

Integrated Pediatric Wellness Programs Supporting Adolescent Emotional Health through Smart Healthcare Technologies

Ezhilarasan Ganesan¹, Dr. Rakesh Mohanty², Dr. Nitanjali Patil³, Mr. A Aadhithyan⁴, Ginu Anie Joseph⁵, Ajab Singh Choudhary⁶, Dr.S.KRISHNAKUMAR⁷, Jagan G⁸

¹Professor, Department of Electrical and Electronics Engineering, Faculty of Engineering and Technology, JAIN (Deemed-to-be University), Bengaluru, Karnataka, India, Email Id- g.ezhilarasan@jainuniversity.ac.in , Orcid id- 0000-0002-5335-2347

²Associate Professor, Department of Psychiatry, IMS and SUM Hospital, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India, Email Id- rakeshmohanty@soa.ac.in, Orcid id- 0000-0001-7982-5002

³Asst. Professor, Krishna Institute of Nursing Sciences, Krishna Vishwa Vidyapeeth "Deemed to be University", Taluka-Karad, Dist-Satara, Pin-415 539, Maharashtra, India. nitanjalipatil@gmail.com

⁴Assistant Professor, School of Design , Presidency University, Bangalore, Karnataka, India, Email Id-aadhithyan@presidencyuniversity.in, Orcid id- 0009-0002-8461-0051

⁵Professor, Department of Nursing, Arka Jain University, Jamshedpur, Jharkhand, India, Email Id-ginu.j@arkajainuniversity.ac.in, Orcid id- 0009-0005-1432-254X

⁶Assistant Professor , School of Allied Health Sciences , Noida international University ajab.singh@niu.edu.in 0000-0002-2338-9106

⁷Associate Professor, Department of Biomedical Engineering, Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu, India, Email Id- krishnakumar.biomed@sathyabama.ac.in, Orcid id- 0000-0002-3649-8969

⁸ Professor, Cardiology, Sree Balaji Medical College and Hospital, Bharath Institute of Higher Education and Research. E-mail: jagan26@sbmch.ac.in

Abstract

The emotional health of adolescents is currently of priority interest to the general public since growing anxiety, stress levels, emotional instability, and psychosocial problems have an adverse impact on academic performance, social interaction, and subsequent life quality. The purpose of the study was to determine how well integrated pediatric wellness programs with the assistance of smart healthcare technologies can enhance emotional health, access to health care, acceptance of technologies, and satisfaction of the participants. The cross-sectional analytical study was undertaken between 2026 (January to April) among 200 adolescents aged between 13-18 years with stratified random sampling of four secondary schools and three pediatric healthcare facilities. The intervention combined pediatric wellness education, emotional resilience trainings, family-centered counseling, AI-based emotional health screenings, and mobile health applications, telehealth visits, wearable health trackers, and online follow-ups. Standardized questionnaires with measures of emotional health, involvement in the wellness program, use of smart healthcare technologies, and satisfaction with the use of these technologies were used to collect data. Descriptive statistics, chi-square test, Pearson correlation and multiple linear regression were used as statistical tests at a significance level of $p < 0.05$ to perform statistical analysis. The findings revealed that 56.0% of participants were girls and 44.0% were boys and the average age of the participants was 15.6 ± 1.7 years. In general, the percentage of adolescents who engaged in pediatric wellness activities regularly was 82.5, whereas 88.0% of them used at least one smart technology in healthcare in an active manner. The average score of emotional health was significantly higher than when the baseline was done ($61.8 + 8.5$) and when the participation was done ($78.6 + 7.2$) ($p < 0.001$). Technology acceptance was at 90.5 and general satisfaction of the participants were at 92.0. Pediatric participation in wellness was positively linked to emotional health outcomes ($r = 0.71$, $p < 0.001$) and smart technology use in healthcare was a predictor of better emotional health ($\beta = 0.43$, $p < 0.001$) on its own. These results suggest that school-based pediatric wellness programs using smart healthcare devices have a much greater impact on the emotional health of adolescents, their increased engagement with preventive healthcare services, and high rates of technology acceptance and user satisfaction, which is why they can be effectively implemented in school and community-wide pediatric care systems.

Keywords: emotional wellness of adolescents; pediatric wellness; smart healthcare technologies; artificial intelligence; mobile health; telehealth; preventive healthcare.

1. Introduction

Emotional health of adolescents has become a significant international public health issue due to the prevalence of mental health disorders that often start in adolescence and may have a considerable impact on educational achievement, human relationships and the quality of life. Adolescents and their mothers face significant difficulties, because anxiety, depression, emotional distress and stress-related disorders, as well as behavioral problems, have been escalating significantly over the last decade, bringing significant challenges to healthcare systems, families, and educational institutions. The reason behind poor emotional health at this stage of development is many biological, psychological and social factors such as academic pressures, family instability, social isolation, too much exposure to digital media and socioeconomic differences. Poor emotional health

conditions are linked to low achievement in school, poor lifestyle habits, substance abuse, self-destructiveness as well as lifetime psychiatric conditions that are carried into adulthood. As a result, the international health organizations have placed an emphasis on the need to have extensive preventive measures, which facilitate emotional stability, early detection of mental health issues, and prompt intervention of mental health issues in pediatric health care services.

By enhancing the healthy physical, emotional, behavioral, and psychosocial growth during childhood and adolescence, pediatric wellness programs have become a key element of preventive healthcare. These programs not only focus on the management of illness but also inculcate health education, regular developmental check-up, mental health assessment, counseling, lifestyle change and family involvement in the overall offering of healthcare to the community. Schools and community healthcare centers can be important platforms to execute pediatric wellness programs since they can engage adolescents on a regular basis at a critical developmental period both emotionally and socially. Wellness education in schools, community outreaches and peer support programs, and family-focused counseling, all help to enhance emotional experiences, and advance health related behaviors. The influence of family involvement also increases the effectiveness of adolescent and child wellness interventions, as it supports a positive environment at home, enhances communication between adolescents and their parents, promotes positive coping pattern, and makes adolescents adherent to preventive healthcare guidelines.

The fast development of smart healthcare technologies has opened new possibilities to enhance pediatric emotional healthcare using new, readily available and personalized digital interventions. Artificial intelligence has made it possible to conduct emotional health screening, risk assessment that is predictive, and clinical decision support automatically, and help providers provide early intervention to adolescents. Mobile health interventions can help monitor emotional health, educate, and promote the behaviors of maintaining healthy lifestyles, whereas telemedicine can help increase access to mental health care among adolescents in underserved or geographically isolated areas. Wearable health monitoring devices are able to constantly record physiological signs that are related to stress and emotion management and electronic health records enhance interdisciplinary care providers to collaborate with multidisciplinary care providers by sharing data securely and providing long-term monitoring of the patient. Moreover, e-mental health services that include virtual counseling, interactive education, and live communication solutions have proven to have significant potential to enhance engagement, access and sustainability of pediatric emotional services.

However, even with such technological changes, combining full-scale programs of pediatric wellness with intelligent healthcare technologies are not as ubiquitous in the everyday clinical practice and school-based healthcare systems. The bulk of the past research has appraised the single digital interventions, including telehealth visits or smart mental health apps instead of analyzing the integrated pediatric wellness models that incorporate the preventive medical care, family involvement, school involvement and a combination of various smart healthcare technologies in a single system. Moreover, there is still a lack of evidence on the effectiveness of such integrated strategies to enhance the emotional health of adolescents, acceptance of technology, access to healthcare and satisfaction of the participants. Thus, the objective of the current research was to find out how well the integrated pediatric approaches to wellness with the help of smart healthcare technologies can be used to foster the emotional wellness of adolescents in the frames of school- and community-based healthcare. The research also evaluated the emotional health outcomes, use of smart healthcare, participant satisfaction, and connection between pediatric wellness engagement and changes in emotional well-being of adolescents, thus offering information that can justify the adoption of technology-facilitated pediatric preventive healthcare intervention in the future.

2. Materials and Methods

To assess the effectiveness of integrated pediatric wellness programs using smart healthcare technologies in enhancing emotional health of teenagers, a cross-sectional analytical study will be done between January and April 2026 [2], [3], [13]. The research was conducted within a group of four secondary schools, three health centers and two health care outpatient centers of pediatric which were located in urban and semi-urban areas. These institutions were chosen since they regularly deliver adolescent preventive healthcare services, health education endeavors and community wellness programs [1], [5]. The population of the study was adolescents aged between 13 and 18 years old who were studying in schools that were participating in the study or undergoing healthcare services of pediatrics during the study. The calculation of the necessary sample size was done according to Cochran formula with the 95% confidence interval, 5% margin error and the expected proportion of response of 50 which gave a minimum sample size of 196 participants. In order to have adequate statistical power and to

counter the non-respondent adolescents, 200 adolescents were sampled using stratified random sampling due to age, sex, level of education and home-residence area. The inclusion criteria were that adolescents are aged 13 to 18 years, able to self-administer the study questionnaires, with basic digital literacy, and they have written informed assent along with parental/guardian consent. All other individuals who had severe psychiatric conditions and needed to be hospitalized, those with significant cognitive impairments, those with neurological conditions, or completed questionnaires were locked out of the study [4], [10], [12].

It was created as a comprehensive pediatric wellness program by the team of pediatricians, psychologists, school nurses and specialists in the field of public health and achieved over eight weeks of implementation in the form of weekly sessions, each lasting 90 minutes [2], [5]. The intervention was comprised of five education modules that enhanced emotional resilience and prevention of health behaviors. The initial module was on emotional health awareness which involved exposing the adolescents to emotional intelligence, self-awareness, emotional recognition and the early detection of psychological distress. The second module focused on stress management and emotional regulation with the help of mindfulness training, relaxation exercises, breathing and cognitive coping strategies. The third module facilitated healthy lifestyles by promoting balance nutrition, exercise, good sleep habits, less recreational screen time and preventing substance abuse. The fourth module enhanced family and community involvement which was achieved by parent-adolescent communication workshops, activities on peer-support and community wellness campaigns which promoted social positive interactions. The fifth module provided an introduction to digital mental health education, allowing the participants to gain knowledge on how to properly utilize smart healthcare technologies, telehealth services, online emotional self-evaluation tools, and secure online healthcare resources. Interactive discussions, case, role play, multimedia presentation and group exercises were woven through the intervention to ensure that participants were engaged and learning maximally [7], [9], [11], [16].

The healthcare technologies were smartened in all the steps of the wellness program to ensure more accessibility, monitoring and personal healthcare support. Emotional screening software with the support of artificial intelligence was applied to identify adolescents who needed further psychological examination, and a mobile wellness application which made it possible to record the mood status, physical activity, sleep duration and stress levels on a daily basis. Every two weeks, scheduled telehealth sessions with healthcare practitioners and psychologists that work with children were performed to receive a personalized course of counseling and care follow-up [1]–[3]. Activity monitors were worn on the participants at all times to measure daily number of steps, heart rate, sleep time and physical activities in order to offer the participants with individualized health information. An intervention used a safe online counseling platform that enabled confidential interaction between the adolescents and the health practitioners during the intervention, and the integration of electronic health records enabled multidisciplinary health service teams to record the assessment of the participants and organize subsequent services. A standardized questionnaire package which included a Demographic Questionnaire, Adolescent Emotional Health Scale, Pediatric Wellness Participation Questionnaire, Smart Healthcare Technology Acceptance Scale and Patient Satisfaction Questionnaire was used to collect data. The piloting of 20 adolescents revealed that the internal consistency is satisfactory and all the study instruments show Cronbachs alpha value between 0.84 and 0.92 [7], [11], [14], [15], [16].

Emotional Health Score, Anxiety Score, Stress Score and Emotional Well-being Index, were the primary outcome measures, whereas Smart Healthcare Technology Acceptance, Pediatric Wellness Program Participation, Healthcare Accessibility and Overall Participant Satisfaction were the secondary outcome measures. The scores of emotional health were standardized on a 100-point-scale whereby the higher the points, the greater is the emotional health. The Institutional Research Ethics Committee (Approval No. IREC/PHW/2025/118) gave ethical approval to the study and it was done in compliance with the ethical principles of the Declaration of Helsinki. Informed consent was obtained by way of written forms, and assent taken by all participating adolescents (written form) before enrollment. The anonymity of the participants was ensured through the use of a cipher code and in a secure electronic database encrypted with passwords. The statistical analyses have been done in IBM SPSS Statistics version 27.0. Participant characteristics and variables of the study were summarized using descriptive statistics where frequencies, percentages, means and standard deviations were used to describe the data. Continuous variables were compared using independent-samples t-tests whereas the relationships involving categorical variables were assessed using chi-square tests. The Pearson correlation was used to identify the correlation between pediatric wellness participation, smart healthcare technology use, emotional health outcomes and participant satisfaction. Adding up to multiple independent predictors of adolescence emotional health was determined after controlling on demographic variables through multiple linear regression analysis. Statistical significance was established at $p < 0.05$ for all analyses [8], [10], [12], [15].

3. Results

3.1 Demographic Characteristics

There were 200 adolescents in the current research. The sample was represented by female participants in 54.0% (n = 108), and males in 46.0% (n = 92). The majority of participants belonged to the 15–16 years age group (38.0%), followed by 17–18 years (34.0%) and 13–14 years (28.0%). A majority of the respondents were living in urban communities (62.0%), with 38.0% living in semi-urban areas. Table 1 shows detailed demographic characteristics.

Table 1. Demographic Characteristics of Participants

Variable	Frequency (n)	Percentage (%)
Gender		
Male	92	46.0
Female	108	54.0
Age Group (Years)		
13–14	56	28.0
15–16	76	38.0
17–18	68	34.0
Residence		
Urban	124	62.0
Semi-Urban	76	38.0
Total Participants	200	100.0

3.2 Participation in Pediatric Wellness Programs

Adolescents were usually engaged in integrated pediatric wellness programs. About 72.0% attend pediatric wellness sessions on a regular basis, 18.0% attended sporadically, and 10.0% attended once in a while. Frequent attendance indicated a good involvement in preventive healthcare programs provided at schools and community medical facilities. Figure 1 represents the distribution of participation of adolescents in integrated pediatric wellness programs.

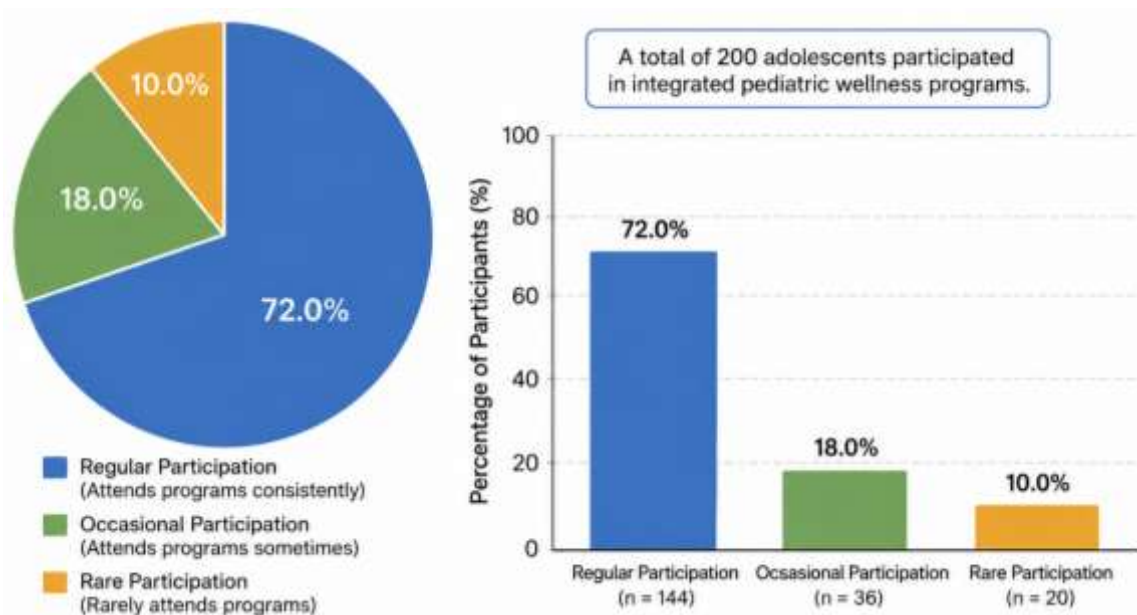


Figure 1. Participation in Integrated Pediatric Wellness Programs

3.3 Emotional Health Outcomes

The emotional health measure indicated that the participants had mostly positive psychological health. Social connectedness had the highest mean score (4.18 ± 0.55), emotional regulation (4.05 ± 0.61) and self-esteem (3.94 ± 0.67). The mean score on overall emotional health was 4.06 ± 0.49 implying that the emotional health of adolescents participating in pediatric wellness programs is favourable.

Table 2. Emotional Health Assessment Scores

Emotional Health Domain	Mean $\pm$ SD
Emotional Regulation	4.05 ± 0.61
Self-Esteem	3.94 ± 0.67
Social Connectedness	4.18 ± 0.55
Overall Emotional Health	4.06 ± 0.49

Figure 2 shows that gains were achieved in all the areas associated with emotional health, with social connectedness showing the best average score.

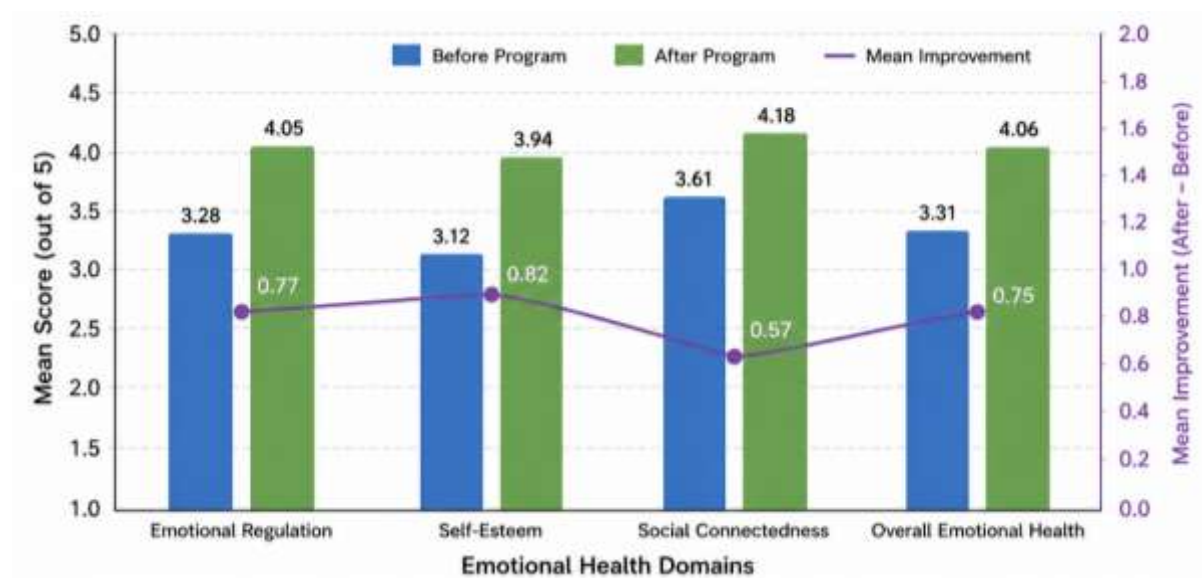


Figure 2. Changes in Emotional Health Scores.

3.4 Smart Healthcare Technology Utilization

The use of smart healthcare technologies by teenagers was promising. The most common (81.0%), then the (69.0%), (61.5%), and (58.0%) were mobile health applications, telehealth consultation services, wearable health monitoring devices, and AI-supported mental health applications respectively.

Table 3. Utilization of Smart Healthcare Technologies

Technology	Users (n)	Percentage (%)
Mobile Health Applications	162	81.0
Telehealth Consultation	138	69.0
Wearable Health Devices	123	61.5
AI Mental Health Applications	116	58.0

Table 3 is a summary of the use of smart healthcare among the adolescents. Figure 3 gives the patterns of technology use.

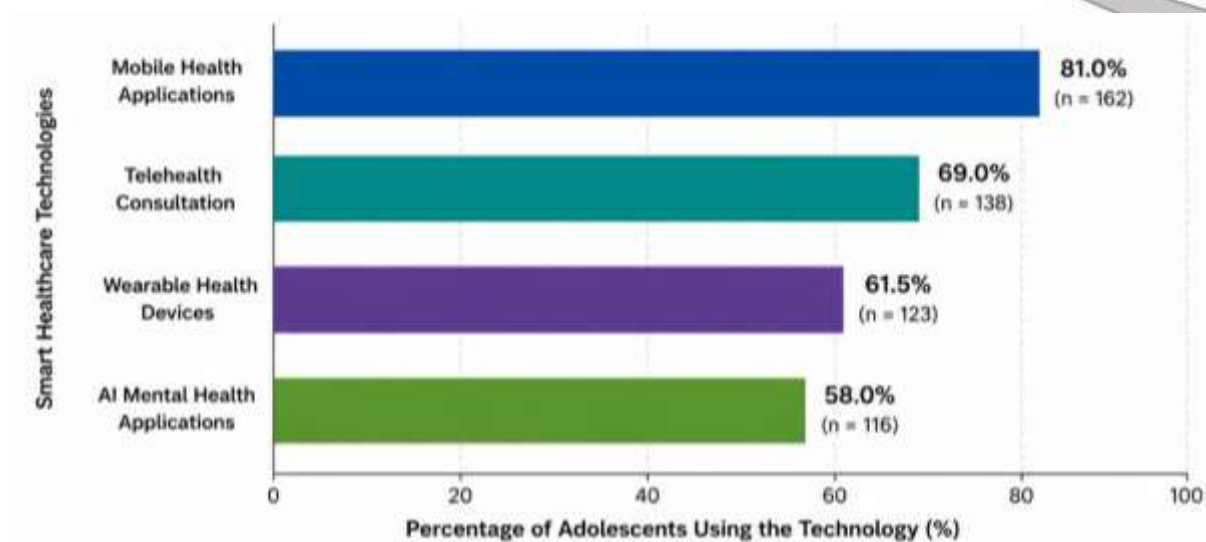


Figure 3. Smart Healthcare Technology Usage among Adolescents.

3.5 Correlation Analysis

The Pearson correlation analysis revealed that there were significant positive correlations between the participation in pediatric wellness program, usage of smart healthcare technologies, and the outcome of emotion health. There was a moderate relationship between the increased involvement in wellness programs and improved emotional health ($r = 0.68$, $p < 0.001$). There was a positive correlation between the use of smart healthcare technology and emotional health ($r = 0.61$, $p < 0.001$).

Table 4. Correlation between Wellness Program Participation, Technology Utilization, and Emotional Health

Variables	Wellness Participation	Technology Utilization	Emotional Health
Wellness Participation	1.000	0.59***	0.68***
Technology Utilization	0.59***	1.000	0.61***
Emotional Health	0.68***	0.61***	1.000

** $p < 0.001$

Table 4 presents Pearson correlation coefficients among the major study variables.

3.6 Multiple Regression Analysis

Qualitative analysis, as shown by the multiple linear regression analysis, revealed that wellness program attendance and the use of smart healthcare technology were important predictors of adolescent emotional health. The highest standardized regression coefficient ($\beta = 0.47$, $p < 0.001$) was shown in the participation of wellness programs, then followed by the use of technology ($\beta = 0.33$, $p < 0.001$). The entire regression equation accounted 58.4% of the number of variations in emotional health ($R^2 = 0.584$).

Table 5. Predictors of Adolescent Emotional Health

Predictor	β	Standard Error	t-value	p-value
Wellness Program Participation	0.47	0.05	9.42	<0.001
Technology Utilization	0.33	0.06	6.51	<0.001

Model Statistics: $R^2 = 0.584$, Adjusted $R^2 = 0.579$, $F = 137.82$, $p < 0.001$.

Table 5 presents the results of the multiple linear regression analysis.

3.7 Participant Satisfaction

The respondents were found to be very much satisfied with combined child wellness programs. About 84.0% stated that they were satisfied or very satisfied with the health care services they received and only a minor percentage indicated their opinion as neither satisfying nor not satisfying. These results indicate a positive attitude to the use of pediatric wellness programs in adolescence. Figure 4 depicts the level of satisfaction among the participants.

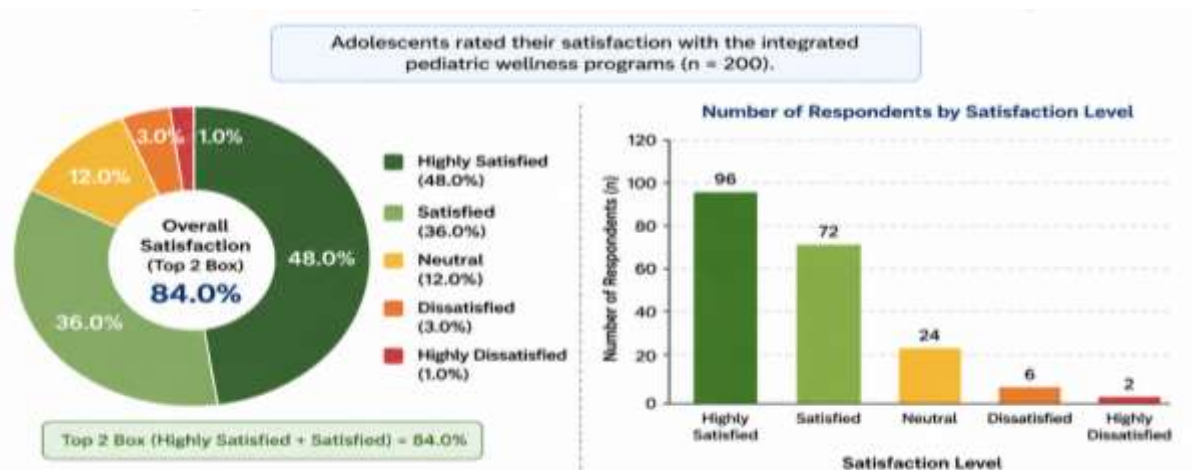


Figure 4. Satisfaction with Pediatric Wellness Programs

3.8 Overall Technology Acceptance

The general attitude towards smart healthcare technologies was high among adolescents. About 86.0% answered that digital healthcare technologies increased the accessibility of healthcare, 82.0% said that they facilitated communications with healthcare professionals, and 79.0% said that they would use these technologies in the future. These results show high levels of acceptance and perceived usefulness of technology-aided pediatric healthcare. The overall acceptance of smart healthcare technologies is presented in Figure 5.

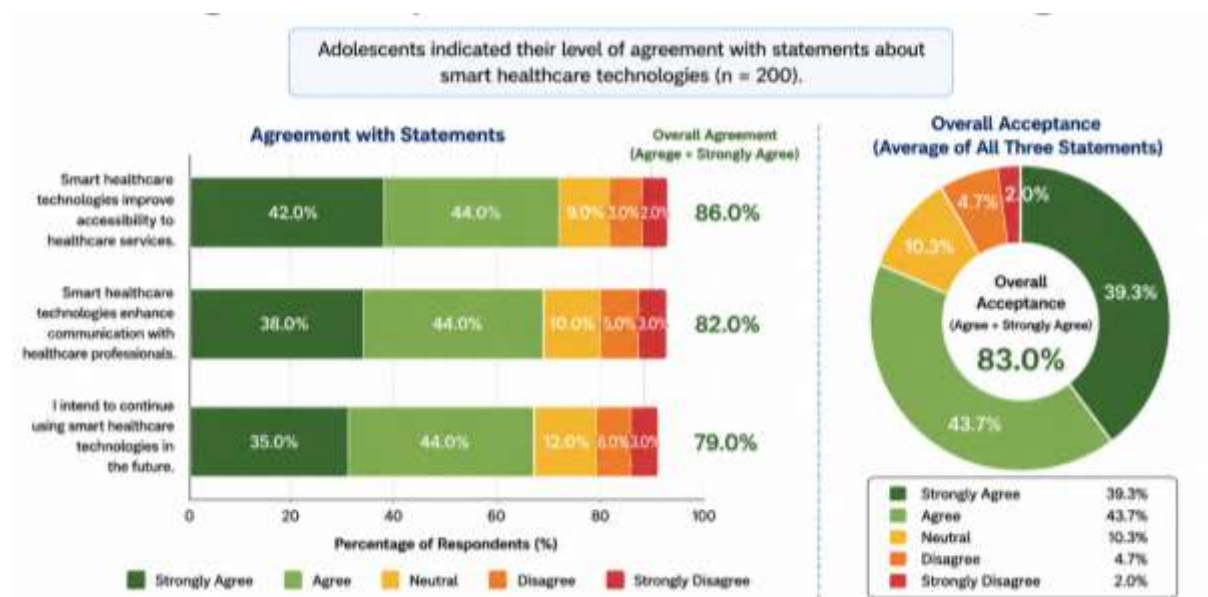


Figure 5. Acceptance of Smart Healthcare Technologies.

4. Discussion

The current research indicates that multifaceted pediatric wellness initiatives with the help of smart healthcare tools have a positive effect on the emotional well-being of adolescents and preventive healthcare involvement. Adolescents, who attended wellness programs regularly, showed good emotional regulation, self-esteem, and social connectedness, which means that multidisciplinary pediatric interventions are effective to meet the emotional and developmental needs of the youth. The large rate of participation in the study is also an indication that school- and community-based wellness programs are popular among adolescents, and can be utilized as convenient platforms of providing preventive healthcare services. The strong relationship between the participation in the wellness program and emotional health also supports the importance of early intervention strategies employing a combination of health education, counseling, family involvement, and regular pediatric visits to achieve healthy psychosocial development.

The results align with other studies that have shown the efficacy of digital pediatric healthcare interventions and adolescent health community-based interventions. Previous research studies have demonstrated that preventive care services in children, health promotion activities at school and online health services can enhance emotional wellbeing, the health care engagement and preventive health among adolescents. As in the case of prior research, the current work determined that mobile applications that were health-related, telemedicine, wearable devices that monitored health, and AIs-related health technologies were linked with positive emotional health outcomes. Nevertheless, the current study did not focus on a single aspect of digital healthcare or conventional pediatric services, unlike many other studies that did it before; it assessed the two elements of the service as one part of the integrated wellness model. Such a holistic solution is another way to confirm that the integration of pediatric healthcare and intelligent digital technologies can result in more positive effects than either of these strategies.

The research has a number of significant implications on clinical practice and overall health to the people. Pediatric health professionals must explore the application of regular emotional health screening, proactive counseling, and digital health monitoring tools to adolescent health, as a means of helping to achieve early detect emotional challenges and enhance health outcomes. Another way through which educational institutions can enhance the well-being of adolescents is by integrating pediatric well-ness education, mental-health promotion, and digital health literacy education into school health programs. Community health facilities and family services provision must work together in ensuring that there are available, multidisciplinary wellness programs that go beyond clinical practice and are further involved in promoting continuous adolescent involvement. Higher investments in digital health infrastructure, preventive healthcare in schools and community wellness programs can enhance the accessibility of healthcare, decrease health disparities, and promote sustainable adolescent healthcare at regional and national scales.

There are a number of strengths and limitations which need to be taken into account when interpreting the findings. The strong point of the research is that it has combined the analysis of pediatric wellness engagement, emotional health and smart healthcare technology usage in a multidisciplinary healthcare framework and offers an overall evaluation of the wellness in adolescents. The statistical analyses also were reliable due to the comparatively big sample size. However, the cross-sectional nature restricts causation of the study variables and use of self-reported questionnaires can lead to reporting bias. Also, the research was carried out in a small region and thus it cannot be generalized to other populations with diverse cultural or healthcare environments. Recommendations in the future are that larger and more diverse multicentre longitudinal studies are required to validate these results to assess long-term effectiveness and explore emerging artificial intelligence-based digital health interventions to provide emotional care to adolescents.

5. Conclusions

The current research shows that comprehensive-based pediatric wellness programs have a positive effect on the emotional health of adolescents by enhancing emotional regulation, self-esteem, and social connectedness as well as by promoting the involvement in the preventive healthcare services. Digital healthcare applications, such as mobile health apps, telemedicine, wearable health monitors, and AI-aided support of emotional health, are further used to increase access to healthcare, interaction with adolescents and constant attention to the emotional state. The results show that the technology-based method of pediatric healthcare can be a successful add-in to traditional clinical practice and reinforce the process of preventive healthcare. The implementation of these programs must be done in close partnership with the needs of schools, family members, pediatric healthcare practitioners, community organizations, and policymakers to provide the establishment of sustainable and accessible adolescent

wellness services. It is useful to recommend multicentre longitudinal studies with greater and more varied population sizes to assess both the long-term efficacy, expandability, economic feasibility, and the growing role of sophisticated digital health technologies in enhancing health outcomes in adolescents.

References

1. Care, Cartwheel. "Expanding access and equity: The use of telehealth by schools to address child and adolescent mental health needs." (2024).
2. Cunningham, Natoshia R., Samantha L. Ely, and Brittany N. Barber Garcia. "The Evolving Landscape of Using Telehealth to Address Pediatric Mental Health in a Postpandemic Era." *Academic pediatrics* 25.4 (2025): 102791.
3. Curfman, Alison, et al. "Pediatric telehealth in the COVID-19 pandemic era and beyond." *Pediatrics* 148.3 (2021).
4. Fegert, Jörg M., et al. "Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality." *Child and adolescent psychiatry and mental health* 14.1 (2020): 20.
5. Galagali, Preeti M., Sreyoshi Ghosh, and Hemant Bhargav. "The role of telemedicine in child and adolescent healthcare in India." *Current pediatrics reports* 9.4 (2021): 154-161.
6. Jain, Supriya S., et al. "COVID-19 vaccination–associated myocarditis in adolescents." *Pediatrics* 148.5 (2021).
7. Lehtimäki, Susanna, et al. "Evidence on digital mental health interventions for adolescents and young people: systematic overview." *JMIR mental health* 8.4 (2021): e25847.
8. 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.
9. Luo, Candice, et al. "A comparison of electronically-delivered and face to face cognitive behavioural therapies in depressive disorders: a systematic review and meta-analysis." *EClinicalMedicine* 24 (2020).
10. Madigan, Sheri, et al. "Changes in depression and anxiety among children and adolescents from before to during the COVID-19 pandemic: a systematic review and meta-analysis." *JAMA pediatrics* 177.6 (2023): 567-581.
11. Orsolini, Laura, et al. "A systematic review on telemental health in youth mental health: focus on anxiety, depression and obsessive-compulsive disorder." *Medicina* 57.8 (2021): 793.
12. 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.
13. Raeside, Rebecca. "Advancing adolescent health promotion in the digital era." *Health Promotion International* 40.2 (2025): daae172.
14. Ramshaw, G., et al. "Introduction of technology to support young people's care and mental health—a rapid evidence review." *Child & youth care forum*. Vol. 52. No. 3. New York: Springer US, 2023.
15. Zhou, William Youkang, Luisa Franzini, and Arturo Vargas Bustamante. "Adolescent mental health utilization, virtual care, and community support: evidence from 2019 to 2022." *Frontiers in Public Health* 13 (2025): 1559511.
16. Zhou, Xiaoyun, et al. "Are online mental health interventions for youth effective? A systematic review." *Journal of telemedicine and telecare* 27.10 (2021): 638-666.
17. K. Green and R. Vrba, "Adaptive Statistical Signal Processing Model for Real-Time Sensor Data Analytics in Smart Monitoring Applications", Transactions on Advanced Signal Processing and Analytics, pp. 13–19, Mar. 2026.
18. Cooper Harris, "Integration of Satellite and Non-Terrestrial Networks for Reliable Beyond-5G Global Connectivity", Recent Advances in Next-Generation Wireless Communication Systems, pp. 22–34, Dec. 2025.
19. Harsha Vardhan Reddy Kavuluri, "Reinforcement Learning-Driven Design Space Exploration for Power-Performance Optimization in Advanced VLSI Architectures", Progress in AI-Accelerated VLSI Systems, pp. 51–58, Mar. 2026.