Social Medicine
Health For All
ISSN: 1557-7112

ORIGINAL RESEARCH

Effectiveness of a School-Based Coping Skills Program on Psychological Distress Among Adolescents

La eficacia de un programa escolar para el desarrollo de habilidades de afrontamiento en el malestar psicológico entre adolescentes

Rinu David. Amala College of Nursing, Thrissur Kerala, India.
Email: rinu.david@amalaims.org, https://orcid.org/0009-0007-4316-1946
Molly John. Amala College of Nursing, Thrissur Kerala, India.
Email: srmerlyjohn@gmail.com corresponding author, https://orcid.org/0009-0003-1779-0467

Received: September 9, 2025.
Accepted: September 29, 2025.
Conflicts of interest: None.
DOI: https://doi.org/10.71164/socialmedicine.v19i3.2026.2391

Abstract

Approximately half of the world's population, or more than 2.2 billion individuals, are children, and 16% of the global population are adolescents. Psychological distress is a major contributor to illness and disability among adolescents. **Objective.** To determine the prevalence of psychological distress among adolescents and evaluate the effectiveness of a school-based coping skills program. The study also examined the association between psychological distress and selected sociodemographic variables. **Method.** A pre-experimental, one-group pre-test/post-test study was conducted among 205 school-going adolescents. Participants were selected using a purposive sampling method. Psychological distress was measured using the Depression, Anxiety, and Stress Scale (DASS-21). The Mann–Whitney U test was used to evaluate the effectiveness of the coping skills intervention. Fisher's exact test was used to determine associations between psychological distress and selected sociodemographic variables. **Results.** The study sample consisted of 29.3% females and 70.7% males. A considerable proportion of students reported moderate levels of depression (34.6%) and anxiety (26.3%), while the majority of adolescents (75.1%) did not experience stress. Following the coping skills intervention, the proportion of adolescents with normal depression scores increased to 72%, while moderate cases decreased to 9% and severe cases were eliminated. Similarly, normal anxiety scores increased to 72%, while moderate and severe anxiety decreased to 12% and 2%, respectively. The proportion of adolescents with normal stress scores increased to 96.6%, while extremely severe stress decreased from 9.3% to 0.5%. Psychological distress was significantly associated with age, gender, parental education and occupation, family income, number of siblings, birth order, friendships, academic performance, perceived pressure, and bullying ($p < 0.05$). **Conclusion.** The findings suggest that school-based coping skills programs can significantly improve adolescents' mental health. These results highlight the importance of addressing both personal and environmental factors to support adolescent well-being.

Keywords: adolescents, school-based coping skills, psychological distress

Resumen

Aproximadamente, la mitad de la población mundial, o más de 2,200 millones de personas, son infancias y 16%, adolescentes. El malestar psicológico es un importante contribuyente a la enfermedad y la discapacidad entre las y los segundos. **Objetivo.** Determinar la prevalencia del malestar psicológico entre las y los adolescentes y evaluar la efectividad de un programa de habilidades de afrontamiento basado en la escuela. El estudio también examinó la asociación entre tal malestar psicológico y variables sociodemográficas seleccionadas. **Método.** Se realizó un estudio preexperimental, de un solo grupo, pre-test/post-test con 205 adolescentes escolarizados. Las y los participantes fueron seleccionados mediante un método de muestreo intencional. El malestar psicológico se midió utilizando la Escala de Depresión, Ansiedad y Estrés (DASS-21). Se utilizó la prueba U de Mann-Whitney para evaluar la efectividad de la intervención de habilidades de afrontamiento. Se utilizó la prueba exacta de Fisher para determinar las asociaciones entre el malestar psicológico y variables sociodemográficas seleccionadas. **Resultados.** La muestra fue de 29.3% de mujeres y 70.7% de hombres. Una proporción considerable de estudiantes reportó niveles moderados de depresión (34.6%) y ansiedad (26.3%), la mayoría (75.1%) no experimentó malestar. Tras la intervención a favor del desarrollo de habilidades de afrontamiento, la proporción con puntuaciones de sin depresión aumentó a 72%, mientras que los casos moderados disminuyeron a 9% y los casos graves fueron eliminados. De manera similar, las puntuaciones de sin ansiedad aumentaron hasta 72%, mientras que la ansiedad moderada y grave disminuyeron a 12% y 2%, respectivamente. La proporción de adolescentes con puntuaciones de sin estrés aumentó a 96.6%, mientras que el estrés extremadamente grave disminuyó de 9.3% a 0.5%. El malestar psicológico se asoció significativamente con la edad, el género, la educación y la ocupación de los padres, los ingresos familiares, el número de hermanos, el orden de nacimiento, las amistades, el rendimiento académico, la presión percibida y el acoso escolar ($p < 0.05$). **Conclusión.** Los hallazgos sugieren que programas para el desarrollo de habilidades de afrontamiento impartidos en la propia escuela pueden mejorar significativamente la salud mental em la adolescencia. Estos resultados resaltan la importancia de abordar tanto los factores personales como ambientales para apoyar su bienestar.

Palabras clave: adolescentes, habilidades de afrontamiento en el ámbito escolar, malestar psicológico

Introduction

Children and adolescents constitute a substantial proportion of the global population. Approximately half of the world's population is under 18 years of age, and around 16% are adolescents between 10 and 19 years old.[1] Mental health problems affect an estimated 10–20% of children and adolescents worldwide and represent a significant cause of disability in this age group, particularly in developing countries.[2] Because mental health challenges during adolescence can have lasting effects throughout life, efforts to support the mental well-being of vulnerable adolescents are essential.[2]

Around one in seven adolescents worldwide, aged 10–19 years, lives with a mental health condition, accounting for approximately 15% of the total disease burden in this age group. Anxiety, stress, and depression are among the leading causes of illness and disability during adolescence, while suicide is the third leading cause of death among individuals aged 15–29 years. Inadequate attention to adolescent mental health can result in impaired physical and mental health in adulthood and may limit future life opportunities.

Adolescence is a critical period for developing essential social and emotional skills that promote mental well-being. These include obtaining adequate sleep, engaging in regular physical activity, building positive interpersonal relationships, developing coping and problem-solving skills, and learning to manage emotions effectively. Supportive environments within families, schools, and communities also play an important role in promoting mental health. Research indicates an inverse relationship between age and life satisfaction and a positive association between age and levels of stress, depression, and anxiety.[3]

A cross-sectional study was conducted among 350 adolescents aged 16–19 years from urban and rural areas of Shivamogga to determine the prevalence of stress, depression, and anxiety among young people. The findings indicated that the prevalence of stress, anxiety, and depression was higher among adolescents living in urban areas than among those in rural areas, at 23.1%, 29.4%, and 26.6%, respectively. Depression was found to be more prevalent among females in both urban and rural settings, with a particularly notable difference in rural areas. Similarly, stress and anxiety were more common among females, with urban female adolescents demonstrating especially high levels of anxiety. Overall, adolescents residing in urban areas exhibited higher levels of depression, anxiety, and stress.[4]

Adolescence is a period characterized by numerous challenges, including exposure to adversity, peer pressure, and the process of identity formation, all of which can contribute to elevated levels of stress. Gender stereotypes and media influences may further exacerbate the gap between adolescents' aspirations for the future and their lived experiences. Relationships with peers and the quality of the home environment also play important roles in shaping mental health outcomes. Additional risk factors for mental health problems include socioeconomic disadvantage, harsh parenting practices, abuse, sexual violence, and bullying. Certain groups of adolescents may be particularly vulnerable to mental health challenges because of environmental factors, social stigma, discrimination, or limited access to support services. These groups include adolescents living in unstable circumstances, those with disabilities or chronic illnesses, adolescent parents, adopted adolescents, and individuals from minority or otherwise marginalized communities.[5]

A study using network analysis investigated "bridge symptoms," or symptoms that link depression and anxiety and may help explain their co-occurrence. Researchers analyzed data from 3,670 participants in the Avon Longitudinal Study of Parents and Children. The study examined symptoms such as sadness and worry, as well as factors including bullying, peer victimization, social relationships, positive behavior, and parental supervision at approximately 13 years of age. Stressful life events experienced at age 11 were also assessed. The findings identified important bridge symptoms, including feelings of unhappiness and loneliness associated with depression, as well as excessive worrying associated with anxiety. [6]

A systematic review and meta-analysis was conducted to identify and evaluate school-based programs designed to prevent internalizing mental health problems among adolescents. The analysis included 42 studies involving 7,310 adolescents between 11 and 18 years of age. Three mental health outcomes—stress, depression, and anxiety—were examined. Meta-regression analysis was used to assess the effects of program type, program intensity, age, gender, and race on intervention effectiveness. The findings showed that targeted interventions were associated with greater reductions in stress than universal programs, although stress interventions did not significantly reduce stress symptoms overall. Interventions targeting anxiety significantly reduced anxiety symptoms, while universal programs appeared to require greater intervention intensity to achieve similar effects. Depression-focused interventions also significantly reduced depressive symptoms; however, the magnitude of improvement depended on several factors, including program type, intervention intensity, age group, and race [(7).]

Methodology

A quantitative pre-experimental study using a one-group pre-test/post-test design was conducted among 205 school-going adolescents. A purposive sampling technique was used to recruit participants. The inclusion criteria were adolescents of both genders studying in the 8th, 9th, and 10th standards. Adolescents who were absent during data collection, unwilling to participate, or currently receiving medication for chronic illnesses (e.g., type 2 diabetes, seizure disorders, allergies, or other ongoing medical conditions) were excluded from the study.

The sample size was calculated using a 95% confidence level and a 5% margin of error. The final sample consisted of 205 participants. Data were collected over a two-month period from July to August 2025.

Ethical approval was obtained from the authorized institutional ethics committee (Ref. No. 09/EC/25/AIMS-05). Written permission was obtained from the appropriate authorities of the selected institution. Informed consent was obtained from parents or guardians, and assent was obtained from the adolescent participants. Participants were informed about the purpose of the study, and confidentiality and privacy were assured. The first section of the questionnaire collected demographic information, including age, gender, and other relevant characteristics.

Psychological distress was assessed using the Depression, Anxiety, and Stress Scale (DASS-21), a self-report instrument designed to measure the emotional states of depression, anxiety, and stress. Responses were recorded using a four-point Likert scale. Scores were categorized into five severity levels: normal, mild, moderate, severe, and extremely severe. The DASS-21 has demonstrated strong reliability, with Cronbach's alpha coefficients typically exceeding 0.80.

The effectiveness of the coping skills intervention was evaluated using the Mann–Whitney U test. Data analysis was performed using the Statistical Package for the Social Sciences (SPSS), version 23. Continuous variables were summarized using means and standard deviations, while categorical variables were presented as frequencies and percentages. Fisher's exact test was used to determine the association between psychological distress and selected demographic variables.

Results

Table 1 presents the demographic characteristics of the participants. A total of 205 adolescents completed the questionnaire. The majority of participants were 13 years old (91.2%). Of the total sample, 60 (29.3%) were female and 145 (70.7%) were male. More than half of the participants belonged to nuclear families (55.1%), while 44.9% belonged to joint families. Most fathers (74.1%) and mothers (85.9%) had attained a college-level education.

Tale 1 :Demographic profile of participants

Age	Frequency	Percentage
12	14	6.8
13	187	91.2
14	4	2.0
Gender		
Female	60	29.3
Male	145	70.7
Family		
Joint	92	44.9
Nuclear	113	55.1
Father's Education		
College	152	74.1
Primary	5	2.4
Secondary	48	23.4
Mother's Education		
College	176	85.9
Primary	2	1.0
Secondary	27	13.2
Father's occupation		
Government employee	22	10.7
Other	6	2.9
Private employee	97	47.3
Self-employed	67	32.7
Unemployed	13	6.3
Mother's occupation		
Government employee	38	18.5
Homemaker	96	46.8
Other	5	2.4
Private employee	55	26.8
Self-employed	10	4.9
Unemployed	1	.5

Fig 1:Social and environmental factors

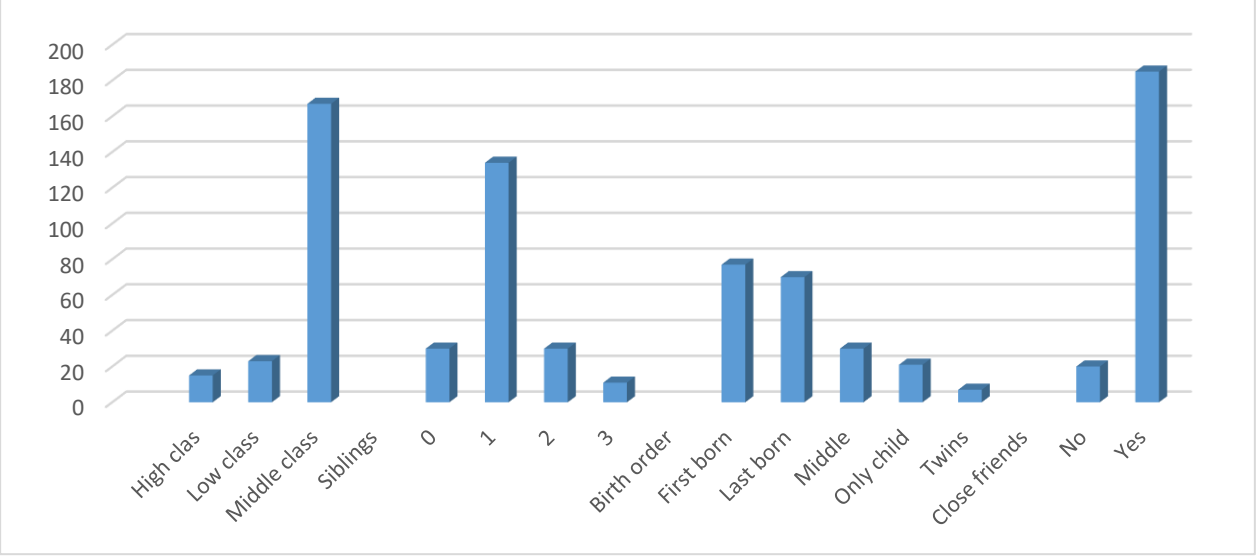

Fig 2:School and academic background

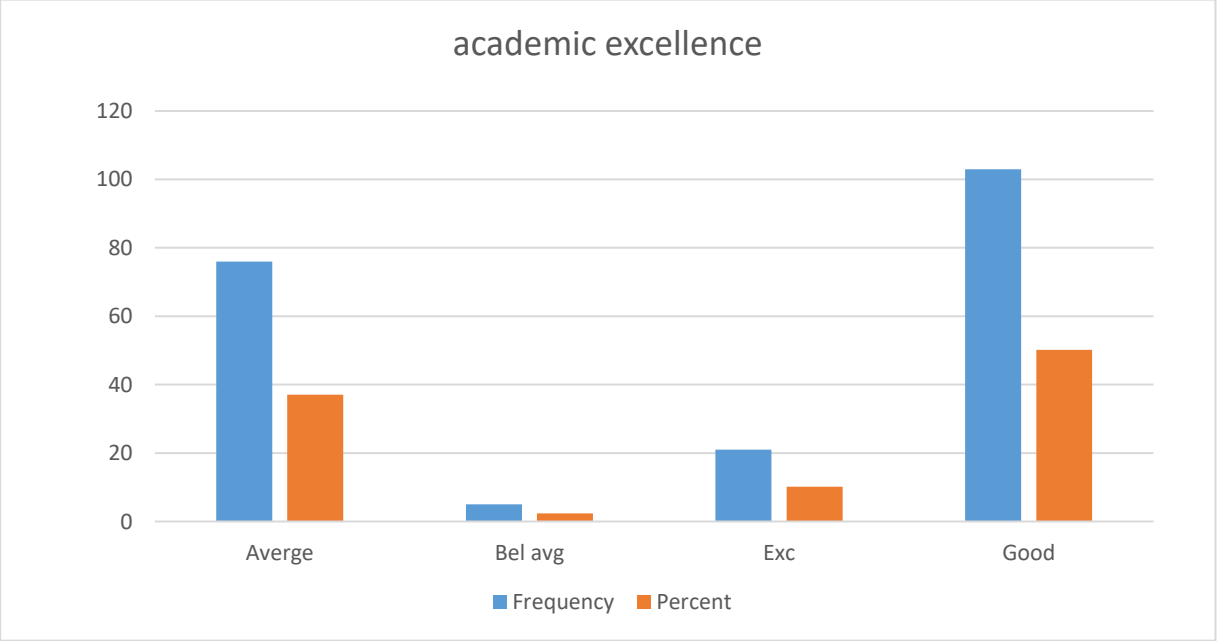

Table 2: Effect of Intervention on Psychological distress Severity Levels

Categories	Depression		anxiety		stress	
	Pre test	Post test	Pre-test	Post-test	Pretest	Posttest
Normal	60(29.3%)	147(71.7%)	82(40%)	148(72.2%)	154(75.1%)	198(96.6%)
Mild	33(16.1%)	37(18%)	22(10.7%)	25(12.2%)	27(13.2%)	3(1.5%)
Moderate	71(34.6%)	19(9.3%)	54(26.3%)	24(11.7%)	5(2.4%)	3(1.5%)
Severe	15(7.3%)	0(0%)	17(8.3%)	5(2.4%)	0(0%)	0(0%)
Extremely Severe	26(12.7%)	2(1%)	30(14.6%)	3(1.5%)	19(9.3%)	1(0.5%)

Table 2 presents the distribution of depression, anxiety, and stress severity levels before and after the coping skills intervention.

For depression, the proportion of participants classified as normal increased from 29.3% at pre-test to 71.7% at post-test. Moderate depression decreased from 34.6% to 9.3%, while severe depression was eliminated following the intervention. The proportion of participants with extremely severe depression decreased from 12.7% to 1.0%.

Similarly, anxiety levels improved following the intervention. The percentage of participants classified as normal increased from 40.0% to 72.2%, while moderate anxiety decreased from 26.3% to 11.7%. Severe anxiety declined from 8.3% to 2.4%, and extremely severe anxiety decreased from 14.6% to 1.5%.

Improvements were also observed in stress levels. The proportion of participants within the normal range increased from 75.1% at pre-test to 96.6% at post-test. Mild stress decreased from 13.2% to 1.5%, while extremely severe stress decreased from 9.3% to 0.5%. Severe stress was not reported at either assessment point.

Table 3. Pre- and post-intervention depression, anxiety, and stress scores among adolescents

		Mean	Std. Deviation	Median	25th quartile	75th quartile	P value
Depression	Pre	13.06	9.013	12	6	20	0.0001
	Post	6.75	5.035	6	3	10	
Anxiety	Pre	10.13	7.473	10	4	14	0.0001
	Post	5.13	3.768	4	2	8	
Stress	Pre	9.79	8.643	6	4	15	0.0001
	Post	5.37	4.438	4	2	8	

Table 3 presents the pre-test and post-test scores for depression, anxiety, and stress following the coping skills intervention.

For depression, the mean score decreased from 13.06 ± 9.01 at baseline to 6.75 ± 5.04 following the intervention, while the median score decreased from 12 to 6. Anxiety scores also decreased, with the mean declining from 10.13 ± 7.47 to 5.13 ± 3.77 and the median decreasing from 10 to 4. Similarly, the mean stress score decreased from 9.79 ± 8.64 at baseline to 5.37 ± 4.44 post-intervention, while the median score declined from 6 to 4.

The 25th and 75th percentile values were lower at post-test than at pre-test for all three outcomes. Statistically significant reductions were observed in depression, anxiety, and stress scores following the intervention ($p = 0.0001$ for all comparisons).

Significant associations were observed between psychological distress and several demographic and psychosocial variables, including age, parental education and occupation, family income, number of siblings, birth order, friendships, academic performance, perceived pressure, and bullying ($p < 0.05$). However, not all variables were significantly associated with each outcome. For example, gender and family type were not significantly associated with depression, while mother's education and family type were not significantly associated with stress.

Discussion

The intervention was associated with improvements in adolescents' mental health, with reductions observed in depression, anxiety, and stress levels following the coping skills program. Many participants who were initially classified in the moderate to severe categories shifted into the normal range. For example, the proportion of students within the normal range increased from 75.1% to 96.6% for stress, from 40.0% to 72.2% for anxiety, and from 29.3% to 71.7% for depression. At the same time, the proportion of participants with severe and extremely severe psychological distress decreased substantially. These findings are consistent with previous research demonstrating the effectiveness of school-based mental health interventions. A recent meta-analysis reported that school-based mental health programs significantly reduced symptoms of depression and anxiety, with a moderate but meaningful effect size (ES = 0.24, $p = 0.002$) (8). Similarly, Lee et al. (2020) found that a school-based life skills program reduced substance use and improved mental health outcomes among adolescents.[9] Other studies have also reported that life skills training can improve adolescent mental health by reducing symptoms of anxiety and depression while enhancing overall well-being.[10]

The observed improvements in stress may reflect the greater responsiveness of stress-related symptoms to short-term interventions compared with depression and anxiety. Nevertheless, the overall findings suggest that coping skills programs may play an important role in promoting adolescent mental health and reducing psychological distress.

The present study also found significant associations between psychological distress and several sociodemographic and psychosocial

factors, including age, parental education and occupation, family income, sibling status, birth order, quality of friendships, academic performance, perceived academic pressure, and experiences of bullying. These findings are consistent with previous studies highlighting the influence of family, school, and social environments on adolescent mental health. Kieling et al. reported that low socioeconomic status, poor academic achievement, and negative peer experiences increase vulnerability to mental health disorders during adolescence.[2] In the present study, mother's education and family type were not significantly associated with stress, suggesting that other contextual factors, such as academic burden and peer relationships, may exert a stronger influence on psychological well-being in this population. Previous research has similarly shown that bullying victimization is strongly associated with higher levels of depression, anxiety, and suicidal behavior among adolescents.[11] Perceived academic pressure has also been identified as an important contributor to poor mental health outcomes and has consistently been reported as a risk factor for adolescent depression and anxiety in both Indian and international studies. [12]

Previous research supports the effectiveness of school-based interventions in promoting adolescent mental health. A meta-analysis evaluating school-based programs aimed at reducing psychological distress included 54 studies comprising 61 independent samples, 16,475 students, and 123 effect sizes. Overall, the interventions demonstrated a moderate effect in reducing psychological distress, although stronger effects were observed in specific student populations. These findings suggest that interventions tailored to the needs of particular adolescent groups may be more effective in reducing stress and improving mental health outcomes. [13]

The influence of social environments on adolescent mental health has also been widely documented. Previous studies have shown that adolescents experience significant stress arising from their immediate social contexts, including family, school, peer relationships, and neighborhood environments. Common sources of stress include academic pressure, peer and parental expectations, difficulties in romantic relationships, and exposure to threats to personal safety, including violence. Adolescent girls may face additional stressors related to concerns about sexual harassment and conformity to traditional gender roles. These stressors have been associated with emotional reactions such as anger, rumination, and difficulty concentrating. [14]

Previous research has identified a wide range of stressors associated with adolescent mental health problems. One study involving 15,570 adolescents aged 10–19 years examined the relationships between various stressors and symptoms of anxiety and depression using network analysis. In addition to collecting demographic information, the researchers assessed multiple stressors and psychological symptoms and conducted simulations to identify potential targets for intervention and prevention. The findings indicated that academic stressors were more strongly associated with anxiety symptoms than many other stressors, highlighting the important role of educational pressures in adolescent mental health.[15]

Research has also shown that adolescents most commonly employ emotion-focused coping strategies, including distraction, escape-avoidance, and seeking emotional support, whereas problem-focused coping strategies, such as seeking practical advice and solutions, are used less frequently. Some adolescents also report maladaptive coping mechanisms, including substance use. These findings suggest that interventions aimed at strengthening both problem-focused and emotion-focused coping skills may improve adolescents' ability to manage stress effectively.[16]

Previous studies have emphasized the importance of developing age-appropriate and culturally relevant psychosocial interventions that address challenges arising within family, school, peer, and community environments.[16] One study of adolescents aged 11–17 years with risk factors for anxiety, depression, and mood disturbances found a high prevalence of psychological distress, particularly among those experiencing social isolation and disrupted daily routines. Strong family support was associated with better coping abilities, whereas limited family support was

linked to poorer mental health outcomes. Psychological therapies and educational interventions were found to improve emotional well-being, reduce symptom severity, enhance school attendance, and positively influence academic performance, although access to these services varied across demographic groups [17].

Further evidence comes from a three-wave longitudinal study of 6,995 adolescents in Shandong, China, which examined the relationships among life stress, insomnia, and anxiety/depressive symptoms. The findings showed that increases in life stress were associated with higher levels of insomnia and anxiety/depressive symptoms over time. Cross-lagged panel analyses demonstrated that life stress, insomnia, and anxiety/depressive symptoms predicted one another across successive time points. In addition, insomnia partially mediated the relationship between life stress and anxiety/depressive symptoms, while anxiety/depressive symptoms partially mediated the relationship between life stress and insomnia [18].

Taken together, these findings reinforce the importance of addressing multiple factors that contribute to adolescent psychological distress, including academic pressures, ineffective coping strategies, family support, sleep disturbances, and broader social stressors. School-based coping skills programs may provide an effective platform for addressing several of these interconnected risk factors simultaneously.

Conclusion

The findings of the present study indicate significant reductions in stress, anxiety, and depression levels following participation in the coping skills intervention. These results suggest that school-based coping skills programs may be effective in promoting adolescents' psychological well-being and reducing psychological distress. The findings underscore the importance of incorporating structured coping skills training and mental health promotion strategies into school health programs to support the early identification and management of emotional difficulties among adolescents.

References

1. Policy brief: the impact of COVID-19 on children. Policy breif]. :. United Nations 1-17.
2. Kieling C, Baker-Henningham H, Belfer M, Conti G, Ertem I, Omigbodun O, et al. Child and adolescent mental health worldwide: evidence for action. The Lancet. 2011;378(9801):1515–25.
3. Hoseini-Esfidarjani SS, Tanha K, Negarandeh R. Satisfaction with life, depression, anxiety, and stress among adolescent girls in Tehran: a cross sectional study. BMC Psychiatry. 2022 Dec;22(1):109.
4. Keyes KM, Platt JM. Annual Research Review: Sex, gender, and internalizing conditions among adolescents in the 21st century – trends, causes, consequences. J Child Psychol Psychiatry. 2024 Apr;65(4):384–407.
5. Devika Mehra 1,2, Theophilus Lakiang 2, Nishtha Kathuria 2, Manish Kumar 2, Sunil Mehra 2, Shantanu Sharma 2,3,*, Editor: Alyx Taylor. Mental Health Interventions among Adolescents in India: A Scoping Review. Available from: https://pubmed.ncbi.nlm.nih.gov/35206951/
6. Konac D, Young KS, Lau J, Barker ED. Comorbidity Between Depression and Anxiety in Adolescents: Bridge Symptoms and Relevance of Risk and Protective Factors. J Psychopathol Behav Assess. 2021 Sept;43(3):583–96.
7. Feiss R, Dolinger SB, Merritt M, Reiche E, Martin K, Yanes JA, et al. A Systematic Review and Meta-Analysis of School-Based Stress, Anxiety, and Depression Prevention Programs for Adolescents. J Youth Adolesc. 2019 Sept;48(9):1668–85.
8. Zhang Q, Wang J, Neitzel A. School-based Mental Health Interventions Targeting Depression or Anxiety: A Meta-analysis of Rigorous Randomized Controlled Trials for School-aged Children and Adolescents. J Youth Adolesc. 2023 Jan;52(1):195–217.
9. Lee MJ, Wu WC, Chang HC, Chen HJ, Lin WS, Feng JY, et al. Effectiveness of a school-based life skills program on emotional regulation and depression among elementary school students: A randomized study. Child Youth Serv Rev. 2020;118:105464.
10. John JM, Sharma R. AB010. Effectiveness of life skills training to enhance mental health status and wellbeing of children and adolescents. Pediatr Med. 2020 Feb;3:AB010–AB010.
11. Moore SE, Norman RE, Suetani S, Thomas HJ, Sly PD, Scott JG. Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. World J Psychiatry. 2017;7(1):60.
12. Kumar A, Yadav G, Chauhan N, Bodat S. Prevalence of depression, anxiety and stress among

school going adolescents in Delhi: a cross sectional study. Int J Community Med Public Health. 2019 Nov 27;6(12):5021.
13. Van Loon AWG, Creemers HE, Beumer WY, Okorn A, Vogelaar S, Saab N, et al. Can Schools Reduce Adolescent Psychological Stress? A Multilevel Meta-Analysis of the Effectiveness of School-Based Intervention Programs. J Youth Adolesc. 2020 June;49(6):1127–45.
14. Sun Y, Zhong Y, Sun W, Chu L, Long J, Fan XW. More prevalent and more severe: gender differences of depressive symptoms in Chinese adolescents. Front Public Health. 2023 July 13;11:1167234.
15. Yang X, Fang Y, Wang Y, Liu S, Cai J, Li H, et al. Multidimensional stressors and depressive and anxiety symptoms in adolescents: A network analysis through simulations. J Affect Disord. 2024;347:364–74.
16. Parikh R, Sapru M, Krishna M, Cuijpers P, Patel V, Michelson D. "It is like a mind attack": stress and coping among urban school-going adolescents in India. BMC Psychol. 2019 Dec;7(1):31.
17. Romero A, Petro M, Ruiz EP. Anxiety, Depression, and Stress on School-Aged Children and Adolescents in 2021: An Urgent Need for Comprehensive Intervention and Support. Eur Psychiatry. 2024 Apr;67(S1):S446–S446.
18. Yang Y, Liu X, Liu ZZ, Tein JY, Jia CX. Life stress, insomnia, and anxiety/depressive symptoms in adolescents: A three-wave longitudinal study. J Affect Disord. 2023;322:91–8.