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Comprehending Knowledge, Practices, and Perceptions of Community Health Workers Regarding Adolescent Health Program: A Cross-Sectional Inquiry in Bellary District, Karnataka

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Abstract

Introduction Community health workers are crucial in improving health and bridging gaps between communities and health care services. They are integral to various national health initiatives to prevent diseases and enhance well-being. Providing health care services to adolescents is a pivotal responsibility for auxiliary nurse midwives (ANMs) and Accredited Social Health Activist (ASHA) workers.

Objectives This study aims to evaluate the community health workers' comprehension, implementation practices, and viewpoints regarding the implementation of the Rashtriya Kishor Swasthya Karyakram (RKSK) program.

Methodology The research was conducted across primary health centers in Hagaribommanahalli and Huvina Hadagali taluks. A two-stage sampling technique was utilized to gather data from 404 participants, who were administered a semi-structured questionnaire. Data analysis was performed using SPSS version 20 software.

Results Out of the total community health workers, 336 (83.2%) were ASHA workers, while 68 (16.8%) were ANMs. The mean age of the community health workers was 38 ± 6 years, and 79% had received training in the RKSK program. Of the respondents, 60.9% demonstrated adequate knowledge, and 79.5% correctly executed the RKSK activities. In addition, 80.5% of the participants strongly concurred with statements reflecting their perception of the RKSK program.

Conclusion The study findings indicate that community health workers possess a commendable understanding of the RKSK program. Furthermore, their effective implementation practices and positive perceptions regarding the RKSK program and its activities suggest a genuine commitment to supporting the RKSK program and other health-related endeavors targeting adolescents.

Keywords
- ANM
- ASHA workers
- knowledge
- practice
- perception

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Introduction

Every individual across the globe possesses an inherent right to good health, which is pivotal for the progress of any society. Regrettably, there exists an uneven distribution of health care resources between developed and developing nations.[1] In India, a country inhabited by 243 million adolescents, accounting for 21% of the population, these young individuals constitute a substantial demographic and economic force that shapes the nation's future. As adolescents' needs vary based on factors such as gender, personal circumstances, and socioeconomic status, their distinct requirements are apparent.[2] This phase of life, known as adolescence, marks the second decade and is characterized by burgeoning potential and significant opportunities that pave the way for self-discovery and autonomy. Adolescents undergo rapid physical, cognitive, and emotional development, influencing their feelings, cognitive processes, decision-making abilities, and interactions with their surroundings. This phase is a distinctive juncture in human growth and is pivotal in establishing the foundation for long-term well-being.[3]

The research underscores that the adolescent demographic is often the initial underlying cause of numerous noncommunicable diseases. Conditions like mental health disorders, sexually transmitted infections, early pregnancies, and childbirth are prevalent among adolescents. This age group's current health status substantially shapes adolescents' future well-being.[2] Given the substantial population of adolescents and the associated disease burden, the Indian government introduced the Rashtriya Kishor Swasthya Karyakram (RKSK) or the National Adolescent Health Program in 2014, aiming to safeguard and enhance the health of adolescents. The primary objective of the RKSK program is to ensure that "all adolescents can realize their full potential and make informed decisions related to their health and well-being."[4]

Investing in the health of adolescents is imperative, as it yields immediate and positive outcomes in terms of India's health objectives.[5] The RKSK program encompasses six priority areas: enhancing nutrition, promoting adolescent sexual and reproductive health, addressing noncommunicable diseases, curbing substance misuse, preventing injuries and violence (including gender-based violence), and fostering mental health. To achieve optimal adolescent health, RKSK employs strategies such as peer education, Adolescent Health Day (AHD), the Weekly Iron and Folic Acid Supplementation (WIFS) program, and the Menstrual Hygiene Scheme (MHS).[6]

Facility-based interventions aim to provide health care services by engaging adolescents and field workers, including auxiliary nurse midwives (ANMs), Accredited Social Health Activist (ASHA) Workers, Anganwadi Workers, medical officers, and nongovernmental organizations (NGOs).[7] Consequently, the role of community health workers (CHWs) becomes pivotal in disseminating awareness about adolescent health within communities. CHWs in a primary health center (PHC) context are individuals who are part of

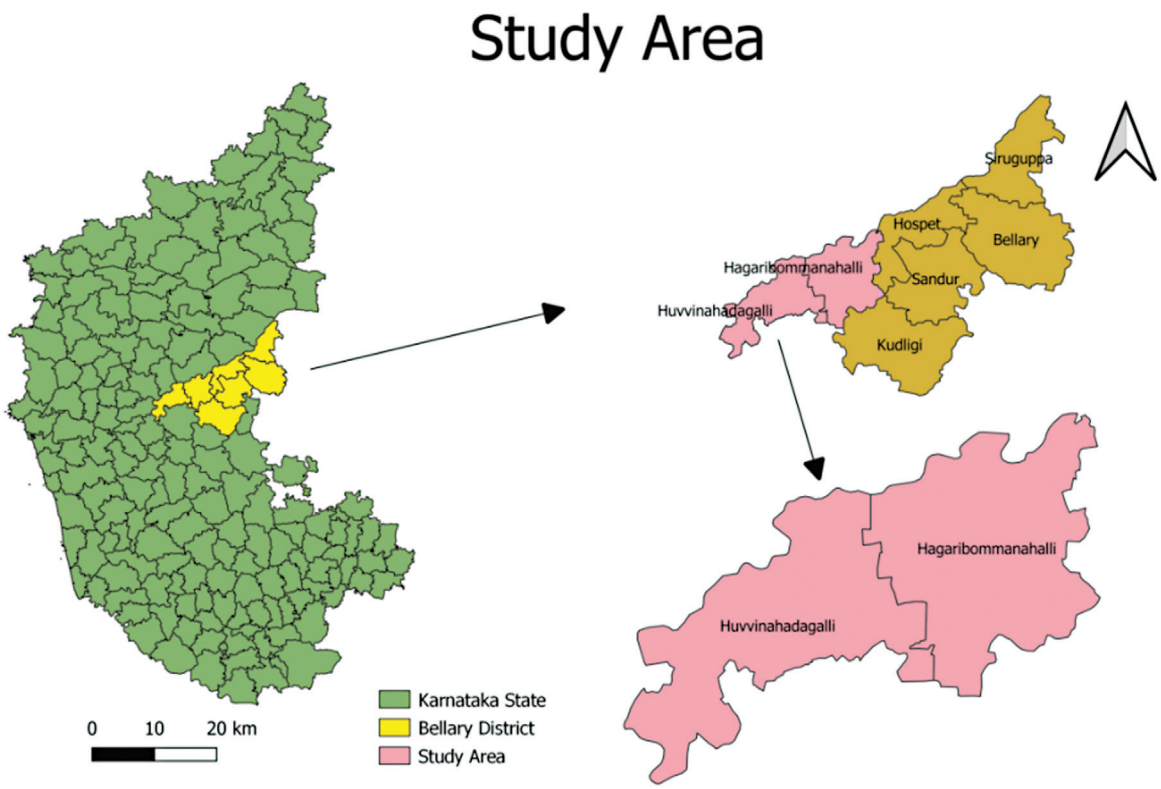

Fig. 1 Study area.

the local community and have undergone specialized training to deliver essential health care services and support within the area they serve. Assessing the extent of knowledge of these CHWs becomes instrumental in enhancing the focus on adolescent health within the health care system. Furthermore, a survey focusing on adolescent health highlighted that adopting the ABCDE approach (Assess, Build, Create, Deliver, and Evaluate) significantly enhances the effective implementation of RKSK.[8]

Methodology

Study Design

A cross-sectional study was carried out in Bellary district's Hagaribommanahalli and Huvina Hadagali taluks (►**Fig. 1**). The study was conducted between October 2021 and July 2022. A two-stage sampling technique was employed. In the first stage, two taluks were selected using a lottery-based approach. In the subsequent stage, a complete enumeration was performed using the census method. The researcher included all available ANMs and ASHA workers in the chosen taluks. This encompassed all the CHWs in Hagaribommanahalli and Huvina Hadagali. The total count of CHWs working in PHCs across these taluks was 404. All the CHWs in the PHCs of Hagaribommanahalli and Huvina Hadagali taluks were approached for participation in this study.

Study Instruments and Administration Procedure

The study instrument was subjected to validation by five experts in the field. The researcher administered a semi-structured questionnaire to the CHWs. The questionnaire was translated into the local language to ensure ease of comprehension. Comprising four sections, the questionnaire encompassed sociodemographic information, knowledge-based queries, practice-related inquiries, and perception-related items. Data collection from the respondents was conducted by trained public health personnel.

Data Collection and Ensuring Data Quality

The researcher personally visited the health centers where the participants were located and provided them with a clear understanding of the study's nature and objectives. Following a concise presentation, the researcher gave the participants an informed consent form and guided them through its contents. The participants were informed that they retained the right to withdraw from the study at any point, and their involvement was completely voluntary.

Data Analysis

The data collection process involved the collection of information in a paper-based format, which was subsequently entered into the Epicollect5 mobile application. The analysis of the collected data was carried out using SPSS Version 20. Categorical variables were summarized using frequencies and percentages, including age, education level, marital status, designation, and experience. The variables related to knowledge, practice, and perception levels were presented in percentages. The chi-squared test was employed for association between variables such as age, education, marital status, designation, and experience with the outcome variables. A significance level of $p < 0.05$ was utilized to determine statistical significance.

Ethical Considerations

Before the study commenced, ethical clearance was secured from the Institutional Ethics Committee with the approval number INST.EC/EC/162/2021-22 at KS Hegde Medical Academy, Nitte (Deemed to be University). Additionally, permission was sought from the relevant authorities to conduct the study.

Results

This study encompassed 404 CHWs, comprising 336 (83.2%) ASHA workers and 68 (16.8%) ANMs. The breakdown of respondents according to the sociodemographic attributes is depicted in ►**Table 1**. The average age of the CHWs was 38 ± 6 years, with the entirety of the respondents being females. Among the participants, 132 (32.7%) fell within

Table 1 Sociodemographic characteristics of the community health workers ($n = 404$)

Variables	Number	Percent
Designation		
ANM	68	16.8
ASHA	336	83.2
Age (y)		
25–30	54	13.4
31–35	91	22.5
36–40	132	32.7
>40	127	31.4
Education		
8–10	254	62.9
12 (PUC/ITI)	124	30.7
>13 (UG, PG)	26	6.4
Marital status		
Unmarried	15	3.7
Married	356	88.1
Widowed	33	8.2
Experience (y)		
2–5	65	16.1
6–10	75	18.6
>11	264	65.3
Formal training		
Yes	319	79
No	85	21

Abbreviations: ANM, auxiliary nurse midwives; ASHA, Accredited Social Health Activist; ITI, industrial training institute; PG, postgraduate; PUC, preuniversity course; UG, undergraduate.

Table 2 Distribution of respondents based on their knowledge of RKSK ($n = 404$)

Questions	Correct, *n* (%)	Incorrect, *n* (%)
Age of adolescents mentioned in the RKSK program	389 (96.3)	15 (3.7)
Full form of RKSK	198 (49.0)	206 (51.0)
The target group for the RKSK program	392 (97.0)	12 (3.0)
Objectives focused under the RKSK program	389 (96.3)	15 (3.7)
Reasons to conduct the Adolescent Health Day	364 (90.1)	40 (9.9)
Who organizes the Adolescent Health Day	389 (96.3)	15 (3.7)
Who are the beneficiaries of the Adolescent Health Day	357 (88.4)	47 (11.6)
Suitable contraceptive methods for adolescents	177 (43.8)	227 (56.2)
Methods used for nutritional evaluation among adolescents	377 (93.3)	27 (6.7)
Reasons for noncommunicable diseases among adolescents	306 (75.7)	98 (24.3)
Reasons for injury and violence among adolescents	94 (23.7)	310 (76.3)
Preferred day to conduct the Adolescent Health Day as per the RKSK guidelines	167 (41.3)	237 (58.7)
Reasons for mental health issues among adolescents	266 (65.6)	138 (34.4)

Abbreviation: RKSK, Rashtriya Kishor Swasthya Karyakram.

the age bracket of 36 to 40 years, while 127 (31.4%) were aged above 40 years. The educational attainment of the CHWs was categorized using a revised version of the Kuppuswamy scale, revealing that 254 (62.9%) CHWs had completed their secondary education. This was followed by 26 (6.4%) who had obtained a graduation degree. Moreover, a significant portion, namely, 356 (88.1%) of the respondents, were married. Notably, 319 (79%) of the participants had undergone training under the RKSK program.

The distribution of knowledge was classified into two categories, aligning with the RKSK guidelines: correct and incorrect. A significant proportion the CHWs, comprising 389 (96.3%), were aware of the specified age range for adolescents according to the RKSK guidelines (10–19 years). However, only 198 (49%) knew the accurate acronym for the RKSK program. Furthermore, nearly 392 (97%) CHWs were well-informed about the target demographic addressed by the RKSK program, while 389 (96.3%) were acquainted with the program's objectives.

Regrettably, a notable percentage, namely, 227 (56.2%) of the respondents, lacked awareness regarding appropriate contraceptive methods for adolescents. Additionally, 310 (76.3%) were not informed about the reasons for injury and violence prevalent among adolescents. Likewise, approximately 237 (58.7%) were unfamiliar with the recommended day for conducting AHD as outlined in the RKSK guidelines.

Knowledge of the CHWs was categorized based on a median value of 10. Participants scoring below 10 were classified as having inadequate knowledge, whereas those scoring above 10 were deemed to possess sufficient knowledge. Among the total participants, 158 (39.1%) exhibited insufficient knowledge concerning the RKSK program, while 246 (60.9%) demonstrated a satisfactory level of knowledge (►**Table 2**).

Table 3 Distribution of respondents based on practice of RKSK program at the field level

Variables	Frequency	Percent
Confidentiality		
Yes	390	96.5
No	14	3.5
Documentation		
Yes	334	82.7
No	70	17.3
Frequency of conducting AHD		
Once in 3 mo	337	83.4
Once in 6 mo	8	2.0
Once a year	30	7.4
Not at all	29	7.2
Location of conducting AHD		
Schools	183	45.3
PHC	90	22.3
Community	131	32.4
Commodities during the RKSK program		
Sanitary napkins	17	4.2
IFA and albendazole tablets	72	17.8
Condoms	2	0.5
All the above	313	77.5

Abbreviations: AHD, Adolescent Health Day; IFA, iron and folic acid; PHC, primary health center; RKSK, Rashtriya Kishor Swasthya Karyakram.

Table 4 Distribution of participants' total score on the RKSK practice questionnaire ($n = 404$)

Practice	Frequency	Percent
Correct (total score <3.9)	321	79.5
Incorrect (total score >4)	83	20.5

Abbreviation: RKSK, Rashtriya Kishor Swasthya Karyakram.

Out of the entire pool of respondents, 390 (96.5%) affirmed that they upheld the confidentiality of adolescents' health matters. Additionally, 334 (82.7%) participants reported documenting activities as part of the RKSK program. Moreover, 337 (83.4%) CHWs indicated that they organized AHD every 3 months. In comparison, 313 (77.5%) of these workers supplied sanitary napkins, iron and folic acid (IFA) tablets, and condoms to adolescents (see ►**Table 3** for detailed data).

The practice of RKSK activities among CHWs was evaluated, and the results were categorized using a median value. Participants scoring below 4 were classified as having correct practices, while those scoring above 4 were considered incorrect. The findings revealed that 321 (79.5%) CHWs adhered to the RKSK guidelines and correctly implemented the RKSK activities (►**Table 4**)

►**Table 5** presents the analysis of the relationship between the age and education of respondents and the knowledge level of CHWs concerning the RKSK. The results indicate that neither the respondents' age nor their education showed any significant association with the knowledge of CHWs about the RKSK program. Neither the respondents' marital status nor their work experience exhibited any significant association with the CHWs' knowledge concerning with the RKSK program. The designation of respondents significantly correlates with the knowledge level of CHWs concerning the RKSK.

Discussion

In the current investigation, it was observed that 32.7% of the respondents fell within the age range of 36 to 40 years, with an average age of 38 ± 6 years. This is consistent with a survey conducted in Saudi Arabia, where the age of 63.5% of the participants were between 35 and 39 years.[9] Notably, 62.9% of the individuals had completed their secondary education, while 88.1% were married. These findings align with a study conducted in Ethiopia, which reported a similar marital status distribution with approximately 62.3% of the participants being married.[10] The study also found that 79% of the participants had undergone formal training, a statistic resembling a study conducted on health service providers where approximately 60.68% of respondents had received training on adolescents' sexual and reproductive health.[11]

Regarding knowledge of the RKSK program, 60.9% of the respondents in the current study demonstrated adequate understanding. This is comparable to findings from a study in Madhya Pradesh that reported that 70.3% of participants

Table 5 Association of social variable with community health workers' knowledge

Variables	Inadequate, *n* (%)	Adequate, *n* (%)	Test statistic	*p*-value
Age (y)				
25–30	20 (37)	34 (63)	4.292	0.232
31–35	33 (36.3)	58 (63.7)		
36–40	46 (34.8)	86 (65.2)		
>40	59 (46.5)	68 (53.5)		
Education				
8–10	108 (42.5)	146 (57.5)	4.964	0.174
12	44 (35.5)	80 (64.5)		
>13	6 (24)	20 (76)		
Marital status				
Unmarried	2 (13.3)	13 (86.7)	4.558	0.102
Married	144 (40.4)	212 (59.6)		
Widowed	12 (36.4)	21 (63.6)		
Experience (y)				
2–5	25 (38.5)	40 (61.5)	0.192	0.908
6–10	31 (41.3)	44 (58.7)		
>11	102 (38.6)	162 (61.4)		
Staff				
ANM	19 (27.9)	49 (72.1)	4.282	0.039
ASHA workers	39 (41.4)	197 (58.6)		

Abbreviations: ANM, auxiliary nurse midwives; ASHA, Accredited Social Health Activist.

were knowledgeable about the RKSK program. Additionally, 96.5% of the participants stated they maintained confidentiality about the adolescents at the field level. These results are consistent with a survey conducted in 2018 that revealed that 90% of adolescent consultations with health care providers were treated confidentially.[12,13]

Regarding practices related to the RKSK program, 82.7% of the participants reported documenting the RKSK activities, and 83.4% indicated conducting AHD every 3 months. Furthermore, nearly 77.5% of the CHWs supplied the adolescents with essential items such as sanitary napkins, IFA tablets, albendazole, and condoms. A study in Gujarat also found that ASHA workers primarily assisted with the WIFS program and the AHD.[14]

The perception of the CHWs was assessed based on the statements they provided. Notably, all the participants strongly concurred with the views on implementing the RKSK program in every PHC and educating adolescents about nutrition. They acknowledged that organizing the AHD improves adolescents' health knowledge and education about sexual and reproductive health, ultimately aiming to reduce teenage pregnancies. Similar perceptions were documented in a study conducted in Saudi Arabia, where health care providers were seen offering separate health care wards and services tailored to adolescents' needs.[9]

Conclusion

The results of our study reveal that knowledge of the CHWs regarding the RKSK program remains below the desired level. Enhancing the initial and ongoing training for CHWs in the RKSK program could yield positive outcomes. It is commendable that implementing the RKSK program at the field level showcased effectiveness. However, there is room for improvement, particularly regarding the frequency of conducting the AHD within communities and the diligence of documentation. Addressing these aspects would warrant dedicated attention. Comprehensive training for each CHW across every taluk within their respective PHCs as part of the RKSK program would serve to fortify adolescent health and the CHWs' understanding, practices, and life skills across a spectrum of health dimensions. This includes nutrition, mental health, sexual and reproductive health, communicable and noncommunicable diseases, curbing violence and injuries, and preventing substance abuse. Given the employment of the questionnaire approach in this study, the depth of exploration with the CHWs was limited. Furthermore, potential limitations encompass respondent and recall bias, considering that the training was undertaken some time ago.

Conflict of Interest
None declared.

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References

1 Nampewo Z, Mike JH, Wolff J. Respecting, protecting and fulfilling the human right to health. Int J Equity Health 2022;21(01):36
2 Sivagurunathan C, Umadevi R, Rama R, Gopalakrishnan S. Adolescent health: present status and its related programmes in India. Are we in the right direction? J Clin Diagn Res 2015;9(03): LE01–LE06
3 National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Division of Behavioral and Social Sciences and Education; Board on Children, Youth, and Families; Committee on the Neurobiological and Socio-behavioral Science of Adolescent Development and Its Applications. The Promise of Adolescence: Realizing Opportunity for All Youth. Backes EP, Bonnie RJ, editors. Washington (DC): National Academies Press (US); 2019 May 16. PMID: 31449373
4 Barua A, Watson K, Plesons M, Chandra-Mouli V, Sharma K. Adolescent health programming in India: a rapid review. Reprod Health 2020;17(01):87
5 Mukherjee D, Behal S, Kurian OC Investing in Adolescent Health: Harnessing India's Demographic Dividend. Accessed January 10, 2023 at: https://www.orfonline.org/research/investing-in-adolescent-health-harnessing-indias-demographic-dividend/
6 Desai S. Adolescent Health: Priorities and opportunities for Rashtriya Kishor Swasthya Karyakram [Internet]. New Delhi: Population Council; 2017. Accessed August 10, 2023 at: https://knowledgecommons.popcouncil.org/departments_sbsr-pgy/502
7 National Health Mission Implementation guidelines Rashtriya Kishor Swasthya Karyakram (RKSK). Ministry of Health and Family Welfare, Government of India; 2018 Accessed August 11, 2022 at: https://nhm.gov.in/New_Updates_2018/NHM_Components/RMNCHA/AH/ guidelines/Implementation_Guidelines_Rashtriya_Kishor_Swasthya_Karyakram(RKSK)_2018.pdf
8 Kansara K, Saxena D, Puwar T, et al. Convergence and outreach for successful implementation of Rashtriya Kishor Swasthya Karyakram. Indian J Community Med 2018;43(Suppl 1):S18–S22
9 AlBuhairan FS, Olsson TM. Advancing adolescent health and health services in Saudi Arabia: exploring health-care providers' training, interest, and perceptions of the health-care needs of young people. Adv Med Educ Pract 2014;5:281–287
10 Tilahun M, Mengistie B, Egata G, Reda AA. Health workers' attitudes toward sexual and reproductive health services for unmarried adolescents in Ethiopia. Reprod Health 2012;9(01):19
11 Gausman J, Othman A, Al-Qotob R, et al. Health care professionals' attitudes towards youth-friendly sexual and reproductive health services in Jordan: a cross-sectional study of physicians, midwives and nurses. Reprod Health 2021;18(01):84
12 Wadman R, Thul D, Elliott AS, Kennedy AP, Mitchell I, Pinzon JL. Adolescent confidentiality: understanding and practices of health care providers. Paediatr Child Health 2014;19(02):e11–e14
13 English A, Ford CA. Adolescent health, confidentiality in healthcare, and communication with parents. J Pediatr 2018;199:11–13
14 Shah T, Prajapati B, Shah V. Situational analysis of Rashtriya Kishor Swasthya Karyakram at one of the districts of Gujarat. Indian J Community Med 2022;47(04):543–548