effect size. The findings revealed that on scale of Vulnerability in pretest scores (M = 29.13, SD = 17.13) was higher as compared to post-test (M = 6.34, SD = 15.16) and showed stability in follow up (M = 5.78, SD = 16.49).

Table 4(b): *Post Hoc Analysis for Significant Difference Among Domains of Resiliency (N = 32)*

Resiliency Domains							
						95% CI	
(I)	(J)	Mean Difference (I-J)	I-J	*SE*	*p*	*LL*	*UL*
Mastery							
Pre	Post	-17.34*	Pre<Post	2.53	.00	-23.75	-10.93
Pre	FU	-15.87*	Pre<FU	2.56	.00	-22.36	-9.38
Relatedness							
Pre	Post	-19.78*	Pre<Post	2.79	.00	-26.86	-12.69
Pre	FU	16.81*	Pre>FU	2.60	.00	10.21	23.40
Post	FU	36.59*	Post>FU	2.15	.00	31.14	42.04
Reactivity							
Pre	Post	12.03*	Pre>Post	2.92	.00	4.62	19.44
Pre	FU	14.46*	Pre>FU	2.94	.00	7.00	21.93
Resource							
Pre	Post	-12.84*	Pre<Post	1.650	.00	-17.01	-8.66
Pre	FU	-11.78*	Pre<FU	1.733	.00	-16.16	-7.39
Vulnerability							
Pre	Post	22.78*	Pre<Post	3.12	.00	14.87	30.69
Pre	FU	23.34*	Pre<FU	3.41	.00	14.70	31.97

The above-mentioned table shows that there is a significant difference between pre and post-test and pre and follow up test of Mastery. However, relatedness is higher in post-test as compared to pretest but is lesser in follow up in comparison with pre and posttest. Scores on Reactivity is higher in pretest as compared to post and follow up. Lastly Resources and Vulnerability scores are higher in post and follow up as compared to pretest.

Table 5: *Independent Sample's t-test of Between Experimental Group and Wait-List Control Group Participants in the Pre to Post-Test (N = 64)*

Variables		*M*	*SD*	*t(df)*	*p*	*95%CI*	
						LL	*UL*
Pre-Mas	Exp	38.34	12.83	-.35(31)	.72	-6.97	4.85
	Control	39.40	10.72				
Post Mas	Exp	55.68	9.26	6.37(31)	.00*	11.47	21.96
	Control	38.96	11.57				
Pre-Rel	Exp	43.53	13.60	-.43(31)	.66	-8.52	5.46
	Control	45.06	14.38				
Post Rel	Exp	63.31	13.05	4.79(31)	.00*	9.48	23.01
	Control	47.06	14.01				
Pre-Rea	Exp	37.93	14.91	-.88(31)	.37	-9.55	3.67
	Control	40.87	11.25				
Post Rea	Exp	25.90	13.58	-4.79(31)	.00*	-23.85	-9.82
	Control	42.75	14.47				
Pre-Res I	Exp	33.09	8.79	-.45(31)	.64	-5.19	3.25
	Control	34.06	8.09				
Post Res I	Exp	45.93	7.57	5.62(31)	.00*	7.44	15.65
	Control	34.39	8.80				
Pre-Vuln I	Exp	29.13	17.13	-.20(31)	.84	-8.83	7.20
	Control	29.94	14.85				
Post Vuln I	Exp	6.34	15.16	-5.75(31)	.00*	-33.10	-16.01
	Control	30.91	18.80				

Note. $^{*}p < .01$.

Results indicated a significant difference in the scores of experimental groups. On Resource index (M = 45.93, SD = 7.57) and wait list control group (M = 34.39, SD = 8.80). On Vulnerability index (M = 6.34, SD = 15.16) and wait list control group (M = 30.91, SD = 18.80).

Discussion

Resilience is the ability to maintain composure and overcome difficulties. Numerous elements, such as optimism, skill in solving problems, faith, a sense of purpose, self-effectiveness, adaptability, impulse control, empathy, and close connections, are known to

contribute to resilience. Childhood resilience is the phenomenon of successfully coping with major life challenges in a healthy way (Reivich et al., 2011). Evidence-based training programs that have been shown to increase resilience, wellbeing, and optimism include the Penn Resilience Program (PRP). It is a strengths-based program that gives a set of useful skills that individuals may use in their daily lives to overcome obstacles and succeed in demanding situations (Reivich et al., 2011). The aim of the current research is to see the effectiveness of resilience skill building training in adolescents.

The first hypothesis tended to test the resiliency (sense of mastery, relatedness, and reactivity) before and after resilience skill building training in adolescents. The results on repeated measures ANOVA showed significantly large differences in all domains of resilience (Sense of mastery, relatedness, reactivity) (Table 3). Rich et al. (2022) validated the current findings, which revealed the benefits of the Resilience Builder Program, which was a school-based group training, on resilience and academic functioning in a sample of economically deprived children. 169 participants with social-emotional issues were recruited from five primary schools and randomly allocated to the Resilience Builder Program. The Behavior Assessment System, Resilience Scale for Children and Adolescents (BASC-2, RSCA), and academic functioning were used to conduct cross-sectional studies on participants, their parents, and teachers. The findings revealed a link between resilience and improved academic performance. Participants in the Resilience Builder Program, as well as their parents and instructors, reported larger gains in resilience when compared to the wait list group. Teachers noticed considerable improvements in participants' study skills and academic performance (Rich et al., 2022).

Post hoc analysis indicated significant differences between pre to post-test and follow-up in all domains of resiliency, which indicated the effectiveness of resilience skill building training. However, the domain of relatedness indicated an insignificant difference in follow-up scores (Table 3). It is important to point out that during the follow-up data collection (one-month post-training) the participants were busy with their midterm exam due to which they had less time for socialization. Sabin et al. (2021) conducted research based on a group-based training, which was a 12-session Resiliency Program with adolescents after school. Each session lasted for 90 minutes. A total of 285 students, aged from 11 to 12 years, took part in this non-randomized 6-week school-based training. Participants were screened out at the baseline and six-week follow-ups using surveys that assessed depression, anxiety symptoms, bullying, self-effectiveness,

academic pressure, grit, and resilience. The findings suggested that a universal school-based training program benefits all adolescents while simultaneously focusing on the needs of kids with negative affectivity who are not at risk of mental health problems.

The second hypothesis tended to test the resiliency (sense of mastery, relatedness, and reactivity) in adolescents who were exposed to resilience skill building training as compared to wait list control group. Results indicated that there is a significant difference in the scores of experimental groups compared to wait list control group (Table 5). The between group findings are also supported by Gadari et al. (2022) which evaluated the effects of virtual resilience training on elementary school girls from southeast Iran's primary schools. Participants in this experimental study ranged in age from 9 to 10 years. Participants in the training group scored higher immediately and a month after the training, and there was a significant difference between the two groups (p = .0001) (Gadari et al. (2022).

Tang and colleagues (2022) conducted research in the context of a growing percentage of children and adolescents who have expressed concerns about their mental health and found that resilience is a protective factor against these problems. A cluster randomized controlled trial was done with 1,613 students, divided into training group (19 courses, 732 participants) and control (24 classes, 881 participants) groups. The training group received one year of peer education, whereas the control group received no training. Data was collected using the Resilience Scale for Chinese adolescents and a self-designed basic information questionnaire. Compared to the control group, the training group showed significant improvement in concentrating on goals after the training (Tang et al., 2022).

Conclusion

The present research aimed to investigate the effectiveness of resilience skill building training for improving resiliency as demonstrated by an increased sense of mastery and relatedness along with reduced emotional reactivity of in adolescents in adolescents. A twelve-session resilience skill-building training was conducted to improve self-effectiveness, relatedness, and reactivity. The hypotheses were tested and significant improvements in sense of mastery, relatedness, and emotional reactivity, as well as increased resources and decreased vulnerability indices were observed. These results suggest that resilience-building training can be effective in improving resiliency of adolescents.

A resilience skill-building training is a comprehensive set of skills for teenagers that may be effectively used in various educational settings in terms of increasing confidence in an individual's ability to exercise mastery over one's own effectiveness in the face of adversity, behavior, and social environment. Future research can explore other areas of Pakistan to test the effectiveness of the resilience building program and other factors that affect resilience of Pakistani adolescents.

Research was conducted on adolescents between 15-18 years, but more research is needed to generalize the findings and investigate potential interaction effects. Future research could investigate other age bands of adolescents (between 9-11 and 12-14) to see the effectiveness of resilience-building skills on these age bands as well.

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