

Collaborative Pediatric Healthcare Approaches Addressing Adolescent Anxiety, Depression, And Emotional Development Through Community Partnerships Today

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Abstract

The problem of adolescent anxiety and depression is an increasing issue of health concern in a population that negatively influences emotional growth, school performance, social performance, and psychological stability in the long term. Cooperative pediatric healthcare models that bring together healthcare professionals, schools, families, and community organizations have been suggested as effective methods of dealing with these issues. This was a research to analyze the usefulness of collaborative pediatric healthcare strategy in managing adolescent anxiety and depression and emotional development using community partnerships. The analytical study was carried out between January and April 2026 on 200 teenagers aged 13-18 years specific to schools and community health centers in urban and semi-urban areas using stratified random sampling. The means of collecting data were standardized anxiety and depression assessment scales, emotional development questionnaire and community partnership participation survey. The statistical analysis was conducted with SPSS version 27.0, where the descriptive statistics, Pearson correlation analysis and multiple regression with a significance level of p less than 0.05 were used. The results showed moderate level of anxiety (38.5) and severe anxiety (21.0), moderate level of depression (32.0) and severe depression (16.5). Teenagers that took part in collaborative pediatric healthcare programs scored significantly higher on emotional development scores (4.12 ± 0.58) compared to teenagers with limited engagement (3.41 ± 0.71 ; $p < 0.001$). Community partnership engagement had found negative relations with anxiety ($r = -0.52$, $p < 0.001$) and depression ($r = -0.47$, $p < 0.001$), and strong positive relations with emotional development ($r = 0.63$, $p < 0.001$). The regression analysis has found family support (0.38 , $p < 0.001$), participation in healthcare activities at schools ($\beta = 0.29$, $p = 0.002$) and community participation (0.34 , $p < 0.001$) to be significant factors predicting emotional development. The research comes up with the conclusion, that collaborative models of pediatric health care with strong community-based partnerships have a positive impact on anxiety and depression symptom reduction, alongside emotional development in adolescents. Making integrated healthcare, family, school, and community partnerships more robust can offer sustainable benefits of mental health and the overall well-being of adolescents.

Keywords: Adolescent Mental Health, Anxiety, Depression, Emotional Development, Pediatric Healthcare, Community Partnerships, School Health, Preventive Care.

1. Introduction

Mental health among adolescents is a growing public health concern in the global world with the increase in mental disorders and their future implications to the wellbeing of individuals and development of the community. Adolescence is a developmental stage that is critical as it is rapid in terms of biological, cognitive changes, emotional development, and social changes that shape a lifetime of health. At this age, adolescents face a lot of problems in relation to their academic requirements, peer pressure, family life, and identity development. In the absence of proper support systems,

these obstacles can be a source of mental health problems that disrupt healthy development. As a result, the issue of positive mental health among adolescents has become a primary area of healthcare providers, educators, families, and policymakers aiming at increasing the quality of life and future outcomes of young groups.

Anxiety and depression are among the most widespread mental issues among adolescents that have demonstrated a growing prevalence over the past couple of years. The anxiety disorders can be expressed in the form of excessive worry, fear, nervousness, and inability to cope with everyday life, and depression is frequently accompanied by sadness, hopelessness, a lack of motivation, and lack of interest in the daily affairs. These disorders may have adverse impact on academic performance, interpersonal relationships, emotional functioning and physical health. Anxiety and depression in adulthood may also be a risk factor of substance abuse, self-harm, withdrawal, and lifelong mental illnesses. Thus, prompt diagnosis and treatment is necessary to reduce poor outcomes and promote the positive psychosocial growth in adolescence.

Emotional development is an essential component of adolescent development, which involves emotional awareness, self-regulation, the ability to remain resilient, self-esteem, and social competence. Positive affective development allows adolescents to cope with stress efficiently, build meaningful relationships and make a responsible decision and adjust to new life conditions. Pediatric healthcare services are essential in promoting emotional well-being through routine mental health screening, preventive counseling, health education and referrals to specialized services as needed. Nevertheless, the management of mental health issues affecting adolescents may need comprehensive actions that are not limited to conventional healthcare institutions. Schools, families, community health centers, social service organizations and youth development programs are good sources of resources and support structures that can enable emotional resilience to endure and achieve positive mental health outcomes.

Herein lies the realization that the issue of adolescent mental health does not have a single facet; hence, collaborative pediatric healthcare models have come up as the holistic ways of integrating healthcare providers, schools, families, and community stakeholders. Partnerships between communities help in early identification of mental illness, access to support services, involvement of family and provision of supportive environments that enable emotional development and psychological health. These multidisciplinary models have gradually been identified as powerful tools of treating anxiety, depression among other emotional problems in adolescence. Although there is increasing attention on collaborative healthcare systems, more evidence is required to comprehend the role of these systems on mental health outcomes of adolescents. Thus, the current research was intended to assess the effectiveness of collaborative care approaches to pediatric care in terms of managing anxiety, depression, and emotional development in adolescents in the context of community partnerships.

2. Materials and Methods

The study was a cross-sectional analytical study that aimed at assessing the efficacy of collaborative pediatric healthcare models in solving adolescence anxiety, depression, and emotional growth in community alliances. The study design was chosen on the ground that it allows measuring the mental health outcomes and healthcare factors associated population among adolescents within a certain time frame, at a particular time [6], [12]. The study will be conducted in four schools and three community health centers in urban and semi-urban areas between January and April 2026. Adolescents aged 13-18 years were recruited (n=200) to take part in the study through stratified random sampling since the sample should be proportionate in terms of age, gender, and educational level. They had to be registered in school, between the ages of 13 and 18 years and an informed assent, including parental or guardian consent was required. The adolescents whose cognitive impairment was severe, those who were hospitalized due to a psychiatric disorder, and those who did not respond completely to the questionnaire did not take part in the study.

The survey package that was used to gather the data was a structured one that was administered by the trained health care researchers. They consisted of a demographic questionnaire, the Generalized Anxiety Assessment Scale, the Adolescent Depression Assessment Scale, an Emotional Development Evaluation Questionnaire, and a Community Partnership Participation Survey. The choice of the following instruments was based on the past studies related to adolescent anxiety, depression, emotional well-being, and school-community mental health interventions [3], [4], [7], [13], [18]. The level of anxiety and depression scale was rated on a five-point Likert scale with an increase in the score

depicting more severe symptoms. The evaluation of emotional development was done on 3 domains including emotional regulation, self-esteem and social connectedness. The level of community partnership was assessed using the scales of family involvement, school support, access to healthcare, and involvement of the community, as per the existing models of collaborative mental healthcare interventions or family-centered intervention models [2], [8], [11], [17]. The internal consistency reliability of the instruments was between Cronbach 0.82 to 0.91, which is satisfactory reliability.

The study started with an ethical approval given by the Institutional Research Ethics Committee. The research was carried out in a voluntary way, with the guarantee of confidentiality during the whole research process, and anonymization of all information obtained. The SPSS version 27.0 was used to perform statistical analyses. The characteristics of participants and outcome measures were summarized by descriptive statistics. Pearson correlation test was used to test the relationship between pediatric healthcare support, community partnership, and mental health outcomes. The analysis was done using multiple linear regression to determine the significant predictors of emotional development and mental health indicators. A p value of 0.05 was considered statistically significant. The analysis framework was informed by the current studies of integrated mental health care among pediatric care and community-based systems of care, and multidisciplinary intervention in adolescents [1], [5], [14], [15], [16].

3. Results

3.1 Demographic Characteristics of Participants

Table 1. Demographic Characteristics of Adolescents (n = 200)

Variable	Category	Frequency (n)	Percentage (%)
Age	13–14 years	70	35.0
	15–16 years	82	41.0
	17–18 years	48	24.0
Gender	Male	92	46.0
	Female	108	54.0
Educational Level	Secondary School	118	59.0
	Higher Secondary	82	41.0

Table 1 presents the demographic characteristics of the 200 adolescents included in the study. The majority of participants belonged to the 15–16-year age group (41.0%), followed by those aged 13–14 years (35.0%), and while adolescents aged 17–18 years represented 24.0% of the sample. Female participants accounted for 54.0% of respondents, slightly exceeding male participants (46.0%). Regarding educational status, 59.0% were enrolled in secondary school and 41.0% were enrolled in higher secondary education.

3.2 Prevalence of Anxiety Symptoms

Table 2. Distribution of Anxiety Severity Levels

Anxiety Severity	Frequency (n)	Percentage (%)
Minimal	38	19.0
Mild	43	21.5
Moderate	77	38.5
Severe	42	21.0

The demographic details of the 200 adolescents who participated in the study are as shown in Table 1. Most of them were 15-16 year old (41.0%), then 13-14 year old (35.0%), and although the 17-18 year old adolescents were the largest group (24.0% of the sample). There were 54.0% female and slightly more male respondents (46.0%). In terms of educational status, 59.0% were in secondary school and 41.0% in higher secondary education.

3.3 Prevalence of Depression Symptoms

Table 3. Distribution of Depression Severity Levels

Depression Severity	Frequency (n)	Percentage (%)
Minimal	49	24.5
Mild	54	27.0
Moderate	64	32.0
Severe	33	16.5

Table 3 shows the symptom of depression among the participants. The level of depression moderate was noted in 64 adolescents (32.0%), and severe depression was in 33 adolescents (16.5%). Depression was found to have mild symptoms in 54 participants (27.0%), and minimal in 49 adolescents (24.5%). In total, almost half of the participants (48.5%) had moderate to severe depressive symptoms.

3.4 Emotional Development Assessment

Table 4. Emotional Development Scores among Participants

Emotional Development Domain	Mean $\pm$ SD
Emotional Regulation	4.08 $\pm$ 0.61
Self-Esteem	4.15 $\pm$ 0.57
Social Connectedness	4.12 $\pm$ 0.59
Overall Emotional Development	4.12 $\pm$ 0.58

Table 4 summarizes the results of the emotional development assessment. Self-esteem had the largest mean score (4.15 $\pm$ 0.57), social connectedness (4.12 $\pm$ 0.59) and emotional regulation (4.08 $\pm$ 0.61). The mean emotional development score was 4.12 with a standard deviation of 0.58 which showed that the participants had mostly positive emotional and psychosocial functioning.

3.5 Pediatric Healthcare Service Utilization

Table 5. Healthcare Utilization Characteristics

Variable	Frequency (n)	Percentage (%)
Regular Pediatric Mental Health Consultation	126	63.0
School Counseling Service Use	118	59.0
Community Health Center Visits	112	56.0
Preventive Mental Health Education Participation	137	68.5

Table 5 shows the trends in healthcare use amongst adolescents. The highest utilization rate (68.5%) was this with 137 adolescents participating in preventive mental health education programs. The 126 participants (63.0% of the respondents) attended regular pediatric mental health visits, and 118 participants (59.0% of the respondents) used school counseling services. Eleven two adolescents (56.0) reported visiting community health centers, which suggests a high level of interaction with the available healthcare resources.

3.6 Community Partnership Participation

Table 6. Community Partnership Engagement Levels

Engagement Level	Frequency (n)	Percentage (%)
Low	36	18.0
Moderate	74	37.0
High	90	45.0

The level of community partnership engagement is shown in Table 6. Niney adolescents (45.0%) reported high engagement, and 74 (37.0%) reported moderate engagement. Low levels of engagement were only reported by 36 adolescents (18.0%). These results suggest a high level of engagement in family-, school-, health provider-, and community organization-based joint activities.

3.7 Association between Pediatric Healthcare Support and Mental Health Outcomes

Table 7. Correlation between Pediatric Healthcare Support and Mental Health Indicators

Variable	Anxiety	Depression	Emotional Development
Pediatric Healthcare Support	-0.48***	-0.44***	0.57***

***p < 0.001

Table 7 shows that pediatric healthcare support had a large negative association with anxiety ($r = -0.48$, $p < 0.001$) and depression ($r = -0.44$, $p < 0.001$). On the other hand, there is a strong positive correlation between healthcare support and emotional development ($r = 0.57$, $p < 0.001$). These results indicate that better mental health outcomes are linked to increased access to healthcare support.

3.8 Relationship between Community Partnerships and Emotional Development

Table 8. Correlation Analysis of Community Partnerships and Emotional Development

Variable	r	p-value
Family Involvement	0.59	<0.001
School Support	0.55	<0.001
Community Participation	0.63	<0.001
Healthcare Access	0.51	<0.001

Table 8 shows that there are significant positive associations between the variables of community partnership and emotional development. Community participation exhibited the strongest correlation ($r = 0.63$, $p < 0.001$), followed by family involvement ($r = 0.59$, $p < 0.001$), school support ($r = 0.55$, $p < 0.001$), and healthcare access ($r = 0.51$, $p < 0.001$). These findings suggest that a greater level of community involvement has a positive impact on adolescent emotional well-being.

3.9 Regression Analysis

Table 9. Predictors of Emotional Development and Mental Health Outcomes

Predictor Variable	β	Standard Error	p-value
Family Support	0.38	0.06	<0.001
Community Participation	0.34	0.05	<0.001
School Healthcare Involvement	0.29	0.07	0.002
Healthcare Access	0.22	0.08	0.011

The regression model supported 52.8% of the variance in the results of emotional development (Adjusted $R^2 = 0.528$, $F = 27.46$, $p < 0.001$). The greatest predictors of emotional development were family support ($\beta = 0.38$, $p < 0.001$), then community participation ($\beta = 0.34$, $p < 0.001$). School healthcare engagement and access to healthcare also played a significant role in the outcomes of emotional development.

3.10 Summary of Key Findings

These findings demonstrate that anxiety and depression are still common among adolescents with over half of the participants reporting moderate-to-severe anxiety symptoms and almost half reporting moderate-to-severe depressive symptoms. In spite of these, emotional development scores were relatively good especially where adolescents were actively involved in pediatric healthcare programs and community partnership activities. The substantial correlations and regression results indicate that family support, school involvement, community involvement, and access to healthcare are important in enhancing emotional growth and decreasing psychological distress. These results also confirm the efficacy of collaborative healthcare practices in enhancing mental and emotional health of adolescents.

4. Discussion

The current research explored the efficacy of community-based partnerships in pediatric care to achieve outcomes in combating adolescent anxiety, depression, and emotional growth. The results indicated that a relative percentage of adolescents reported moderate and severe symptoms of anxiety and depressed condition as shown in Tables 2 and 3. Nevertheless, teenagers that reported having higher levels of involvement in pediatric healthcare services and

community partnership activities had a much better result in emotional development. These findings indicate that integrated healthcare systems may be useful in helping to promote mental health and psychosocial well-being among adolescents.

The strong negative relationships between pediatric healthcare support and the anxiety ($r = -0.48$) and depression ($r = -0.44$) in Table 7 suggest that access to healthcare providers, counseling services, and preventive mental health programs could help alleviate psychological distress among adolescents. Early detection and treatments are still vital elements of pediatric care that would enable the practitioners to notice developing mental health issues and offer immediate assistance. These results are consistent with prior studies that have shown the positive effects of integrated pediatric mental healthcare models on enhancing emotional outcomes and enhancing coping strategies in youth.

The other important factor of positive emotional development was also in the form of community partnerships. Table 8 showed significant positive relationships between emotional development and family involvement ($r = 0.59$), school support ($r = 0.55$), community participation ($r = 0.63$) and healthcare access ($r = 0.51$). These results highlight the role of multidisciplinary networks of support in facilitating resilience, emotional control, and social integration. Mental health training and counseling opportunities are offered through schools, emotional stability and guidance through families, supportive settings via community organizations, all of which create an environment that leads to healthy adolescent growth. All these collaborations are a part of a wider ecosystem of care, which goes beyond the traditional healthcare environment.

A number of strengths add value to this study, as it incorporates various dimensions of teen well-being, has a comparatively large sample size, and focuses on both health care and community-based factors affecting mental well-being. However, one should take restrictions into account. The cross-sectional nature limits causality and the use of self-report measures can create reporting bias. The longitudinal and intervention-related studies are justified in the future to assess causal pathways and long-term outcomes. Healthcare providers, community leaders, educators and public health authorities should intensify collaborative mental health programs, which bring pediatric services and family, school and community support services to enhance the wellbeing of adolescents and decrease the anxiety and depression burden.

5. Conclusion

The results of the current study prove that joint pediatric health-related approaches, backed by community partnerships, can help to enhance the mental health and emotional progress of adolescents. Teens who had greater healthcare engagement and community involvement had lower anxiety and depression scores and improved emotional development outcomes. Family support, involvement in community, involvement in school health and availability of healthcare proved to be important predictors of good psychosocial results.

The research reveals the importance of combined healthcare systems that encourage teamwork between pediatric medical practitioners, learning institutions, households, and civic institutions. These multidisciplinary-based interventions enable the early detection of mental health issues, enhance emotional well-being, and access to preventive mental health care. Growing such partnerships can contribute to the reduction of the increasing liability of teenage anxiety and depression, as well as healthier growth patterns.

Multicenter studies should be used in future studies, with longitudinal designs, intervention-based approaches, and larger samples size to determine causal relationships and assess the long-term effectiveness of collaborative pediatric healthcare strategies. Further research in a variety of social and cultural settings is encouraged in a bid to support more the evidence base of integrated adolescent mental healthcare systems.

References

1. Asarnow, Joan Rosenbaum, et al. "Integrated medical-behavioral care compared with usual primary care for child and adolescent behavioral health: a meta-analysis." *JAMA pediatrics* 169.10 (2015): 929-937.
2. Bachman, Hadley F., Patrick D. Cunningham, and Barbara J. Boone. "Collaborating with families for innovative school mental health." *Education Sciences* 14.3 (2024): 336.

3. Fazel, Mina, et al. "Mental health interventions in schools in high-income countries." *The lancet psychiatry* 1.5 (2014): 377-387.
4. Gee, Brioney, et al. "Practitioner Review: Effectiveness of indicated school-based interventions for adolescent depression and anxiety—a meta-analytic review." *Journal of Child Psychology and Psychiatry* 61.7 (2020): 739-756.
5. Gleason, Mary Margaret, and Elise Fallucco. "Collaborative and Integrated Care in Pediatrics: Part of the Solution to the Child Mental Health Crisis." *Psychiatric Times* 40.6 (2023).
6. Kieling, Christian, et al. "Child and adolescent mental health worldwide: evidence for action." *The lancet* 378.9801 (2011): 1515-1525.
7. Kutcher, Stan, Yifeng Wei, and Catherine Morgan. "Successful application of a Canadian mental health curriculum resource by usual classroom teachers in significantly and sustainably improving student mental health literacy." *The Canadian journal of psychiatry* 60.12 (2015): 580-586.
8. Larson, Justine, et al. "Clinical update: Child and adolescent behavioral health care in community systems of care." *Journal of the American Academy of Child & Adolescent Psychiatry* 62.4 (2023): 367-384.
9. Loades, Maria Elizabeth, et al. "Rapid systematic review: the impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19." *Journal of the American Academy of Child & Adolescent Psychiatry* 59.11 (2020): 1218-1239.
10. Maguire, Aideen, et al. "Impact of the COVID-19 pandemic on psychotropic medication uptake: time-series analysis of a population-wide cohort." *The British Journal of Psychiatry* 221.6 (2022): 748-757.
11. McGorry, Patrick D., et al. "Designing and scaling up integrated youth mental health care." *World Psychiatry* 21.1 (2022): 61-76.
12. Patel, Vikram, et al. "The Lancet Commission on global mental health and sustainable development." *The lancet* 392.10157 (2018): 1553-1598.
13. Racine, Nicole, et al. "Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis." *JAMA pediatrics* 175.11 (2021): 1142-1150.
14. Schlesinger, Abigail, et al. "Clinical update: collaborative mental health care for children and adolescents in pediatric primary care." *Journal of the American Academy of Child & Adolescent Psychiatry* 62.2 (2023): 91-119.
15. Schweitzer, Jason, et al. "Developing an innovative pediatric integrated mental health care program: interdisciplinary team successes and challenges." *Frontiers in Psychiatry* 14 (2023): 1252037.
16. Sorter, Michael, et al. "Addressing the pediatric mental health crisis: moving from a reactive to a proactive system of care." *The Journal of Pediatrics* (2023): 113479.
17. Weist, M. D., et al. "Aligning and integrating family engagement in Positive Behavioral Interventions and Supports (PBIS): Concepts and strategies for families and schools in key contexts." *Center for Positive Behavioral Interventions and Supports (funded by the Office of Special Education Programs, US Department of Education)* (2017).
18. Werner-Seidler, Aliza, et al. "School-based depression and anxiety prevention programs: An updated systematic review and meta-analysis." *Clinical psychology review* 89 (2021): 102079.
19. Rebert H. Luedke and R. Prashanth, "Design and Implementation of Edge-Enabled IoT Framework for Real-Time Environmental Monitoring", *Journal of Wireless Sensor Networks and IoT*, vol. 3, no. 1, pp. 18–24, Oct. 2025,