International Journal of Research in Social Sciences
Vol. 13 Issue 09, September 2023,
ISSN: 2249-2496 Impact Factor: 7.081 UGC Approved Journal Number: 48887
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Health-Seeking Behaviour and Barriers for Adolescent Girls: A Study in Akbarnagar, Bhagalpur Rural Area

Pushpa Kumari, Research scholar, University Department of Home Science-Food & Nutrition, TMBU, Bhagalpur

Dr. Shephali, HOD, University Department of Home Science-Food & Nutrition, TMBU, Bhagalpur

Abstract

Background:

Adolescent girls in rural India may delay or avoid professional care because of limited awareness, gendered decision-making, stigma, concerns about confidentiality and practical constraints. This model study examined health-seeking behaviour and perceived barriers among adolescent girls in the rural area of Akbarnagar, Bhagalpur. Methods: A publication-oriented community-based cross-sectional design was modelled for 200 girls aged 10-19 years. A reproducible synthetic dataset was generated to reflect variables commonly measured under the Rashtriya Kishor Swasthya Karyakram and World Health Organization standards for adolescent-friendly care. Appropriate health-seeking was defined as consulting a qualified government or private provider, nurse/ANM or adolescent-friendly health clinic within seven days of the most recent health problem. Frequencies, chi-square tests and multivariable logistic regression were used. Results: Of 200 girls, 164 (82.0%) had experienced at least one health problem during the preceding six months. Among these, 75 (45.7%) sought formal care, 31 (18.9%) used a pharmacy or self-medication, 20 (12.2%) used home or traditional remedies and 38 (23.2%) sought no care. Awareness of adolescent-friendly health clinics was 40.0%, while only 12.0% had ever used one. The most frequently modelled barriers among girls who did not seek formal care were shyness or embarrassment (58.4%), lack of information about adolescent-specific services (56.2%), perceiving symptoms as normal or minor (50.6%), needing family permission or accompaniment (43.8%) and concern about privacy or confidentiality (40.4%). In adjusted analysis, awareness of adolescent-friendly clinics (adjusted odds ratio [aOR] 3.87; 95% confidence interval [CI] 1.82-8.23), open parent-adolescent communication (aOR 2.84; 95% CI 1.38-5.84) and greater decision-making autonomy (aOR 4.41; 95% CI 2.08-9.36) were associated with formal care-seeking. Conclusion: The synthetic findings illustrate how low service awareness, stigma, confidentiality concerns and restricted autonomy can interact to reduce professional care-seeking. Community outreach through Anganwadi workers, ASHAs and peer educators, confidential girl-friendly clinic sessions, stronger referral pathways and parent communication interventions should be evaluated with genuine field data in Akbarnagar.

Keywords: adolescent girls; health-seeking behaviour; barriers; adolescent-friendly health services; rural Bihar; Akbarnagar; RKSK

1. Introduction

Adolescence, conventionally defined as 10-19 years of age, is a period of rapid physical, cognitive and psychosocial development during which health behaviours and social opportunities can shape wellbeing across the life course (World Health Organization, 2024). Adolescent girls face health needs related to nutrition, menstruation, reproductive and sexual health, mental wellbeing, violence, infection and chronic disease risk. These needs are frequently under-recognised because symptoms are normalised, discussed only within the family or managed through informal sources rather than qualified providers.

India's National Family Health Survey and programme data show that adolescent and young women's health remains a major public-health priority. Nationally, NFHS-5 reported anaemia in 59.1% of girls aged 15-19 years, while Bihar continues to experience a high burden of anaemia and unequal access to health information and services (Press Information Bureau, 2022; International Institute for Population Sciences and ICF, 2021). Nutritional morbidity intersects with menstrual discomfort, fatigue, infection, emotional distress and school participation. Yet the presence of a health problem does not automatically lead to timely treatment.

Health-seeking behaviour includes recognition of symptoms, disclosure to another person, the decision to seek help, selection of a source of care, timing of consultation and adherence to advice. For adolescents, these steps are influenced not only by illness severity but also by parental communication, mobility, control over money, gender norms, school attendance, provider attitude, perceived confidentiality and knowledge of available services. Parent-adolescent discussion has been associated with preventive care use, while cost, the belief that care is necessary only during serious illness and failure of adults to arrange visits can reduce utilisation (Aalsma et al., 2016). Confidentiality concerns are particularly important for sensitive sexual and reproductive health needs and can lead young people to forgo services (Fuentes et al., 2018).

The Government of India launched the Rashtriya Kishor Swasthya Karyakram (RKSK) to address nutrition, sexual and reproductive health, mental health, injuries and violence, substance misuse and non-communicable diseases. Adolescent-Friendly Health Clinics (AFHCs), peer education, Adolescent Health Days and community outreach are intended to improve knowledge, referral and access. The operational framework states that services should be accessible, respectful, non-judgemental, affordable and confidential, with separate space and convenient timing wherever possible (Ministry of Health and Family Welfare, 2014). World Health Organization quality standards similarly emphasise adolescent health literacy, community support, appropriate service packages, provider competence, confidentiality, equity and adolescent participation (World Health Organization, 2015).

Evidence from India indicates a substantial implementation and utilisation gap. In Madhya Pradesh, only 9.5% of surveyed adolescents were aware of AFHC services and 2.74% had used them (Bali et al., 2022). A rural West Bengal study reported that 29.4% of adolescents had ever used adolescent reproductive and sexual health services; non-use was associated with younger age, female sex, stigma and limited parent-adolescent communication, while qualitative barriers included lack of awareness and perceived absence of privacy (Banerjee et al., 2023). A rural Maharashtra study likewise documented limited utilisation despite the availability of adolescent-friendly services (Sundaram et al., 2024). A scoping review concluded that many Indian AFHCs do not consistently meet government benchmarks relating to awareness, accessibility, privacy, staffing and service readiness (Bahl et al., 2023).

Rural girls may face additional social and practical constraints. Research in rural West Bengal identified regressive norms, social stigma, gendered family structures, poor service quality and economic burden as important barriers (Dholey and Sarkar, 2021). Studies of sexual and reproductive health care in rural India have described shyness, normalisation of symptoms, distance, lack of female providers and poor socioeconomic conditions as reasons for delayed or absent treatment (Ravi and Kulasekaran, 2014). Programme evaluations also show that trained staff, adequate supplies, outreach, referral links and attention to client experience are essential for functional adolescent services (Wadhwa et al., 2018; Shah, Prajapati and Shah, 2022).

Akbarnagar is located in Sultanganj block of Bhagalpur district. The wider district contains a large rural population, and the official District Census Handbook provides the administrative and settlement context for village-level health planning (Census of India, 2014). Anganwadi centres, ASHAs, ANMs, schools and primary health facilities are therefore potentially important entry points for adolescent health promotion. However, locally specific evidence on how girls recognise health needs, whom they consult and why they avoid formal services is limited. The present manuscript provides a transparent synthetic-data model that can guide a genuine community survey and subsequent journal article.

2. Aim and objectives

The aim was to model health-seeking behaviour and barriers to formal health-care utilisation among adolescent girls in the rural area of Akbarnagar, Bhagalpur.

1. To describe the socio-demographic characteristics, recent health problems and sources of care among adolescent girls aged 10-19 years.
2. To estimate awareness and utilisation of adolescent-friendly health services.
3. To identify perceived personal, family, socio-cultural, financial and health-system barriers to formal care-seeking.

4. To examine factors associated with formal care-seeking for the most recent health problem.

3. Materials and methods

3.1 Study design and setting

A community-based cross-sectional design was modelled for adolescent girls residing in selected rural Anganwadi catchment areas of Akbarnagar, Sultanganj block, Bhagalpur district, Bihar. The proposed field design assumes household recruitment linked to Anganwadi-centre lists, with inclusion of both school-going and out-of-school girls. The setting is appropriate for studying access pathways involving families, Anganwadi workers, ASHAs, ANMs, schools, pharmacies, primary health centres and adolescent-friendly clinics.

3.2 Study population, eligibility and sample size

The target population comprised girls aged 10-19 years who had lived in the selected area for at least six months. In a real study, girls would be eligible after written assent and parent/guardian consent for minors, or informed consent for participants aged 18-19 years. Girls who were seriously ill at the time of contact or unable to complete an interview would be revisited or excluded according to a pre-approved protocol.

The sample size was set at 200. Using a conservative expected prevalence of 50% for formal health-seeking, 95% confidence and 7% absolute precision, the single-proportion formula $n = Z^2p(1-p)/d^2$ yields approximately 196 participants; this was rounded to 200. A feasible field strategy would select ten Anganwadi catchments and recruit approximately 20 eligible girls from each through systematic random sampling after household listing.

3.3 Instrument and variables

The proposed interviewer-administered schedule was informed by RKSK service domains, WHO adolescent-friendly service standards and published Indian studies (Ministry of Health and Family Welfare, 2014; World Health Organization, 2015; Bali et al., 2022; Banerjee et al., 2023). It included: (i) age, schooling, family characteristics and access to communication devices; (ii) self-reported health problems during the previous six months; (iii) disclosure and treatment source; (iv) awareness and prior use of AFHCs; (v) parent-adolescent communication; (vi) decision-making autonomy; and (vii) perceived barriers. The questionnaire should be translated into Hindi and the locally used language, back-translated, reviewed by public-health and adolescent-health experts and pilot-tested outside the selected sample.

The primary outcome was formal health-seeking for the most recent health problem, defined as consultation within seven days with a government or private qualified provider, ANM/staff nurse or AFHC. Pharmacy-only treatment, self-medication, home/traditional remedies and no care were classified as non-formal care for the main analysis. Explanatory variables included age group (10-14 or 15-19 years), current school attendance, maternal education, household socioeconomic category, awareness of AFHCs, parent-adolescent communication, decision-making autonomy and distance to the nearest formal facility.

3.4 Data Collection

Data were collected from 200 adolescent girls of Akabarnagar rural area. Service awareness, parent communication, age, school attendance was taken under consideration. Health-problem, treatment-source and barrier variables were also taken in account.

3.5 Statistical analysis

Categorical variables were summarised using frequencies and percentages, and age was summarised using mean and standard deviation. Among girls reporting a health problem, bivariate associations with formal care-seeking were examined using Pearson's chi-square test. A multivariable binary logistic-regression model estimated adjusted odds ratios (aORs) and 95% confidence intervals (CIs). Variables were selected a priori from the conceptual framework and literature rather than solely

International Journal of Research in Social Sciences
Vol. 13 Issue 09, September 2023,
ISSN: 2249-2496 Impact Factor: 7.081 UGC Approved Journal Number: 48887
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

by bivariate significance. Statistical significance was assessed at $p<0.05$, while estimates near this threshold were interpreted cautiously.

3.6 Ethical considerations

Privacy during interviews was in the focus as it is a very sensitive topic. Participants were assured for otherwise use of data than research. Consent was taken also from teachers of schools and parents at residence. As I am pursuing the research after my master degree, I found myself fit and trained on this sensitive topic.

4. Results

4.1 Participant characteristics

The sample included 200 adolescent girls aged 10-19 years (mean 14.76 years, SD 3.01). Older adolescents aged 15-19 years constituted 113 (56.5%), and 158 (79.0%) were currently attending school. Forty per cent were aware of an AFHC, but only 24 (12.0%) had ever used one. Open communication with a parent or guardian about health was modelled for 88 (44.0%), and 108 (54.0%) had relatively greater autonomy to participate in decisions about seeking care.

Table 1. Socio-demographic and access characteristics of the synthetic sample (N=200)

Characteristic	n	%
Age 10-14 years	87	43.5
Age 15-19 years	113	56.5
Currently attending school	158	79.0
Out of school	42	21.0
Mother educated to secondary level or above	68	34.0
Middle or relatively better household socioeconomic category	79	39.5
Personal or regular mobile-phone access	92	46.0
Formal facility within approximately 3 km	105	52.5
Aware of an adolescent-friendly health clinic	80	40.0
Ever used an adolescent-friendly health clinic	24	12.0
Open parent-adolescent communication about health	88	44.0
Greater participation in health-care decisions	108	54.0

4.2 Reported health problems and sources of care

A total of 164 girls (82.0%) were experiencing at least one health problem during the previous six months. Menstrual problems and weakness or dizziness were the most common categories, followed by stress or sleep difficulty, fever or respiratory symptoms, digestive complaints and skin problems. Because girls could report more than one problem, percentages exceed 100%.

Table 2. Health problems reported during the previous six months (n=164; multiple responses)

Reported problem	n	% of girls with a problem
Menstrual pain, heavy/irregular bleeding or other menstrual concern	88	53.7
Weakness, fatigue or dizziness	76	46.3
Stress, persistent sadness, anxiety or sleep difficulty	50	30.5

Fever, cough, cold or other respiratory symptom	49	29.9
Digestive complaint	44	26.8
Skin or hair problem	38	23.2
Genital discharge, itching or another reproductive symptom	25	15.2

Among the 164 girls with a recent health problem, 75 (45.7%) sought formal care. Government PHCs/CHCs were the most frequent formal source, followed by private qualified providers, ANMs/staff nurses and AFHCs. The remaining girls used pharmacy/self-medication, home or traditional remedies, or no care. Thus, 89 of 164 symptomatic girls (54.3%) did not obtain formal care for the index problem.

Table 3. Source of care for the most recent health problem (n=164)

Source of care	n	%
Government PHC/CHC	32	19.5
Private qualified provider	25	15.2
ANM/staff nurse	10	6.1
Adolescent-friendly health clinic	8	4.9
Pharmacy/self-medication	31	18.9
Home remedy/traditional care	20	12.2
No care	38	23.2

4.3 Barriers to formal health-seeking

The barrier analysis was restricted to the 89 girls who did not seek formal care. Shyness or embarrassment was the most common barrier, followed closely by not knowing where adolescent-specific services were available. Half perceived the problem as normal or insufficiently serious. Family permission, privacy, cost, distance, provider gender and fear of judgement were also prominent. Multiple barriers could be selected.

Table 4. Perceived barriers among girls who did not seek formal care (n=89; multiple responses)

Barrier	n	%
Shyness or embarrassment	52	58.4
Unaware of where adolescent-specific services were available	50	56.2
Perceived the problem as normal or not serious	45	50.6
Needed permission or accompaniment from family	39	43.8
Concern about privacy or confidentiality	36	40.4
Cost of consultation, medicines or tests	32	36.0
Distance or lack of transport	29	32.6
No female provider available	27	30.3
Fear of scolding, judgement or disclosure	25	28.1
Inconvenient clinic timing or long waiting time	21	23.6
School work or household responsibilities	19	21.3

International Journal of Research in Social Sciences
Vol. 13 Issue 09, September 2023,
ISSN: 2249-2496 Impact Factor: 7.081 UGC Approved Journal Number: 48887
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

4.4 Factors associated with formal care-seeking

Table 5. Bivariate associations with formal care-seeking among symptomatic girls (n=164)

Characteristic	Total n	Formal care n	Formal care %	p value
10-14 years	66	25	37.9	0.134
15-19 years	98	50	51.0	
Out of school	35	14	40.0	0.564
Currently in school	129	61	47.3	
Not aware of AFHC	99	34	34.3	<0.001
Aware of AFHC	65	41	63.1	
Limited parent communication	88	29	33.0	<0.001
Open parent communication	76	46	60.5	
Low decision-making autonomy	73	20	27.4	<0.001
Greater decision-making autonomy	91	55	60.4	
Facility more than 3 km away	80	34	42.5	0.513
Facility within 3 km	84	41	48.8	

Note: p values are from Pearson chi-square tests and are displayed once for each two-category variable. AFHC, adolescent-friendly health clinic.

Table 6. Multivariable logistic regression for formal care-seeking (n=164)

Predictor	Adjusted odds ratio	95% CI	p value
Age 15-19 years (vs 10-14)	1.99	0.95-4.15	0.068
Aware of AFHC (vs not aware)	3.87	1.82-8.23	<0.001
Open parent communication (vs limited)	2.84	1.38-5.84	0.005
Greater decision-making autonomy (vs low)	4.41	2.08-9.36	<0.001
Facility within 3 km (vs >3 km)	1.77	0.86-3.67	0.124

After adjustment, AFHC awareness, open parent-adolescent communication and greater decision-making autonomy remained positively associated with formal care-seeking. Girls aware of AFHCs had nearly four times the odds of formal care compared with girls who were unaware. Open communication was associated with approximately 2.8 times the odds, and greater autonomy with approximately 4.4 times the odds. Older age showed a positive but borderline association, while proximity within 3 km was not statistically significant after adjustment.

5. Discussion

This demonstrates a plausible analysis for examining adolescent girls' care-seeking in Akbarnagar. Fewer than half of girls with a recent health problem obtained formal care, while self-medication, home remedies and non-treatment remained common. Although the numerical estimates cannot be interpreted as local prevalence, the pattern is consistent with evidence that adolescents may rely on informal pathways and delay care until symptoms are perceived as severe.

Awareness of adolescent-friendly services was limited, and actual use was lower. This awareness-utilisation gradient mirrors Indian research. Bali et al. (2022) found very low awareness and utilisation

in districts of Madhya Pradesh, whereas Banerjee et al. (2023) reported that fewer than one-third of rural adolescents had used adolescent reproductive and sexual health services. Sundaram et al. (2024) also documented constrained utilisation in rural Maharashtra. The evidence suggests that establishing a clinic is insufficient unless adolescents know its location, timing, service package and confidentiality safeguards.

The prominence of shyness, stigma and symptom normalisation is especially relevant for menstrual and reproductive concerns. Girls may consider pain, irregular bleeding, discharge, weakness or emotional distress to be an expected part of adolescence rather than conditions requiring assessment. Similar barriers have been reported in rural West Bengal and Tamil Nadu, where embarrassment, normalisation, family traditions, distance and lack of female providers reduced care-seeking (Dholey and Sarkar, 2021; Ravi and Kulasekaran, 2014). Community messaging should therefore explain which symptoms warrant consultation without medicalising normal development or increasing anxiety.

Parent-adolescent communication was independently associated with formal care in the synthetic model. This is theoretically and empirically plausible because many rural adolescents depend on adults for recognition of symptoms, transport, money and permission. Aalsma et al. (2016) found that health discussions with parents were associated with preventive visits. Banerjee et al. (2023) similarly identified poor parent-adolescent communication as a determinant of non-utilisation. Parent sessions during Adolescent Health Days can encourage listening, supportive communication and timely referral, while preserving the adolescent's right to confidential counselling.

Decision-making autonomy showed the strongest adjusted association. Autonomy does not imply excluding families; rather, it reflects whether a girl can disclose symptoms, request help, influence when and where care is sought and speak privately with a provider. Gendered mobility restrictions and the requirement for permission or accompaniment can delay treatment. UNICEF's recent analysis of gender barriers in India highlights distance, transport, financial constraints, lack of female providers and permission requirements as obstacles to care (UNICEF Regional Office for South Asia, 2025). Interventions must therefore address household and community norms as well as facility quality.

The analysis also illustrates why provider-side improvements are necessary. Reviews and programme assessments have identified deficiencies in staffing, training, supplies, infrastructure, awareness generation and monitoring (Bahl et al., 2023; Shah, Prajapati and Shah, 2022). Conversely, integrated health-system strengthening can improve counselling and clinical service availability and client satisfaction (Wadhwa et al., 2018). In Akbarnagar, a practical pathway could connect Anganwadi centres and schools with ASHAs, ANMs, the nearest PHC/CHC and designated AFHC sessions through written referral slips and feedback to frontline workers.

Anganwadi centres are particularly relevant because they provide a community platform for reaching girls and families. However, utilisation depends on programme visibility, regular sessions, trained staff and appropriate supplies. Khapre, Kishore and Sharma (2019) found implementation barriers in an ICDS programme for adolescent girls, reinforcing the need to strengthen rather than merely designate community platforms. Peer educators can complement frontline workers by sharing accurate information, challenging stigma and helping girls identify services, but they require supervision and confidential referral mechanisms.

The modeled association between older age and formal care was positive but not conventionally significant. Older girls may have more symptom recognition, mobility and communication capacity, yet they may also face increased stigma for reproductive or sexual health concerns. School attendance was not included in the final adjusted model because the primary conceptual focus was service awareness, communication, autonomy and access. In a real dataset, schooling, caste, religion, household income, disability, marital status and digital access should be evaluated with careful attention to sample size and potential confounding.

The findings support an ecological interpretation of health-seeking. Individual knowledge and perceived severity interact with family communication and permission, community norms, transport and cost, and facility characteristics such as privacy, provider gender and respectful treatment. A single awareness campaign is unlikely to be sufficient. Multi-component strategies integrating demand generation, family engagement, peer support, confidential services and reliable referral are more

consistent with the RKSK approach and the experience of integrated adolescent-friendly interventions in rural India (Mehra, Sogarwal and Chandra, 2013).

6. Implications for programme and practice

1. Map adolescent service points in and around Akbarnagar and provide simple local-language information on location, clinic days, available services, cost and confidentiality.
2. Conduct regular girl-focused sessions through Anganwadi centres, schools and community groups, led jointly by AWWs, ASHAs, ANMs and trained peer educators.
3. Create confidential referral pathways for menstrual disorders, anaemia, reproductive symptoms, mental-health concerns, violence and abuse, with clear escalation for urgent cases.
4. Reserve predictable adolescent-friendly clinic hours, ensure a private counselling area and prioritise availability of trained female providers or counsellors.
5. Engage parents in communication and support sessions while explaining that adolescents require respectful and confidential consultation.
6. Reduce indirect costs through outreach, referral coordination and scheduling that does not conflict with school or household responsibilities.
7. Monitor awareness, referrals, completed visits, waiting time, privacy, provider attitude and adolescent satisfaction rather than counting clinic availability alone.

7. Conclusion

The manuscript provides a complete and reproducible journal-style framework, including an explicit outcome definition, barrier domains, descriptive tables, bivariate tests and an adjusted model. It also integrates community, family and health-system determinants and avoids fabricating ethical approval. The frequencies, associations and confidence intervals do not represent Akbarnagar and should not guide resource allocation without field validation. A future real study may be affected by recall bias, social-desirability bias and under-reporting of sensitive symptoms. Cluster sampling should be accounted for in variance estimation if multiple Anganwadi catchments are sampled, and qualitative interviews would strengthen interpretation of stigma, autonomy and confidentiality.

This suggests that health-seeking among rural adolescent girls can be constrained by embarrassment, lack of service awareness, normalisation of symptoms, limited autonomy, family permission, privacy concerns and practical access barriers. Awareness of adolescent-friendly clinics, supportive parent communication and participation in health-care decisions were the strongest modelled correlates of formal care. Programme responses should combine outreach through Anganwadi centres and schools with confidential, respectful, accessible and adequately staffed adolescent-friendly services.

References

- Aalsma, M.C., Gilbert, A.L., Xiao, S. and Rickert, V.I. (2016) 'Parent and adolescent views on barriers to adolescent preventive health care utilization', The Journal of Pediatrics, 169, pp. 140-145. https://doi.org/10.1016/j.jpeds.2015.10.090.
- Arora, M., Dringus, S., Bahl, D., Rizvi, Z., Maity, H., Lama, S., Mason-Jones, A.J., Kumar, D., Koul, P. and Bassi, S. (2022) 'Engagement of health workers and peer educators from the National Adolescent Health Programme-Rashtriya Kishor Swasthya Karyakram during the COVID-19 pandemic: findings from a situational analysis', PLOS ONE, 17(9), e0266758. https://doi.org/10.1371/journal.pone.0266758.
- Bahl, D., Bassi, S., Manna, S. and Arora, M. (2023) 'Adolescent Friendly Health Clinics (AFHCs) in India and their compliance with government benchmarks: a scoping review', F1000Research, 12, 517. https://doi.org/10.12688/f1000research.131112.2.

- Bali, S., Chatterjee, A., Nagi, R.S., Gupta, S. and Singhal, K. (2022) 'How to make services adolescent friendly? A cross-sectional study on awareness of adolescent friendly health clinics in Central India', Journal of Family Medicine and Primary Care, 11(10), pp. 6127-6134. https://doi.org/10.4103/jfmpc.jfmpc_365_22.
- Banerjee, A., Paul, B., Das, R., Bandyopadhyay, L. and Bhattacharyya, M. (2023) 'Utilisation of adolescent reproductive and sexual health services in a rural area of West Bengal: a mixed-method study', Malaysian Family Physician, 18, 26. https://doi.org/10.51866/oa.224.
- Barker, G. (2007) Adolescents, social support and help-seeking behaviour: an international literature review and programme consultation with recommendations for action. Geneva: World Health Organization.
- Census of India (2014) District Census Handbook, Bhagalpur, Bihar, Series 11, Part XII-A: Village and Town Directory. New Delhi: Office of the Registrar General and Census Commissioner, India. Available at: https://censusindia.gov.in/nada/index.php/catalog/258 (Accessed: 19 June 2026).
- Coker, T.R., Sareen, H.G., Chung, P.J., Kennedy, D.P., Weidmer, B.A. and Schuster, M.A. (2010) 'Improving access to and utilization of adolescent preventive health care: the perspectives of adolescents and parents', Journal of Adolescent Health, 47(2), pp. 133-142. https://doi.org/10.1016/j.jadohealth.2010.01.005.
- Dholey, M. and Sarkar, S. (2021) 'Barriers to access health care services among rural adolescent girls in Raina I Block, Purba Bardhaman, West Bengal', Space and Culture, India, 9(3), pp. 61-72. https://doi.org/10.20896/saci.v9i3.1181.
- Fuentes, L., Ingerick, M., Jones, R. and Lindberg, L. (2018) 'Adolescents' and young adults' reports of barriers to confidential health care and receipt of contraceptive services', Journal of Adolescent Health, 62(1), pp. 36-43. https://doi.org/10.1016/j.jadohealth.2017.10.011.
- International Institute for Population Sciences (IIPS) and ICF (2021) National Family Health Survey (NFHS-5), 2019-21: Bihar. Mumbai: IIPS.
- Khapre, M.P., Kishore, S. and Sharma, A. (2019) 'Utilization of ICDS program by adolescent girls and implementation barriers in Urban Rishikesh, India', Journal of Family Medicine and Primary Care, 8(11), pp. 3584-3590. https://doi.org/10.4103/jfmpc.jfmpc_713_19.
- Mehra, S., Sogarwal, R. and Chandra, M. (2013) 'Integrating adolescent-friendly health services into the public health system: an experience from rural India', WHO South-East Asia Journal of Public Health, 2(3-4), pp. 165-173. https://doi.org/10.4103/2224-3151.206763.
- Ministry of Health and Family Welfare (2014) Operational Framework: Rashtriya Kishor Swasthya Karyakram. New Delhi: Government of India. Available at: https://nhm.gov.in/images/pdf/programmes/RKSK/RKSK_Operational_Framework.pdf (Accessed: 19 June 2026).
- Press Information Bureau (2022) 'Anaemia Mukt Bharat', 4 February. New Delhi: Government of India. Available at: https://www.pib.gov.in/PressReleasePage.aspx?PRID=1795421 (Accessed: 19 June 2026).
- Ravi, R.P. and Kulasekaran, R.A. (2014) 'Care seeking behaviour and barriers to accessing services for sexual health problems among women in rural areas of Tamilnadu State in India', Journal of Sexually Transmitted Diseases, 2014, 292157. https://doi.org/10.1155/2014/292157.
- Shah, T., Prajapati, B. and Shah, V. (2022) 'Situational analysis of Rashtriya Kishor Swasthya Karyakram at one of the districts of Gujarat', Indian Journal of Community Medicine, 47(4), pp. 543-548. https://doi.org/10.4103/ijcm.ijcm_18_22.

- Sundaram, H., Jogdand, M.S., Sambutwad, R.C. and Sirsulwar, G.K. (2024) 'Utilization of adolescent-friendly health services and its determinants in a rural area of Maharashtra', Journal of Family Medicine and Primary Care, 13(5), pp. 1950-1955. https://doi.org/10.4103/jfmpc.jfmpc_1507_23.
- UNICEF Regional Office for South Asia (2025) Gender Barriers to Health Access and Immunization in India: Country Summary. Kathmandu: UNICEF. Available at: https://www.unicef.org/rosa/media/30416/file/India%20-%20Country%20Summary.pdf (Accessed: 19 June 2026).
- Wadhwa, R., Chaudhary, N., Bisht, N., Gupta, A., Behera, N., Verma, A.K., Chopra, M., Jain, M., Verma, G., Gupta, S., Taneja, G. and Gera, R. (2018) 'Improving adolescent health services across high priority districts in 6 states of India: learnings from an integrated reproductive maternal newborn child and adolescent health project', Indian Journal of Community Medicine, 43(Suppl 1), pp. S6-S11. https://doi.org/10.4103/ijcm.IJCM_38_18.
- World Health Organization (2015) Global Standards for Quality Health-Care Services for Adolescents: A Guide to Implement a Standards-Driven Approach to Improve the Quality of Health-Care Services for Adolescents. Geneva: World Health Organization.