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BARRIERS TO HEALTH CARE ACCESS PERCEIVED BY ADOLESCENT GIRLS: A CROSS-SECTIONAL STUDY.

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ABSTRACT

Background
Adolescent girls face numerous barriers when accessing healthcare, particularly in low-resource settings. These constraints include financial, cultural, and structural challenges, which significantly impact their ability to obtain timely and appropriate medical services. Addressing these barriers is essential for improving the health outcomes of adolescent girls, especially in rural areas. This study investigated the perceived constraints faced by adolescent girls in accessing healthcare in Darbhanga, Bihar, and identified socio-demographic factors associated with these barriers.

Methods
A cross-sectional study involved 250 adolescent girls aged 13-19 years. Data were collected using a structured questionnaire, which assessed socio-demographic characteristics and perceived healthcare barriers. Statistical analysis was performed using SPSS version 21.0. Descriptive statistics, chi-square tests, and multivariate logistic regression were used to identify significant associations between variables.

Results
The mean age of the participants was 16.2 years (± 1.8), with the majority (58%) being between 15 and 17 years of age. The study found that 72% of the participants reported barriers to accessing healthcare. Financial constraints (56%) were the most commonly reported, followed by structural (48%), cultural (40%), and knowledge-related barriers (32%). Family income and parental education were significantly associated with perceived barriers ($p < 0.05$). Multivariate analysis revealed that low family income (OR = 3.2, $p < 0.001$) and low parental education (OR = 2.5, $p = 0.002$) were the strongest predictors of healthcare access constraints.

Conclusion
Adolescent girls in Darbhanga face significant barriers in accessing healthcare, primarily due to financial and structural factors. Socioeconomic conditions, such as family income and parental education, play a crucial role in determining the extent of these barriers.

Recommendations
Policymakers should focus on reducing financial barriers and improving healthcare infrastructure, especially in rural areas. Additionally, educational programs aimed at families and communities could help address cultural and knowledge-related barriers to healthcare access for adolescent girls.

Keywords: *Adolescent Girls, Healthcare Access, Barriers, Financial Constraints, Rural Health*
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INTRODUCTION

Access to healthcare for adolescent girls remains a significant global concern, with numerous barriers limiting their ability to seek timely and adequate medical attention. Adolescents, particularly girls, face specific challenges that range from socio-economic and cultural factors to infrastructural inadequacies. Financial barriers are one of the most pervasive issues, where low-income families struggle to cover the costs of healthcare, transportation, and

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associated expenses, leading many adolescent girls to forego necessary medical services. In many low- and middle-income countries, including India, the economic burden is compounded by the limited availability of free or subsidized healthcare options, forcing families to prioritize other immediate needs over health services for young girls [1].

Cultural barriers also play a crucial role in restricting access to healthcare for adolescent girls. Gender norms and societal expectations often place limitations on girls' mobility, restricting them from visiting healthcare facilities unaccompanied. In rural areas, many families impose restrictions due to concerns over reputation and fear of stigmatization [2]. Moreover, myths and misconceptions about healthcare services, particularly around sexual and reproductive health, further discourage adolescent girls from seeking care. This is particularly evident in settings where discussing issues such as contraception or menstruation is taboo, leading to delayed or avoided healthcare-seeking behavior [3].

Structural barriers, such as the lack of adolescent-friendly healthcare facilities, long distances to clinics, and inconvenient operating hours, further compound these issues. Many adolescents, particularly in rural areas, have to travel long distances to reach healthcare centers, and these facilities often operate during hours that conflict with school schedules, leaving adolescents with little opportunity to access care. Furthermore, a shortage of medicines, privacy concerns, and overcrowded health centers create an environment that is not conducive to adolescent care, further discouraging them from seeking help [3, 4].

Efforts to address these barriers must be multi-faceted, focusing on both the removal of economic hurdles and the dismantling of cultural norms that inhibit access. Additionally, improving the structural capacity of healthcare systems—through the expansion of adolescent-friendly services, better training of healthcare workers, and the provision of privacy and confidentiality—will significantly enhance healthcare access for this vulnerable population [5]. Overcoming these barriers will require a concerted effort from policymakers, healthcare providers, and communities to ensure that adolescent girls receive the care they need to lead healthy and productive lives.
The study aimed to explore the perceived constraints faced by adolescent girls in accessing health care.

METHODOLOGY

Study Design

A cross-sectional design.

Study Setting

The study was conducted over 3 months, from June 2024 to August 2024. Study Location: The research was carried out in Darbhanga, Bihar, a region with significant healthcare access challenges due to its socio-economic and geographic characteristics.

Participants

The study included a total of 250 adolescent girls aged 13-19 years, selected through convenience sampling from various schools, community centers, and local health camps in Darbhanga.

Inclusion Criteria

- Adolescent girls aged between 13-19 years.
- Residing in Darbhanga, Bihar for at least six months.
- Willing to provide informed consent (parental consent for minors).

Exclusion Criteria

Girls with any known physical or mental disabilities that could affect their ability to participate in the study.
Adolescents who were not available during the data collection period.

Bias

Selection bias was minimized by recruiting participants from multiple locations within Darbhanga to ensure a representative sample. Recall bias was minimized by structuring the questionnaire to prompt recent experiences regarding healthcare access. However, self-reporting bias remains a limitation, as participants may not always disclose personal barriers accurately.

Variables

The variables included perceived constraints in accessing healthcare, age, educational level, family income, parental education, and distance to healthcare facilities.

Data Collection

Data were collected using a structured questionnaire, designed and validated based on previous research and tailored to the local context. The questionnaire was divided

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into sections covering socio-demographic details, healthcare-seeking behavior, perceived constraints, and health outcomes.

Procedure

A structured questionnaire was developed in both English and Hindi to ensure better comprehension. The questionnaire was pilot-tested with 20 adolescent girls from the study area to ensure clarity and cultural relevance. Necessary modifications were made based on the feedback. Data were collected through face-to-face interviews conducted by trained field staff. Informed consent was obtained before the interviews, and the confidentiality of responses was assured.

Statistical Analysis

The collected data were entered into SPSS version 21.0 for statistical analysis. Descriptive statistics (frequency, percentages, mean, and standard deviation) were used to summarize the socio-demographic characteristics and perceived constraints. Chi-square tests and t-tests were applied to assess the association between variables such as age, income, and perceived healthcare barriers. A p-value < 0.05 was considered statistically significant. Multivariate logistic regression was performed to determine the factors most significantly associated with perceived constraints.

Ethical considerations

The study protocol was approved by the Ethics Committee and written informed consent was received from all the participants.

RESULTS

Table 1 summarizes the socio-demographic details of the 250 adolescent girls included in the study. The mean age of the participants was 16.2 years (± 1.8), with the majority (58%) being between 15 and 17 years of age. Most participants (64%) were in secondary school, while the remainder were either in primary school or had dropped out. The average monthly family income was INR 7,500 (± 3,200), and 60% of the participants reported that their parents had not completed secondary education.

Table 1: Socio-Demographic Characteristics of Participants

Characteristic	N (%)
Age (years)	
13-14	75 (30%)
15-17	145 (58%)
18-19	30 (12%)
Education Level	
Primary School	50 (20%)
Secondary School	160 (64%)
Dropped Out	40 (16%)
Monthly Family Income (INR)	
< 5,000	100 (40%)
5,001 - 10,000	120 (48%)
> 10,000	30 (12%)
Parental Education	
Less than Secondary	150 (60%)
Completed Secondary	80 (32%)
Higher Education	20 (8%)

A total of 72% of participants (n = 180) reported facing constraints in accessing healthcare. The types of perceived barriers were categorized into financial, cultural, structural, and knowledge-related constraints, with many participants experiencing more than one type of barrier. Table 2 provides a breakdown of the reported constraints.

Table 2: Types of Perceived Constraints in Accessing Healthcare

Type of Constraint	N (%)
Financial	140 (56%)
Cultural (e.g., gender norms, family restrictions)	100 (40%)
Structural (e.g., lack of nearby healthcare facilities)	120 (48%)
Knowledge-related (e.g., lack of information about services)	80 (32%)

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Among those who reported financial constraints, 56% cited the high cost of treatment as a major barrier, while 48% mentioned the expense of transportation to healthcare facilities. Cultural barriers were particularly common in families with lower educational levels, where 40% of the girls reported restrictions on visiting healthcare providers without a male family member.

To investigate the factors associated with perceived barriers, a chi-square test was conducted. Significant associations were found between family income, parental education, and the presence of healthcare access constraints ($p < 0.05$).

Family Income: Girls from families with an income below INR 5,000 per month were significantly more likely to report financial barriers compared to those with higher family income ($\chi^2 = 24.3$, $p < 0.001$).

Parental Education: Participants whose parents had not completed secondary education were more likely to face cultural and knowledge-related constraints ($\chi^2 = 18.7$, $p < 0.01$).

Age: No significant association was found between age and the types of barriers faced ($p > 0.05$).

Table 3: Association Between Socio-Demographic Factors and Perceived Constraints

Variable	Financial Constraints	Cultural Constraints	Structural Constraints	Knowledge-Related Constraints
Family Income				
< INR 5,000	90 (90%)	60 (60%)	75 (75%)	40 (40%)
INR 5,001 - 10,000	40 (33%)	35 (29%)	40 (33%)	30 (25%)
> INR 10,000	10 (33%)	5 (17%)	5 (17%)	10 (33%)
Parental Education				
Less than Secondary	100 (67%)	80 (53%)	90 (60%)	60 (40%)
Completed Secondary	30 (37%)	15 (19%)	25 (31%)	10 (13%)
Higher Education	10 (50%)	5 (25%)	5 (25%)	10 (50%)

A multivariate logistic regression model was developed to determine the most significant predictors of perceived constraints. The dependent variable was the presence of any reported constraint, and independent variables included family income, parental education, and distance to healthcare facilities. The results are shown in Table 4.

Table 4: Multivariate Logistic Regression Analysis for Predictors of Perceived Constraints

Variable	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
Family Income < INR 5,000	3.2	1.8 - 5.6	< 0.001
Parental Education	2.5	1.4 - 4.3	0.002
Distance to Facility (>5 km)	1.7	1.1 - 2.9	0.03

Participants from families with lower incomes were 3.2 times more likely to report barriers in accessing healthcare ($OR = 3.2$, $p < 0.001$), and girls with less educated parents had 2.5 times higher odds of reporting constraints ($OR = 2.5$, $p = 0.002$). Distance to healthcare facilities also contributed significantly, with those living more than 5 km from a facility having 1.7 times higher odds of experiencing barriers ($OR = 1.7$, $p = 0.03$).

DISCUSSION

The study, which surveyed 250 adolescent girls in Darbhanga, Bihar, revealed that a significant proportion (72%) of the participants reported facing various constraints in accessing healthcare services. The perceived barriers were categorized into four major types: financial, cultural, structural, and knowledge-related. Among these, financial constraints were the most frequently reported (56%), followed by structural barriers such as the lack of nearby healthcare facilities (48%), and cultural restrictions, particularly gender norms and family restrictions (40%). Knowledge-related barriers, such as a lack of information about available healthcare services, were also noted by 32% of the participants. These findings highlight the complexity and multifaceted nature of healthcare access challenges in rural areas, where social, economic, and infrastructural factors intersect to limit healthcare utilization.

The results demonstrated significant associations between socioeconomic factors and perceived barriers. Girls from

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families with lower monthly incomes (less than INR 5,000) were more likely to face financial and structural barriers, reflecting the economic challenges that prevent access to adequate healthcare. Additionally, parental education played a key role in shaping perceptions of cultural and knowledge-related barriers. Girls whose parents had not completed secondary education were more likely to report restrictions on seeking healthcare without male family members or a lack of knowledge about available services. These associations suggest that education and economic stability play pivotal roles in facilitating healthcare access for adolescent girls in this region.

Multivariate logistic regression analysis further reinforced these associations, identifying low family income, low parental education, and greater distance to healthcare facilities as the strongest predictors of perceived barriers. Girls from families earning less than INR 5,000 per month were 3.2 times more likely to experience constraints, while those with parents who had not completed secondary education had 2.5 times higher odds of reporting barriers. The distance to healthcare facilities also emerged as a significant factor, with participants living more than 5 kilometers away being 1.7 times more likely to face difficulties in accessing care.

These findings underscore the need for targeted interventions that address both financial and educational disparities to improve healthcare access for adolescent girls. Policymakers should consider strategies that reduce the economic burden of healthcare, improve health infrastructure in rural areas, and promote awareness about healthcare services, especially among families with lower education levels. Addressing these constraints could significantly enhance healthcare utilization and overall well-being for adolescent girls in rural regions like Darbhanga.
Several studies conducted have explored the barriers faced by adolescent girls in accessing healthcare services. These studies have consistently identified a range of challenges, including financial, cultural, and structural barriers that significantly impact healthcare access for this vulnerable population.

A study in Sub-Saharan Africa examined the socio-cultural and structural factors that limit access to sexual and reproductive health services for adolescent girls. It found that socio-economic disparities, including poverty and gender inequality, were the primary obstacles. Cultural norms that stigmatize sexual health discussions, coupled with a lack of accessible and youth-friendly healthcare facilities, further exacerbated the issue. The study highlighted the need for community education and improved healthcare infrastructure to overcome these barriers [6].

In rural India, research identified similar barriers. Financial constraints were a predominant issue, with many families unable to afford healthcare services or the costs of transportation to distant facilities. Cultural factors, such as restrictive gender norms, also played a significant role, particularly in rural areas where adolescent girls were often prohibited from seeking healthcare independently. The study emphasized the need for policy interventions that provide financial support and improve local healthcare accessibility [7].

A systematic review of youth-friendly health services in low- and middle-income countries revealed significant infrastructural challenges. Many healthcare facilities lacked the resources, space, and trained personnel to provide services tailored to adolescent needs. Long wait times, inconvenient hours, and insufficient privacy were commonly reported issues. The study concluded that strengthening healthcare systems and ensuring operational efficiency are critical to improving healthcare access for adolescent girls [8].
In Ghana, a study focusing on facility-level barriers found that inadequate privacy, small spaces, and overcrowded clinics were major deterrents for adolescents seeking healthcare. Additionally, the limited availability of medicines and supplies, such as contraceptives, contributed to the challenges. The study called for the expansion of adolescent-friendly services and better resource allocation to address these gaps [9].

A study in Zambia identified individual and cultural barriers, such as misconceptions about contraceptives and stigma around reproductive health, as significant obstacles for adolescent girls. These factors, combined with inadequate health education and lack of confidential services, discouraged many adolescents from seeking care. The study recommended comprehensive sexual education programs and the creation of safe spaces for adolescents in healthcare settings [10].
A study explored the multiple socio-economic and cultural barriers that adolescent girls face in accessing maternal and reproductive health services. It found that poverty, lack of education, and deeply ingrained cultural norms significantly limit access to essential healthcare services for adolescents in rural Tanzania. The study suggests that targeted educational programs and economic support systems are needed to improve healthcare utilization in this demographic [11].

The research identified the structural barriers limiting healthcare access for adolescents in Uganda, including insufficient healthcare infrastructure, lack of trained healthcare providers, and long distances to healthcare

facilities. The study also pointed to the role of stigma and misconceptions around adolescent healthcare, particularly in reproductive health, which further discourages healthcare-seeking behavior [12].

GENERALIZABILITY

The findings from the study on perceived constraints faced by adolescent girls in accessing healthcare in Darbhanga, Bihar, provide valuable insights into the multifaceted barriers these individuals encounter. However, generalizing these results to other regions or populations should be approached with caution. While the socio-economic and cultural contexts in Darbhanga may reflect broader trends in low- and middle-income countries, variations in local healthcare systems, cultural norms, and economic conditions could yield different experiences and barriers in other settings. Additionally, the convenience sampling method may introduce biases that limit the applicability of the findings to all adolescent girls within similar demographic profiles. Future research should aim to replicate these findings in diverse geographical and socio-economic contexts to better understand the universality of these constraints and inform targeted interventions.

CONCLUSION

Adolescent girls face a variety of barriers to healthcare access, including financial, cultural, and structural challenges. These constraints, particularly prevalent in low-income and rural settings, hinder timely access to essential health services. Financial difficulties limit the ability to afford treatment, while cultural norms restrict girls' mobility and autonomy in seeking care. Additionally, the lack of adolescent-friendly health facilities, long distances to clinics, and inconvenient operating hours exacerbate these issues. Addressing these barriers requires a comprehensive approach that includes policy changes, improved healthcare infrastructure, and community-level interventions to ensure that adolescent girls can access the care they need for their well-being and development.

LIMITATIONS

The limitations of this study include a small sample population who were included in this study. Furthermore, the lack of a comparison group also poses a limitation for this study's findings.

RECOMMENDATION

Policymakers should focus on reducing financial barriers and improving healthcare infrastructure, especially in rural areas. Additionally, educational programs aimed at families and communities could help address cultural and knowledge-related barriers to healthcare access for adolescent girls.

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CONFLICT OF INTEREST

The authors have no conflicting interests to declare.

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