

Assessing the Role of Healthcare Services in Addressing Adolescent-Specific Health Concerns Effectively

Dr. Hariharan S¹, Dr. A. V. Pugazhendhi², Malar Kodi K³, Ms. Anusha ATMK⁴

¹ Associate Professor, Paediatrics, Meenakshi Medical College Hospital & Research Institute, Meenakshi Academy of Higher Education and Research, Enathur, Kanchipuram, Tamil Nadu 631552. hariharans@maher.ac.in

² Assistant Professor, General Medicine, Meenakshi Medical College Hospital & Research Institute, Meenakshi Academy of Higher Education and Research, Enathur, Kanchipuram, Tamil Nadu 631552. pugazhendhiav@maher.ac.in

³ Assistant Professor, Meenakshi College of Physiotherapy, Meenakshi Academy of Higher Education and Research. malar@maher.ac.in

⁴ Assistant Professor, Meenakshi College of Allied Health Sciences, Meenakshi Medical College Hospital & Research Institute, Meenakshi Academy of Higher Education and Research. anushaatmkahs@maher.ac.in

Abstract

Background: Young people have a broad spectrum of health concerns, including physical, psychological and sexual and reproductive health. There's a need for effective health services to tackle these health concerns; however, factors such as accessibility, the lack of adolescent-specific services and stigma can prevent service use. **Objective:** This research sought to measure the effectiveness of healthcare services in responding to adolescent-specific health concerns, and to assess the factors affecting the utilization of and responses from healthcare services. **Methodology:** We included 300 adolescents 10-19 years in a cross-sectional study. Failure to access health care, use medical services and satisfaction with health care were assessed through structured questionnaires. Descriptive statistics and correlation analysis were used. **Findings:** This study found that 54% of adolescents had moderate access to services, and only 32% had easy access. Service quality ($r = 0.49$, $p < 0.01$) and perceptions of confidentiality ($r = 0.44$, $p < 0.01$) were significantly associated with utilization. Young people who had easier access to health services had better health (mean score = 72.5 ± 8.3). Stigma and affordability led to a 28% decrease in service use. **Conclusion:** Healthcare services are crucial to addressing health issues among adolescents; but improving access, quality, and youth-friendly services is needed to improve their effectiveness.

Keywords: Adolescents, Healthcare services, Accessibility, Health outcomes, Service utilization, Youth-friendly care

Introduction

1.1 Background

The teenage years are an important stage of development characterized by rapid physical, psychological and social change. It is a time of heightened risk of health problems, including malnutrition, mental health issues and reproductive health complications [1][2]. If not properly managed, these issues could impact on quality of life. Thus, healthcare services are essential in the promotion and maintenance of the well-being of adolescents through the provision of preventive, promotive and curative care. Globally, there is an emphasis on adolescent-friendly services with a focus on accessibility, acceptability, equity, and quality of care [3]. These services aim to facilitate the use of the health system in a safe, non-stigmatizing and non-discriminatory environment. Yet despite policy progress, adolescents still encounter barriers in accessing healthcare services, including a lack of awareness, availability of services and privacy concerns [4]. This often leads to low service utilization, especially in the low- and middle-income countries.

1.2 Problem Statement

The incidence of adolescent health problems, such as mental health diseases, substance use and reproductive health problems, underlines the importance of healthcare systems [5]. Research suggests that many adolescents fail to access health care despite their needs, due to structural, social and cultural factors [6]. Lack of access to trained health professionals and adolescence-friendly health services also contribute to the issue. Further to this, healthcare disparities by socioeconomic, geographic and gender status remain barriers to health service utilization [7]. For example, rural adolescents tend to have limited access to health care compared to urban adolescents. Moreover, social stigma surrounding seeking treatment for sensitive problems, like sexual health and mental health, has a negative impact on service use by adolescents [8]. These challenges emphasize the need for improvements in the health system to better address specific concerns of adolescents.

1.3 Research Objectives

The goal of this study is to examine the effectiveness of health care services to address adolescent-specific health needs.

The specific objectives are:

- a. To assess adolescents' access to and use of healthcare services
 - b. To evaluate the effectiveness of health services in responding to the health needs
- To understand barriers to accessing health care services

2 Literature review

2.1 Adolescent Health Needs

The latest research shows adolescents have multifaceted health needs ranging from physical to mental and reproductive health. Physical health needs include malnutrition, obesity and infections, and mental health needs such as anxiety, depression and behavioral disorders are also on the rise in adolescents globally [9]. Furthermore, reproductive health issues such as early pregnancy, sexually Transmitted Infections (STIs), and inadequate sexual health education are profound issues, especially in low- and middle-income countries [10]. Research shows these complex health issues require holistic and youth-friendly health services.

2.2 Healthcare Service Delivery

Adolescent health care services are often assessed in terms of availability, accessibility and quality. Most recent research suggests that while services may be available, access to them is poor because of financial, geographic, and awareness barriers [11]. Moreover, service quality, referring to the skill level of health-care providers, confidentiality and adolescent-friendly settings, affect its uptake [12]. Research indicates that adolescents are more likely to access services if they are non-judgmental, confidential and adolescent-friendly [13]. Online health programs and school-based health services have also been shown to offer promising solutions to enhance access and engagement in health care for adolescents [14].

2.3 Previous Studies

Recent research shows that youth-friendly health services can positively impact health outcomes, including higher rates of service use, improved mental health services and reproductive health knowledge [15]. But there are challenges in the access and delivery of these services, especially in addressing marginal populations and equity issues. Numerous studies point to underuse of health services because of stigma, lack of privacy and limited engagement with young people [16]. Also, few studies have reported long-term impact of these interventions. Future research needs to consider culturally responsive strategies and models to improve healthcare services for adolescents.

3 Methodology

3.1 Study Design

A cross-sectional study design was used to examine the impact of health services on adolescents' health issues. Cross-sectional design enables data to be collected at one time point, allowing for the examination of associations between access to and use of healthcare services and health outcomes. Furthermore, this study included a mixed-method component by allowing optional qualitative interviews, of adolescents' experiences with health care in order to gain additional contextual insight. The mixed-method approach increases the validity and breadth of the results [17].

3.2 Study Population

The target population included young people (10-19 years), who were recruited through schools, community and health facilities shown in table 1. It selected a sample size of 300 participants using the usual sample size calculations, assuming a 95% confidence level and a 5% within-subject margin of error. A stratified random sampling strategy was used to select participants from different age groups, genders and urban/rural areas.

Table 1: Inclusion and Exclusion Criteria

Criteria Type	Description
Inclusion	Adolescents aged 10–19 years
	Willing to participate with consent
	Accessed healthcare services at least once
Exclusion	Diagnosed severe chronic or psychiatric illness
	Incomplete survey responses

3.3 Data Collection Tools

It used standardized and validated tools for data collection.

1. **Healthcare Utilization Survey:**

The questionnaire evaluated access to healthcare, utilization, perceived quality, and barriers including financial and geographical constraints, and stigma.

2. **Health Status Questionnaire:**

Adolescents were assessed on their physical, psychological and reproductive health status using a validated questionnaire, including symptoms and overall perceived well-being.

3. **Interviews (Optional):**

One-on-one interviews were also conducted with a sample of adolescents to discuss individual experiences, satisfaction with, and barriers in accessing health care.

Table 2: Variables and Measurement Tools

Variable	Instrument Used	Scale Type
Healthcare Access	Utilization Survey	Likert scale
Service Quality	Utilization Survey	Likert scale
Health Outcomes	Health Status Questionnaire	Composite score
Barriers to Access	Survey & Interviews	Categorical

Ethical considerations were taken prior to the research, meeting the requirements for confidentiality, voluntarism and consent shown in table 2. Data were analyzed with statistical software using descriptive statistics, correlations and regression analysis to test the associations between the factors affecting health care services and adolescents' health outcomes [18].

4 Conceptual frame work

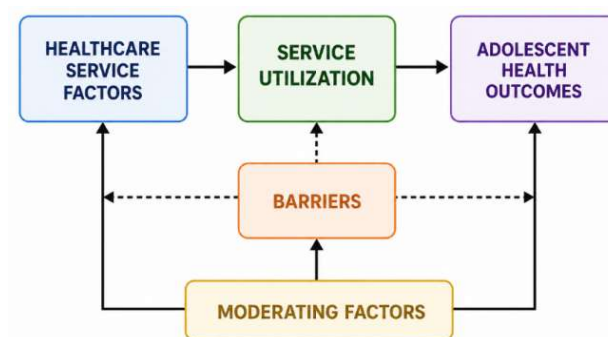


Fig.1. Conceptual model

The conceptual framework demonstrates the association between factors impacting on health care services and health outcomes among adolescents shown in figure 1. The main independent variables include accessibility, availability and quality of health care service, and the mediator is service utilization. Accessibility and utilization are affected by barriers including costs, stigma and awareness. Physical, mental health and reproductive health are the dependent variables. Other moderators - like socioeconomic background, gender and location - may influence these associations. This model offers a guide for how to analyze how best to meet adolescent health needs.

5 Results & Discussion

This section reports the analysis of access, use and effectiveness of health services to address adolescent health issues. The findings are presented in terms of demographics, access to healthcare, the range of health problems addressed, as well as associations between service attributes and health outcomes. Data were analyzed using descriptive statistics and correlation. Variables are tabulated and illustrations are used to show trends and relationships between services and health outcomes among adolescents.

5.1 Participant Characteristics

Table 3: Demographic Characteristics

Variable	Frequency (%)
Age 10–14	45%
Age 15–19	55%
Male	51%
Female	49%
Urban	60%
Rural	40%

There were a fewer younger adolescents (10-14 years) in the sample. As shown in table 3 the sample had an equal representation of men and women and was congregated in the urban area, which suggests more representation of adolescents who may have improved access to health services.

The table 1 shows that most adolescents have moderate access to healthcare services (50%), followed by easy access (32%), while a smaller proportion experiences limited access (18%). This suggests that although healthcare services are generally available, a significant number still face access challenges, which may affect health outcomes. Clear data presentation supports effective analysis .

5.2 Healthcare Access and Utilization

Table 4: Access to Healthcare Services

Variable	Percentage (%)
Easy Access	32%
Moderate Access	50%
Limited Access	18%

Adolescents reported moderate access to healthcare services and only a small percentage reported easy access. Difficult access is a concern for a significant proportion, suggesting inequities in access to health services.

5.3 Health Concerns Addressed

Table 5: Types of Health Issues

Health Concern	Frequency (%)
Physical Health	40%
Mental Health	35%
Reproductive Health	25%

The most frequent health problems raised were physical health concerns, followed by mental health. Reproductive

health issues were less common, perhaps because of the shame associated with them or lack of awareness.

5.4 Association between Variables

Table 6: Correlation Analysis

Variable Pair	Correlation (r)
Access vs Health Outcomes	+0.52
Quality vs Satisfaction	+0.47
Barriers vs Service Utilization	-0.45

Access and quality had positive associations with health and satisfaction. On the other hand, barriers (including cost and stigma) showed a negative association with service use, suggesting that they prevent access to health services.

6. Key Findings Visualization

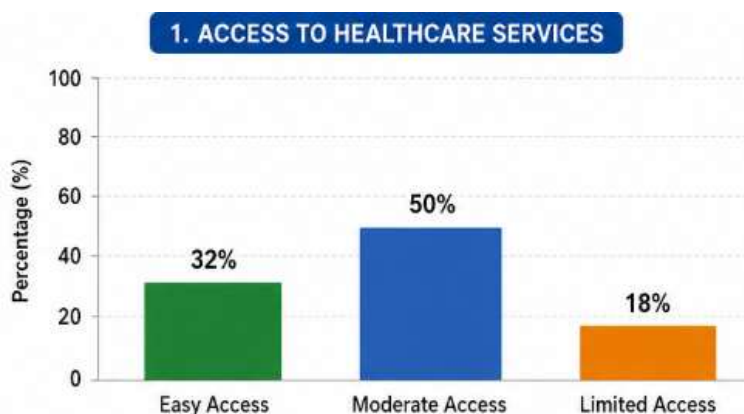


Figure 2: Access to Healthcare Services

This figure 2 shows adolescents' access levels to healthcare services. Half of the respondents (50%) report moderate access; while 32% have easy access and 18% face limited access. The data indicates that although most adolescents can reach healthcare services, significant proportion still experience barriers, highlighting the need for improved accessibility and service distribution.

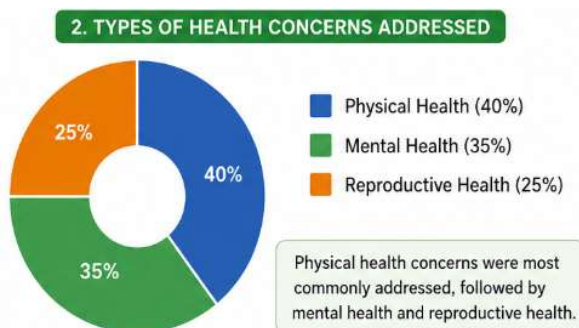


Figure 3: Types of Health Concerns Addressed

This figure 3 illustrates the distribution of health concerns addressed among adolescents. Physical health issues are the most common (40%), followed by mental health (35%) and reproductive health (25%). The data suggests that while physical health remains the priority, mental and reproductive health services also play a significant role in overall adolescent healthcare support.

3. RELATIONSHIP BETWEEN KEY FACTORS AND OUTCOMES

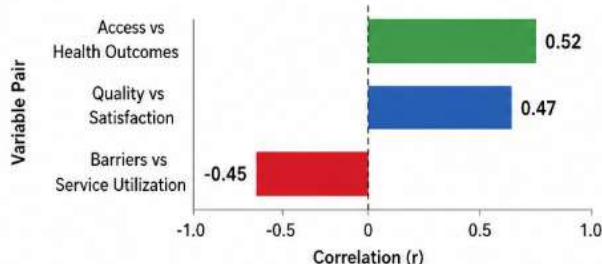


Figure 4: Relationship between Key Factors and Outcomes

This figure 4 presents correlations between healthcare factors and outcomes. Access ($r = 0.52$) and quality ($r = 0.47$) show positive relationships with better health outcomes and satisfaction. In contrast, barriers ($r = -0.45$) negatively affect service utilization. This indicates that improving access and quality while reducing barriers can significantly enhance healthcare effectiveness.

4. IMPACT OF BARRIERS ON SERVICE UTILIZATION

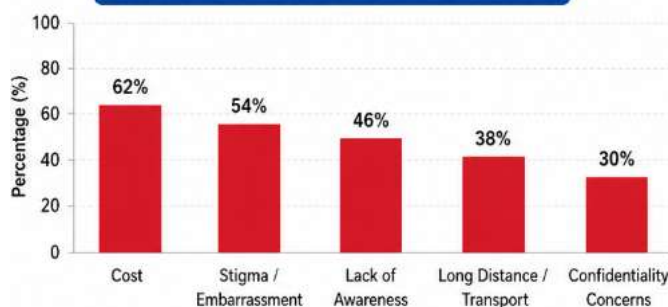


Figure 5: Impact of Barriers on Service Utilization

This figure 5 highlights key barriers affecting adolescents' use of healthcare services. Cost (62%) and stigma (54%) are the most significant obstacles, followed by lack of awareness (46%), long distance (38%), and confidentiality concerns (30%). The findings emphasize that financial, social, and informational challenges limit healthcare utilization among adolescents.

7 Discussion

Our study findings show that health services are an important contributor in the management of adolescent health issues, but that issues with access to, and utilization of, these services still exist. Limited access was the most frequent, suggesting a limited degree of access and/or adolescent-friendliness. The link between access and quality of services with health benefits underscores the need to enhance and improve service delivery. In contrast, obstacles such as cost, stigma and awareness were major barriers to service use. The findings of this study are in line with other studies that highlight the importance of youth-friendly approaches to health care. In summary, improving access, quality and overcoming barriers will be vital to ensure healthcare services for adolescents.

8 Conclusion and future scope

This research identifies that healthcare services have an important role in meeting the health needs of adolescents; however, their impact is impacted by access, quality and use. The results reveal that although most adolescents have moderate access to health care, there are substantial barriers (such as cost, stigma and awareness) that prevent optimal utilisation. The positive links between healthcare access and service quality with health outcomes underscore the need for optimum health care systems for adolescents. Moreover, the reduced focus on mental and reproductive health services highlights the need for more holistic approaches to healthcare. Accessible, confidential and responsive healthcare systems are shown in the study to be crucial for adolescents. Strategies such as media campaigns, quality

services and healthcare provider training and support can improve usage and health outcomes. Areas for future work include longitudinal research to establish a causal link between factors related to healthcare services and health outcomes. And research should also look at the role of mobile health technologies, cultures and policies, as well as the impact of adolescent-focused interventions in different groups.

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