WORKING PAPER

Engendering Evidence-Based Policy for Young People's Reproductive Health in India

November 2019

USAID
FROM THE AMERICAN PEOPLE

MEASURE Evaluation

WORKING PAPER

Engendering Evidence-Based Policy for Young People's Reproductive Health in India

Sunita Nigam, MSc
Avantika Singh, MBA
Vishakha Singh, MSc

November 2019

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
Phone: +1 919-445-9350
measure@unc.edu
www.measureevaluation.org

This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement AID-OAA-L-14-00004. MEASURE Evaluation is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill in partnership with ICF International; John Snow, Inc.; Management Sciences for Health; Palladium; and Tulane University. Views expressed are not necessarily those of USAID or the United States government. WP-19-234

USAID
FROM THE AMERICAN PEOPLE

MEASURE
Evaluation

ACKNOWLEDGMENTS

The project team acknowledges the financial and technical support of MEASURE Evaluation under its small grants program, funded by the United States Agency for International Development.

The authors thank their parent institutions for providing the necessary institutional support for carrying out this research: Sunita Nigum thanks the Indian Institute of Health Management Research, Jaipur, India; Avantika Singh thanks Central University of Rajasthan, Ajmer, India; and Vishakha Singh thanks Maharana Pratap University of Agriculture & Technology, Udaipur, India.

We are grateful to all of the study's respondents who took time to respond to the questionnaires: policymakers, policy implementers, and key informants from government departments, schools, hospitals, and nongovernmental organizations. We thank the chief medical and health officer for Rajsamand District (Rajasthan) and the chief medical officer for Hathras District (Uttar Pradesh) for providing necessary permissions and facilitating the study. We are indebted to the principals of the schools in Hathras and Rajsamand for providing the necessary support to carry out the research. We thank the villagers of the four selected villages for their enthusiastic cooperation in the study. We acknowledge our team of field investigators for tirelessly working to carry out the survey. The support provided by our volunteers from time to time helped us sail through the challenges posed by external environmental conditions. We thank our families, for being staunch pillars and unconditionally supporting us while we were at work.

We are grateful to Bridgit Adamou, family planning technical officer, MEASURE Evaluation, University of North Carolina at Chapel Hill, for technical support at various stages of the research.

We thank the MEASURE Evaluation knowledge management team for editorial, design, and production services.

Suggested citation:

Nigam, S., Singh, A., & Singh, V. (2019). Engendering Evidence-Based Policy for Young People's Reproductive Health in India. Chapel Hill, NC, USA: MEASURE Evaluation, University of North Carolina at Chapel Hill

CONTENTS

FIGURES

TABLES

ABBREVIATIONS

ASHA	accredited social health activist
AYRH	adolescent and youth reproductive health
AYUSH	Ayurveda, Unani, Siddha and Homeopathy
CHC	community health center
DLHS	District-Level Household Survey
FP	family planning
IEC	information, education, and communication
IFA	iron folic acid
IIPS	International Institute for Population Sciences
IUD	intrauterine device
JSSK	Janani Shishu Suraksha Yojana
JSY	Janani Suraksha Yojana
KAP	knowledge, attitudes, and practices
MOHFW	Ministry of Health and Family Welfare
MTP	medical termination of pregnancy
NFHS	National Family Health Survey
NGO	nongovernmental organization
NHM	National Health Mission
PHC	primary health center
RCH	reproductive and child health
RBSK	Rashtriya Bal Suraksha Karyakram
RH	reproductive health
RKSK	Rashtriya Kishor Suraksha Karyakram
RMNCH+A	Revised Maternal, Newborn and Child Health Plus Adolescent Strategy
RTI	reproductive tract infection
SABLA	Rajiv Gandhi Scheme for Empowerment of Adolescent Girls
STI	sexually transmitted infection
TFR	total fertility rate
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

Background: Young people, defined by the World Health Organization (WHO) as people 10–24 years old, account for more than a quarter of India's population (2014). The country has the opportunity to harvest economic and social gains from its young, working-age population if it invests in human capital development and overcomes such challenges as poor education and healthcare, gender discrimination, and lack of access to adolescent and youth reproductive health (AYRH) care.

Objectives: This research aimed to provide evidence for policymakers on the strengths and weaknesses of the health policy framework; service delivery mechanisms; and knowledge, attitudes, and practices (KAP) of 10- to 24-year-olds related to reproductive health (RH) in India. The specific aims were to reveal the gender differences in KAP related to RH.

Methods: The research incorporated exploratory and descriptive approaches, using qualitative and quantitative data from primary and secondary sources. Data sources were document review; 37 key informant interviews; questionnaires; and observations of policymakers, policy implementers, and service providers from public and private sectors. Multistage, stratified random sampling was used to select states, districts, health facilities, schools, and respondents. Policy-related data were collected from 23 key informants at the national level in two randomly selected northern states—Rajasthan and Uttar Pradesh—and in one randomly selected district in each state. In each district, two villages were selected. From each village, 25 in-school and 25 out-of-school young people were selected to participate in the study. A total sample of 230 respondents, with an equal proportion of males and females, was selected for the study.

Findings: Given the number of policies, programs, and schemes aimed at RH launched at the national and state levels in recent years, the Indian government has acknowledged the importance of AYRH and is committed to attaining improved health outcomes for young people. The KAP study revealed that very few respondents recognized the importance of family life education. Most of the respondents discuss puberty and bodily changes with friends and peers and mental health issues with parents. Over 10 percent of 10- to 14-year-old males believed that gender discrimination and violence are acceptable in the family. Both male and female respondents across all age groups agreed there should be a minimum legal age for marriage. Fewer than one-quarter of 20- to 24-year-old female respondents were aware that menstruation is a normal part of development, and most female respondents reported that their main source of information on menstruation was their mother. All the female respondents lacked awareness of reproductive tract infections (RTIs) or sexually transmitted infections (STIs), and less than 50 percent of males were aware of them. Knowledge of HIV was less than 15 percent among females and less than 30 percent among boys, and both exhibited several misconceptions about HIV transmission. No more than half of the respondents knew about conception. More females were knowledgeable about family planning (FP) than males; however, awareness was less than 50 percent among both females and males. The main sources of information were friends and peers among females, and spouses or friends among males. Hospitals were mentioned most often as a place to procure contraceptives. Most respondents discussed FP issues with friends, and less than 15 percent discussed these issues with their spouses.

Recommendations: Family life education should be compulsory in all schools, starting at age 10. It should include a curriculum that incorporates issues related to puberty, menstruation, mental health, RTIs and STIs, HIV, contraception, violence and gender discrimination, and nutrition. Broadcast media programs that address RH issues should be designed to inform parents about and involve them in discussions about RH issues. Mental health and adolescent health counselors should be posted in schools. The education and health

departments need to partner to design and implement long-term engagement strategies for RH that both involve students and their parents.

INTRODUCTION

Background

India is home to nearly 18 percent of the world's population, according to the Census 2011 (Office of the Registrar General & Census Commissioner, India, 2011). The State of World Population 2016 pegged the total population of India at more than 1.3 billion, of which 28 percent falls in the 10- to 24-year olds age bracket (United Nations Population Fund [UNFPA], 2016). (WHO refers to 10- to 19-year-olds as adolescents and to 10- to 24-year-olds as young people [WHO, 2014]; the United Nations refers to 15- to 24-year-olds as youth.) [1]

India stands at the threshold of the demographic dividend,[2] which is likely to peak in the next decade, yielding the opportunity for the country to harvest the gains from its working-age population in the 15- to 64-year-old age group (Ministry of Finance, Government of India, 2017). Attaining the demographic dividend requires investments in human capital, comprising education and health (including RH), expansion of livelihood opportunities, and a conducive policy environment (UNFPA, 2014). However, young people face numerous challenges, such as dropping out of school, poor healthcare, unemployment, discrimination, deprivation of human rights, and lack of access to RH information and care. They confront issues such as child marriage, adolescent pregnancy, low use of modern contraception, lack of sexual education, vulnerability to HIV, gender-based violence, mental health problems, female genital mutilation, and malnutrition (Every Women Every Child, 2015; UNFPA, 2014, 2016). If the young population continues to wrestle with these challenges, payouts from the demographic dividend will be seriously undermined.

Adolescent and youth RH has floated to the top of the international policy agenda, and increasingly, organizations such as UNFPA, WHO, and the United States Agency for International Development (USAID), with global strategies such as Every Woman Every Child, are working with the governments of developing countries to uplift the status of AYRH and maximize the gains from the demographic dividend.

Rationale

The discourse on the demographic dividend is almost euphoric. Economic growth in the near future will be fueled by the working population. To turn rhetoric into reality, it is imperative for the Indian government to invest in human capital development. This requires a dedicated effort to engage in holistic development of young people through interventions in the areas of education, health (including RH and mental health), gender equity, livelihood promotion, and assertion of human rights.

Globally, the process of forming policies is becoming more evidence based. Research on the policy implementation and service delivery mechanisms related to RH can serve as inputs to the policy process. Yet few studies examine the effects of this policy process, including implementation mechanisms, on the KAP related to RH issues among young people. This research lies at the cusp of public policy, management, and social research and aims to address this gap in conceptual and empirical studies.

Economic, political, and academic reasons aside, adolescents are the future of the country and are therefore intrinsically important to India's development. Gender disparities in Indian society, economics, and politics

[1] This definition arose in the context of preparations for the International Youth Year (1985).
[2] Since 2018, India's working-age population (people between 15 and 64 years of age) has grown larger than the dependent population—children ages 14 or below and people above 65 years of age. This bulge in the working-age population is going to last till 2055, or 37 years from its beginning.

need to be pushed to the attention of policymakers, so that suitable policy interventions can be designed and implemented to eliminate gender inequity.

Overview of the Literature

This research encompasses five broad thematic areas related to young people's RH: policy, delivery of care mechanisms, integration of the role of private for-profit providers and the nongovernmental organization (NGO) sector, KAP related to young people's RH, and gender differences. This section presents an overview of the literature on these thematic areas.

Reproductive Health Policy for Young People

Until a few years ago, the Indian government's policy on RH largely focused on curbing population growth and preventing HIV. Consequently, the target groups for the Reproductive and Child Health (RCH) Programme were children up to the age of five years and married women of reproductive age (15–49 years). Young people, particularly unmarried boys and girls, remained largely out of the policy net. The health needs and challenges specifically faced by adolescents were not separately addressed through any policy framework apart from school health programs. Moreover, social, cultural, and religious factors overshadow discussions of RH issues in open spaces in India (Population Action International, 2002). Jejeebhoy and Santhya (2011) presented a comprehensive review of policies, laws, and programs launched during the past two decades related to young people's RH. Apart from this, hardly any research has been done on the policy framework and delivery mechanisms for young people's RH care in India. Moreover, recent policies announced by the Government of India, such as the National Health Mission (NHM), Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) Strategy[3] (Ministry of Health and Family Welfare [MOHFW], 2013), and the National Health Policy 2017, signal that young people's RH is gaining ground as a public policy issue. Thus, the first research gap that this study identified was the imperative to analyze the policy framework for young people's RH in India.

Delivery Mechanisms for Reproductive Health Care

There are several gaps in the implementation of interventions that deliver RH care to young people, such as inadequate reach, implementing interventions that have proven to be ineffective, piecemeal approaches, insufficient duration of interventions, and insufficient inputs for the interventions (Chandra-Mouli, et al., 2015). In the Indian context, the District-Level Household Survey (DLHS) collects data related to RCH infrastructure and use of services across the country (International Institute for Population Sciences [IIPS], 2010). However, the coverage of this survey is limited to RCH, therefore, the findings are not suitable for illustrating the service delivery mechanisms and infrastructure related to RH among the 10- to 24-year-old age group. The second research gap that this study identified was the lack of studies on the effectiveness of service delivery mechanisms for young people's RH.

Role of Private and Voluntary Sectors in Delivery of RH Care

The government, private sector, and NGOs deliver RH care, either individually or through collaborative arrangements such as public-private partnerships. Most publications we reviewed (Baru & Nundy, 2008; Venkat Raman & Björkman, 2009; Singh & Prakash, 2010) on public-private partnerships in health service delivery in India cover various aspects of health and not RH exclusively. A study by Peters, et al. (2004) found a lack of rigorous research designs and impact evaluations on RH activities in the private sector. The third

[3] RMNCH+A is an initiative run by the Government of India. It does not receive funding or other support from USAID.

research gap is the lack of concrete evidence on the roles and integration of private providers with NGOs and voluntary organizations in RH.

Knowledge, Attitudes, and Practices Related to RH among Young People

Adolescence must be understood as a period of biological, psychological, and behavioral changes. In developing countries, many adolescents initiate sexual activity at an early age because of early marriage. Knowledge and use of contraception are low among this age group. This has repercussions in terms of greater risk of HIV and STIs, early pregnancy, unwanted childbearing, abortion, and sexual violence (Hindin & Fatusi, 2009). Women and adolescents, particularly in developing countries, suffer the most from RH problems (Glasier, et al., 2006). Policies and programs do not serve the RH needs of adolescents well (Jejeebhoy, 1998). Very young adolescents (10- to 14-year-olds) form a critical link between childhood and adolescence/adulthood, yet this group has been largely ignored by policy (Igras, et al., 2014).

In India, national-level household surveys such as the National Family Health Survey-4 (NFHS-4) (IIPS, 2016) and the DLHS (IIPS, 2010) are conducted every few years to collect data related to RCH. NFHS-4 surveys women ages 15–49 years on their demographic profile and knowledge and experience with the following: FP, maternal and child health, child survival, HIV, STIs, RH, and nutrition. The DLHS-3 focuses on maternal health, and RCH. It covers ever-married women ages 15–49 and unmarried women ages 15–24. The focus of these surveys is RCH, and consequently does not sufficiently address issues related to young people's RH.

Several KAP studies have been conducted with young people related to various aspects of RH. For instance, a study on urban adolescent schoolgirls in Delhi found inadequate levels of knowledge of STIs, HIV, and contraception (McManus & Dhar, 2008). As they become older, young people ages 10–24 discuss RH issues more among themselves, and their personal hygiene practices improve (Nair, et al., 2013a). Another study found that men and women in the 15–24 age group had knowledge of contraception, legal age of marriage, infertility, and male sperm determining the sex of the child. However, respondents overwhelmingly expressed a need for adolescent care services and facilities for counseling (Nair, et al., 2013b). In developing countries, including India, adolescent girls are apprehensive about menstruation, and menstrual practices are shrouded with social myths and taboos (Chandra-Mouli & Patel, 2017; Chothe, et al., 2014; Drakshayani & Venkata, 1994). The fourth research gap identified relates to the lack of KAP studies on RH among young people, including married and unmarried, males and females.

Gender Differences

According to India's 2011 census, although the overall sex ratio in India is 943 women per 1000 men, it is even more unequal for young people, with the worst ratio of 884 for the 15- to 19-year-old age group. In the Human Development Report, India ranks 131 out of 188 countries, with the Gender Development Index pegged at 0.819 and the Gender Inequality Index at 0.530 (United Nations Development Programme, 2016). The gender disparity in human development is starkly visible in India. Studies find gender-based constraints with respect to knowledge and use of RH care (Nair, et al., 2013a, 2013; Pande, et al., 2006). The fifth research gap we addressed is understanding the gender differences in KAP related to RH among young people.

Research Questions

This research aimed to provide evidence on the effectiveness of existing policies and programs for young people's RH in India. The goal of the research findings is to inform AYRH policies and practices so the country can realize the gains from the demographic dividend over the next decade. To that end, this research

proposed to study the policy framework, care mechanisms, and KAP related to RH among the population ages 10–24 years in India. This research addressed the following questions:

1. How effective is the policy framework for young people's RH?
2. How effective are the service delivery mechanisms, such as the health system infrastructure, supplies, implementation of young people's RH programs by health workers, access to care, and RH programs in schools?
3. How effectively are the roles of the private and voluntary sectors integrated with RH policies and care?
4. Among 10- to 24-year-olds, what are the KAP related to various aspects of RH, including relationship with parents, family life education, adolescent-friendly health services, substance abuse, gender discrimination and violence, age at marriage, menstruation, RTI or STI, HIV, contraception, reproduction, abortion, antenatal care, delivery, and neonatal care?
5. What gender differences exist in program implementation and KAP?
6. What evidence could be provided to policymakers and stakeholders to enable the effective design and delivery of policy interventions related to young people's RH with a focus on gender equity?

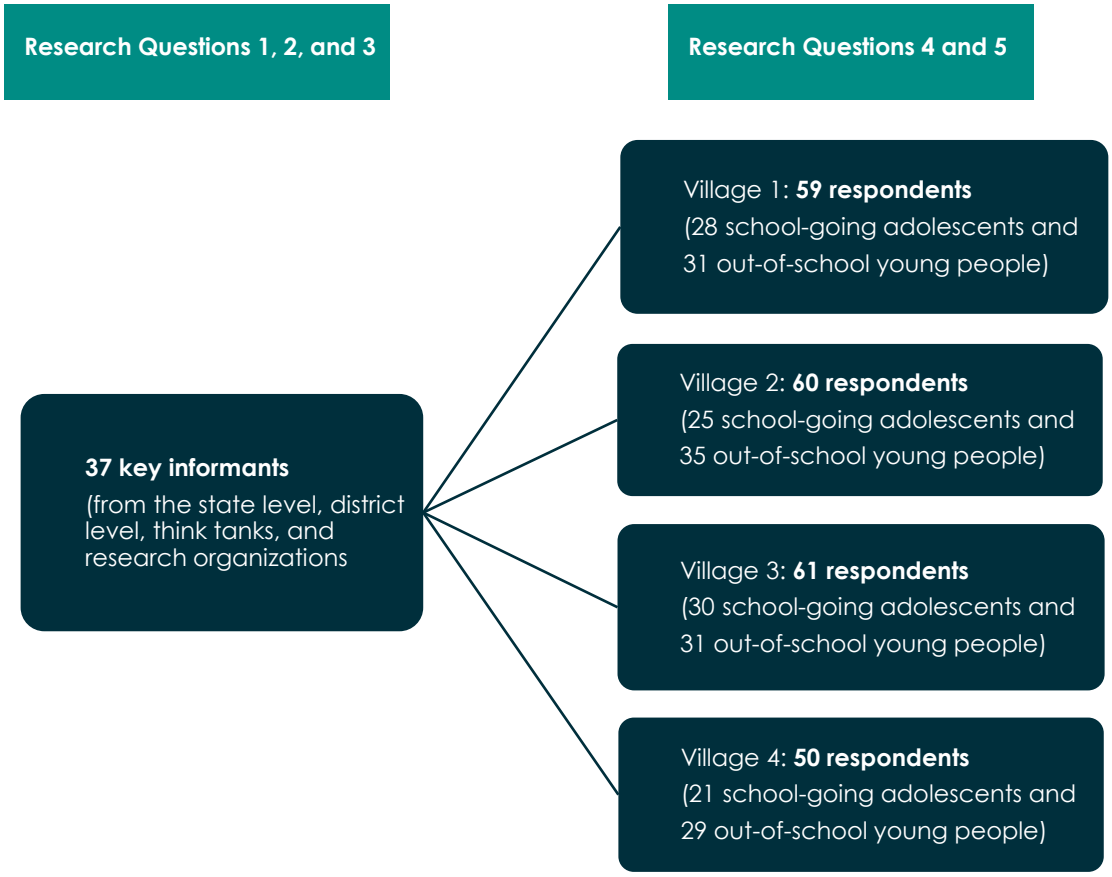
METHODS

This research used exploratory and descriptive approaches, sourcing qualitative and quantitative data from primary and secondary sources. Multistage, stratified random sampling was used to select states, districts, health facilities, schools, and respondents. Policy-related data were collected from 37 key informants at the state and district levels and from think tanks and research organizations.

Among India's 29 states, we randomly selected Rajasthan and Uttar Pradesh, which are categorized as "High Focus Non-North East States" in the NHM. Both are situated in the northern part of the country. Pakistan borders Rajasthan to the northwest and Nepal borders Uttar Pradesh to the northeast.

One district was randomly selected in each state: Rajsamand District, in Rajasthan State, and Hathras District, in Uttar Pradesh State. In both districts, rural female literacy is lower than the state average. In each district, two villages were selected, each with a school that included class 12 (i.e., XII standard, or high school). From the four villages, 104 school-going and 126 out-of-school young people ages 10–24 years were selected as respondents for the study. The former were selected through simple random sampling, with the sample drawn from the school registers, and the latter were selected through snowball sampling in the nearby village. A total sample of 37 key informants and 230 survey respondents, with an equal proportion of males and females, was selected for the study (Figure 1).

Figure 1. Study respondents



Questionnaires, observation checklists, and schedules (i.e., interviewer-directed questionnaires) were developed or modified from existing schedules (Table 1).

Table 1. Summary of data requirements for the study

	Research Question 1	Research Questions 2 & 3	Research Questions 4 & 5	Research Question 6
Subject matter of research question	Effectiveness of the RH policy framework	Effectiveness of service delivery mechanisms and effectiveness of the role of the private sector and NGOs in RH	KAP related to various aspects of RH; gender differences in RH	Evidence related to AYRH to serve as policy input
Dataset required	Policy and strategy documents	Physical infrastructure (health facilities, schools), supplies (e.g., condoms, educational materials), issues related to service delivery faced by health workers, access	KAP related to various aspects of RH	Research findings related to Research Questions 1–5
Data source/ respondents	Key officials from ministries, government departments, and policy agencies at the national and state levels—such as the MOHFW; state health departments, directorates, missions, societies, and other nodal agencies; think tanks; and research organizations	Observation of physical facilities such as hospitals, health centers, and schools in cities and villages	Males and females in the 10- to 24-year-old age group in schools and community	
Type of data	Primary and secondary; qualitative and quantitative	Primary and secondary; qualitative and quantitative	Primary data; quantitative	
Data collection methods and tools	In-depth interviews using checklists and questionnaires	Observation checklist and questionnaires	Schedule filled in through personal interviews	
Number of respondents	37 key informants from state health departments, district-level officials, think tanks, and research organizations	37 key informants as stated in Research Question 1	230 respondents (104 school going and 126 out-of-school young people)	

A schedule for the KAP study was prepared and translated into Hindi. The following null hypothesis was worked out:

H_o: There is no significant difference between males and females in KAP related to RH.

We checked the quantitative data collected through schedules for accuracy. After entering the data into an Excel spreadsheet, the data were exported to SPSS (a statistical analysis software) for further analysis. The data were summarized through descriptive statistics. We computed inferential statistics to establish the relationships among the variables and make inferences from our data to the general population.

RESULTS

Profile of Study Districts

The public health infrastructure of Rajsamand District, in Rajasthan State, comprises seven blocks,[4] 12 community health centers (CHCs), 44 primary health centers (PHCs), 260 subcenters,[5] one district hospital, and one subdistrict hospital. Hathras District, in Uttar Pradesh State, has seven blocks. It is not a high-priority district and has few sanctioned health posts.

Policy Framework

The National Adolescent and Youth Reproductive Health Policy Framework and Implementation Programs

This section pertains to Research Questions 1 and 2, assessing the effectiveness of various AYRH policies at the national and state levels, as perceived by the key informants. The all-encompassing policy framework was provided by the NHM, National Health Policy 2017, and RMNCH+A. The national policy contains a number of aspects related to AYRH, such as health clinics serving adolescents; life skills education; counseling; nutrition; information, education, and communication (IEC); and menstrual hygiene. The policy also includes three national AYRH-related programs: Rashtriya Bal Suraksha Karyakram (RBSK) or National Child Security Programme, Rahtriya Kishor Swasthya Karyakram (RKSK) or National Adolescent Health Programme, and Janani Shishu Suraksha Karyakram (JSSK) or the Mother Child Security Programme.

National Health Policy

India's National Health Policy 2017 is based on the Sustainable Development Goals and aims to attain "the highest possible level of health and well-being for all at all ages, through a preventive and promotive healthcare orientation in all developmental policies, and universal access to good-quality healthcare services" through improved quality and lower cost (MOHFW, 2017). The policy was designed to be implemented through national health programs and interventions: RMNCH+A, child and adolescent health, universal immunization, malnutrition and micronutrient diseases, communicable diseases, noncommunicable diseases, mental health, and population stabilization.

To improve maternal and child health outcomes, the policy recommends strengthening health systems to manage maternal complications, ensuring continuity of care and emergency services, and addressing the social determinants of health. To enhance child and adolescent health outcomes, the policy recommends home-based and facility-based care of sick newborns; screening and treating childhood diseases, defects, and disabilities; implementing a school health program; and focusing on mental health and nutrition. To reduce micronutrient deficiencies and malnutrition, the policy recommends screening for deficiencies, dietary diversification, micronutrient supplementation such as iron folic acid (IFA), and convergence with other ministries or departments such as Human Resource Development, Women & Child Development, and Food and Civil Supplies. Other issues related to AYRH addressed by the policy include HIV and mental health.

The policy promotes integration within the health system, which was initiated through the NHM, and recognizes the long-term benefits of investing in adolescent health. Consequently, the current policy

[4] A block is a rural area administratively earmarked for development. It comprises several villages.

[5] A subcenter is the lowest level of healthcare. It is a peripheral outpost of the Indian healthcare system. One subcenter caters to the needs of 5000 people in general and 3000 people in hilly, tribal and rural areas.

environment in India is more supportive of interventions that are directed toward the human capital development of the young population.

NHM

Started in 2005, the present form of NHM comprises two submissions: the National Rural Health Mission and the National Urban Health Mission. NHM's comprehensive goals are aimed at reducing the maternal mortality rate, infant mortality rate, total fertility rate (TFR), anemia, communicable and noncommunicable diseases, out-of-pocket expenditure on health by households, tuberculosis, leprosy, malaria, microfilaria, and kala azar (NHM, 2014a). NHM provides an overarching institutional framework for the implementation of health policy in India. It has carried out the gigantic task of eliminating fragmentation within the health system into urban versus rural and health versus family welfare. It has established itself as a strong platform for implementing healthcare with supportive human resources and infrastructure. RMNCH+A has been incorporated in India's health policy as a component of NHM.

RMNCH+A

All the programs and schemes that were implemented under the RCH Programme Phase II have been incorporated (MOHFW, 2013). Launched in 2013, RMNCH+A articulates the importance of addressing health needs at all stages of the life cycle and recognizes adolescence as a critical stage linking childhood and motherhood. Thus, for the first time in the history of India's health policy, RMNCH+A recognizes adolescents as a distinct group. The goals of RMNCH+A are congruent with those of NHM and aim to reduce the infant mortality rate, maternal mortality rate, and TFR. The specific targets are to increase the number of service delivery points; proportion of institutional deliveries and deliveries conducted by skilled birth attendants; proportion of women receiving antenatal and postnatal care; coverage of diphtheria, tetanus, and pertussis immunization; and use of oral rehydration salts. The targets aim to promote exclusive breastfeeding, improve the child sex ratio, and reduce the following: proportion of underweight children, unmet need for FP, adolescent pregnancy, and anemia among adolescents.

Previous policies and programs, such as the RCH policy, focused on married women of reproductive age. The earlier policy framework excluded married and unmarried women in the 10- to 14-year-old age group, unmarried women in the reproductive age group, and men of all ages. RMNCH+A eliminated the vertical health program approach, for which the Indian public health system had been heavily criticized on the grounds that it failed to achieve synergies. RMNCH+A, and subsequently other programs such as RBSK and RKSK, provide the gamut of comprehensive and integrated health services to address the health needs of client groups at different life stages, namely, adolescence/prepregnancy, pregnancy, birth, newborn/postnatal, and childhood.

For adolescents, RMNCH+A interventions cover nutrition, life skills education, menstrual hygiene, IEC, counseling on AYRH and other health issues, and preventive health check-ups and screening.

RMNCH+A interventions related to pregnancy and childbirth include preventive use of folic acid in the peri-conception period, antenatal care and tracking high-risk pregnancies, skilled obstetric care, emergency obstetric and newborn care, essential newborn care and resuscitation, postpartum care for mother and baby, postpartum intrauterine device (IUD) and voluntary sterilization, and implementation of the Preconception and Prenatal Diagnostic Techniques Act.

RMNCH+A interventions for newborns and children include home-based newborn care and referrals, facility-based care of sick newborns, child nutrition and essential micronutrient supplementation, integrated management of common childhood illnesses (pneumonia, diarrhea, and malaria), immunization, and child

health screening and early intervention services. RMNCH+A interventions designed for the reproductive age group include contraceptive distribution, promotion of child spacing methods, voluntary sterilization services, comprehensive abortion care, and RTI/STI management.

Nutrition

For adolescent nutrition, RMNCH+A's school and community-based interventions are supplemented by the SABLA[6] scheme under the Ministry of Women and Child Development and the Ministry of Human Resource Development's Mid-Day Meal Programme,[7] which are primarily aimed at promoting nutrition among children and adolescents. Under the National Iron+ Initiative, adolescents and women who are pregnant and lactating are to receive red IFA tablets; those who are not receive blue ones. Weekly IFA supplementation is supposed to be distributed to 10- to 19-year-old girls and women in and out of school. IFA tablets are to be provided either through the school or through the Kishori Balika Programme (Adolescent Girls Program) operated by Anganwadi Centers,[8] where other nutritional services are provided: screening for anemia, biannual deworming through albendazole, and counseling/IEC related to nutrition.

The present strategy provides nutrition education and counseling to the 10- to 18-year-old age group at the community level through existing platforms such as Village Health and Nutrition Day, Kishori Diwas (Adolescent Girls' Day), and Anganwadi Centers. The strategy incorporates nutritional education in the school curriculum in both study states. Supplementary nutrition or fortified food is to be provided to students through the midday meal scheme. The medical department is supposed to inspect the quality of meals periodically. According to Jean Dreze and Aparajita Goyal, in Uttar Pradesh, children are free to bring lunch from home, and many children avoid taking the midday meal because they do not like to be perceived as "poor"(Goyal & Dreze, 2003).

Adolescent Health Clinics

Key informants reported that adolescent health clinics were functional at all health facilities at the CHC level and above. These clinics operated daily and provided comprehensive counseling services. Though the clinics were specifically for adolescents (13- to 18-year-olds), they also provided services to 10- to 12-year-olds, if required. In Rajasthan, the clinics were known as *Ujala* ("light" in Hindi) clinics.

Life Skills Education Program

RMNCH+A envisages operating a life skills education program in school and community settings to cover issues related to AYRH, gender discrimination, gender-based violence, noncommunicable diseases, mental health, substance abuse, and healthy lifestyles (MOHFW, 2013).

[6] The Rajiv Gandhi Scheme for Empowerment of Adolescent Girls, or SABLA, was launched in 2010 across 200 districts in India. It aims to empower adolescent girls ages 11–18 by improving their health and nutritional status and developing their life and vocational skills. The scheme is implemented through the existing network of Anganwadi Centers, which operate under the Integrated Child Development Scheme (Ministry of Women and Child Development, 2010).

[7] Started in 1995, the National Programme of Mid-Day Meal in Schools provides cooked meals to children from classes I to VIII in all government schools, government-aided schools, and other schools for a minimum of 200 days per year.

[8] Started under the Integrated Child Development Scheme in 1975, Anganwadi Centers are rural childcare centers in India. They primarily provide supplementary nutrition and preschool activities. Anganwadi workers collaborate with public health workers to deliver basic healthcare, referrals, and immunization to women and children.

Counseling and IEC on AYRH and Other Health Issues

A peer educator approach was introduced through RMNCH+A to sensitize client groups to health issues, stress, anxiety, conflicts, and healthy relationships. Subsequently, peer educators have been subsumed under RKSK. According to key informants, the approach has yet to be implemented at the ground level in either state. Health workers have been trained to screen and refer young people addicted to alcohol, tobacco, and drugs to addiction centers. Community-level functionaries, such as teachers, Anganwadi workers, auxiliary nurse midwives, and *preraks* (motivators), have been trained to screen, counsel, and refer young people on mental health issues, such as anxiety, stress, depression, and suicidal tendencies. During the 48-hour stay at a health facility following an institutional delivery, RKSK calls for mothers to be counseled on postpartum FP methods, such as IUD and voluntary female sterilization.

Menstrual Hygiene

According to the recent policy, to promote menstrual hygiene, 10- to 12-year-old girls are to be given information about menstruation and menstrual hygiene and provided sanitary napkins at PHCs and higher-level health facilities. Key informants reported that in Rajsamand, sanitary napkins are available in schools and Anganwadi Centers and are sold by accredited social health activists (ASHAs); in Hathras, sanitary napkins are distributed through schools and not health facilities.

District-Level AYRH Implementation Programs

RKSK

Launched across 231 districts in 2014, RKSK addresses the 9- to 18-year-old age group and is present in facilities and the community. Its objectives are to improve access and availability to adolescent health information, enhance access and use of counseling and health services for adolescents, and create a safe and supportive environment for adolescents through multisectoral partnerships. It has six strategic priority areas: injuries and violence (including gender-based violence), noncommunicable diseases, RH, substance abuse, mental health, and nutrition. These are to be implemented through the seven critical components, or the "7Cs": coverage, content, communities, clinics (health facilities), counseling, communication, and convergence (RKSK, 2014).

RKSK provides IFA supplementation every week and six sanitary pads every month to girls studying in classes six through eight. The program revamped the former Village Health and Nutrition Day as Adolescent Health Day, which is to be observed quarterly. (RKSK, 2014)Peer educators[9] will soon be deployed in 10 high-priory districts to improve the program's reach among adolescents. Key informants reported that peer educator training was provided for district-level officers. The pilot for peer educators was carried out in Bundi and Jalore Districts, but had not yet been carried out in Rajsamand District. The program plans to establish adolescent-friendly health clinics at various health facilities. It envisages that as an individual grows from childhood to adolescence, he or she will graduate from RBSK, which is the first point of contact with the health system, to RKSK. The program is built on the model of converging RKSK with other MOHFW programs and with other ministries and departments, including the Ministry of Youth Affairs and Sports, Ministry of Human Resource Development, Ministry of Women and Child Development, Ministry of Labour and Employment, and Ministry of Social Justice and Empowerment. The National Steering Committee for

[9] Girls and boys will be selected as peer educators and trained by teachers in schools and by ASHAs and auxiliary nurse midwives in community settings. They will provide counselling and referrals for both in- and out-of-school adolescents.

Adolescent Health and Development, State Committee for Adolescent Health, and District Committee for Adolescent Health provide overall coordination and ensure RKSK's smooth functioning RKSK, 2014).

RBSK

Since 2014, RBSK has been covering the "4Ds"—defects at birth, deficiencies in nutrition, diseases, and developmental delays, including disabilities—among children up to 18 years of age. Babies are first screened at the time of delivery. The second screening, which looks for deformities, is done by ASHAs through home-based newborn care, from 48 hours of birth and up to six months. Children from newborn to six years of age are screened at Anganwadi Centers. If these screenings identify specific conditions, the children are referred to the district's early intervention center located at the district hospital. According to the RBSK policy document, those ages 6–18 years are to be screened at schools and inter-colleges, and if necessary, are referred to public health facilities by a mobile health team composed of two Ayurveda, Unani, Siddha and Homeopathy (AYUSH)[10] doctors, a male and a female doctor; an auxiliary nurse midwife, or staff nurse; and a pharmacist, paramedical staff, or ophthalmic assistant (RBSK, 2015).

Key informants reported that in Hathras, a mobile health team consisting of a male doctor, a female doctor, an optometrist, and a staff member visited the schools and screened around 120 students in one day. The children were screened for 38 diseases, of which nine were most common. The health reports were posted through an online portal to the nodal officer or district for the early intervention center manager. Medicines for common problems such as cough, cold, abdominal pain, and otitis media were distributed on the spot. Children with more serious problems were referred to a CHC or district hospital. The outpatient department for children was organized every Saturday at the CHC. Lectures and counseling sessions on menstrual hygiene and RH were held for female teachers and girl students from classes six to 12 only (i.e., middle school through high school). In Hathras, RBSK was implemented both at the community and facility levels. However, it covered only government schools, not government-aided schools (privately owned schools that receive grant-in-aid from the government).

Janani Suraksha Yojana (JSY)

Launched in 2005, JSY (Safe Motherhood Plan) aims to improve the number of institutional deliveries and reduce maternal and infant mortality. Under this scheme, ASHA-Sahyoginis[11] and clients who deliver at government health facilities or private hospitals recognized by the government are provided financial incentives by the government. In rural areas, an ASHA-Sahyogini is given Rs.300 (about US$4) for providing antenatal care and facilitating institutional delivery. Clients are paid Rs.1400 (about US$20) for institutional delivery. In urban areas, the ASHA-Sahyoginis are paid Rs200 (about US$3) for antenatal care and institutional delivery and clients are paid Rs.1000 (about US$14) for institutional delivery. Women living below the poverty line are provided Rs.500 (about US$7) for home deliveries. For pregnant women, ASHA-Sahyoginis should provide three antenatal care checkups, tetanus immunizations, IFA tablets, and facilitate institutional deliveries. Postdelivery, mothers are encouraged to stay the standard 48 hours at the health facility (MOHFW, 2015a).

JSSK

According Janani Shishu Suraksha Karyakram, JSSY (Mother and Child Security Program) launched in 2011 by the Government of India to promote safe motherhood and newborn care by providing free services: institutional delivery, round-trip transportation from home to health facility, meals to mothers during the 48-

[10] AYUSH doctors are the doctors in alternative systems of medicine, namely, Ayurveda, Unani, Siddha, and Homeopathy.
[11] ASHA-Sahyoginis (Accredited Social Health Activist-Sahyoginis) are health workers who assist Anganwadi workers and auxiliary nurse midwives in implementing health and nutrition programs.

hour postpartum stay at the health facility, and treatment of sick newborns for a period of 30 days from birth (NHM, 2014a). Free treatment and referral transport were also provided to sick infants up to the age of one year (MOHFW, 2015b).

State-Level AYRH Programs

The AYRH program in Rajasthan State is implemented through the Department of Family Welfare, which functions under the aegis of the Directorate of Medical and Health Services of the Government of Rajasthan (Directorate of Medical Health & Family Welfare Society, Government of Rajasthan, 2018). The Family Welfare Programme's objectives are population stabilization, prevention of infant mortality, and prevention of maternal mortality. Key informants reported that there was a strong convergence among the family welfare, health, and education departments to implement the School Health Programme. The Department of Family Welfare collaborates with the Department of Women and Child Development to implement the Anganwadi program.

According to a gynecologist working in the district hospital in Hathras, ambulance service and 24-hour emergency care were available at most health facilities.[12] In hospitals with adequate infrastructure, trained doctors were authorized to carry out medical termination of pregnancy (MTP), although there was a shortage of doctors and labor rooms to perform the procedure. Key informants reported that up to eight weeks of pregnancy, the procedure could be done at a CHC. After eight weeks of pregnancy, the procedure was often referred to the district hospital—although in Hathras, the procedure was available in the district hospital only, owing to infrastructure challenges. Clients received about US$4 for MTP. ASHAs received about US$2 as an incentive for each case of surgical termination of pregnancy and about US$3 for each MTP. However, often ASHAs referred these cases to private hospitals because private hospitals might pay higher incentives.

In-depth interviews with stakeholders revealed that FP counseling and methods were available in state facilities. Permanent methods included voluntary female sterilization (laparoscopy and the less-common minilaparotomy) and no-scalpel vasectomy for men. However, stakeholders reported that the latter procedure accounted for only 1.4 percent of the total sterilization cases conducted in Rajasthan State during 2017–2018. In Hathras, stakeholders reported that sterilization was available only in the district hospital. Nonpermanent methods available in government health facilities include the five- and 10-year acting IUD, injectables, contraceptive pills, emergency contraceptive pills, and male condoms. Other FP methods, such as implants and the patch, were available from the private sector. In-depth interviews in Rajasthan revealed that injectables were only available at the PHC level in the 13 districts with high TFR. To fulfill the unmet need for contraception, the government had enhanced contraceptive availability at each level of the health system from subcenters to district hospitals.

Key informants reported that in 14 districts with a high TFR, which included Rajsamand, monetary compensation ranging from Rs.2000 to Rs.3000 (about US$28 to $42) was provided by the state government to clients adopting a permanent method from a government health facility. Incentives were provided as well to the person (i.e., motivator or referral agent) who brought the FP client to the facility, ranging from Rs.300 to Rs.400 (about US$4 to $6). In these 14 districts, stakeholders reported that registered private hospitals and NGOs were provided monetary compensation for implant insertion, conducting voluntary sterilization (Rs.3500; about US$49), voluntary postpartum sterilization (Rs.4000; US$56), and IUD insertion (Rs.75; about US$1). According to interviewees, the client did not pay user charges and received Rs.1000 (about US$14) for accepting an IUD. ASHAs received about US$2 for each IUD provided to one of their clients. Antara, a newly

[12] These facilities are supported by the Government of India, as are the service providers, including the FP counselors. They do not receive USAID funding.

introduced injectable, was provided at subsidized cost (about US$1.36) to the FP client with an equal amount paid to the ASHA for motivating the client.

According to key informants, insurance coverage, ranging from Rs.25,000 to Rs.200,000 (about US$353 to $2,825), was provided in case of failure, complications, or death of the client related to their contraceptive method. Institutional awards were also provided at the state, district, and individual level to those government health facilities, private hospitals, NGOs, or Panchayats,[13] with the highest performance in their family welfare program and postpartum IUD insertion. (Subsequently, IUD is a common choice for postpartum women.) Rajsamand District holds the distinction of conducting the maximum number of postpartum IUD insertions in the entire state in 2017–2018.

Key informants reported that women living below the poverty line were entitled to free coupons for five liters of ghee[14] from authorized dealers, to promote institutional deliveries.

The state government is implementing several schemes for improving the sex ratio among the 0- to 6-year-old age group, such as the Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994 Act, IEC messages based on the *beti bachao* ("save the girl child") theme, and other schemes for strengthening the status of girl children (Government of India, 1994). Under several of these schemes, direct cash transfers are provided to beneficiaries. A Mother and Child Health and Nutrition Day is organized monthly at subcenters, Anganwadi Centers, and other locations (Directorate of Medical Health & Family Welfare Society, Government of Rajasthan, 2018).

According to key informant interviews, Rajasthan is the first state to implement the online Pregnancy, Child Tracking, and Health Services Management System. This system is used for name-based online tracking and monitoring of mother-and-child health services, such as antenatal care, delivery, postpartum care, and postnatal care. All subcenter health reports are compiled, uploaded by PHCs, and sent to the state-level on a monthly basis.

Key informants revealed that ASHASoft software has been integrated in the Pregnancy, Child Tracking, and Health Services Management System to compute the compensation amount payable to ASHAs for provision of services such as FP, antenatal care, delivery, postnatal care, and immunization. ASHAs receive incentives for 16 programs. Key informants reported that CHCs and PHCs have also been linked to the online software system that facilitates online payments to beneficiaries under other programs.

Surakshit Matritva Diwas (Safe Motherhood Day) is observed in government facilities on the ninth of every month. High-risk pregnancies are identified and followed-up, and mothers are counseled on postpartum FP, health, and nutrition. Pregnant women are screened for HIV and syphilis at the subcenter level. Under the Home-Based Newborn Care scheme, an ASHA-Sahyogini visits the new mother and her child six or seven times over a period of 42 days. If any complications are identified, the mother and child are referred (Directorate of Medical Health & Family Welfare Society, Government of Rajasthan, 2018).

According to key informants, the district's private hospitals are working with the government to implement schemes such as the Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994, Bhamashah Yojana (scheme for health insurance for poor people), Rajshri Yojana (scheme for direct cash benefit to girl children), JSY (scheme for safe motherhood), and IUD insertion. In Hathras District, the Hausla Saajhedaari (encouragement-partnership) Project is being implemented through a partnership with private hospitals and NGOs. For example, UP Wellness Health (an NGO) works with 70 schools and colleges in Hathras to

[13] Elected bodies of democratic decentralized governance in India.
[14] Also known as butterfat, ghee is believed to provide strength and nutrition to a new mother.

promote health. At the Hathras district hospital, diagnostic services are provided through private providers. There is a de-addiction team at the district-level.

According to survey respondents, Anganwadi Centers provided weekly IFA supplements to out-of-school girls and pregnant women. These centers also organized intensive diarrhea control outreach where community members were informed through IEC. National health programs for tobacco; mental health; and noncommunicable diseases such as cancer, diabetes, and stroke were also being implemented. According to doctors in the private sector, adolescents were reporting an increase in mental health problems, such as stress, anxiety, depression, inability to cope with studies and perform in school, competition with peers, rebelling against parents, and excessive exposure to social media and mobiles, in addition to alcoholism and tobacco use. They identified the need for counseling services for adolescents, parents, spouses, and in-laws.

The survey revealed that in Hathras, Rashtriya Swasthya Bima Yojana (national health insurance scheme) was launched in 2012 for those living below the poverty line, but the program closed in 2014. In 2018, Ayushman Bharat Yojana, the national health protection scheme popularly known as ModiCare, was rolled out and is being implemented.

School Preventive Health Checkups and Screenings

According to key informants, the School Health Programme was effectively providing the following basic health services to students in classes one through 12 (i.e., elementary through high school): preventive health checkups; screening for diseases, deficiency, and disability; referral; immunization; micronutrient supplementation (IFA and vitamin A); and free deworming medication (Albendazole). However, according to an in-depth interview with a school principle, an incident occurred where several children in Hathras took Albendazole without water and fell sick, leading to sensational reporting in the media and suspicion of the drug from parents. Although girls in classes nine to 12 were provided with weekly IFA tablets, they did not take the tablets regularly, owing to a lack of awareness and myths about side-effects.

According to IDIs with school staff, at the Gram Panchayat level,[15] a school principal was designated as the Panchayat Elementary Education Officer and is responsible for monitoring and coordinating the school health program for classes one to eight. A teacher in-charge had been designated for various activities, such as distribution of IFA tablets, procurement and distribution of sanitary pads, coordination with Anganwadi Centers, provision of clean drinking water, sanitation, and the midday meal. For children with special needs both who are in school and out of school, specific teachers had been recruited and trained at the block level.[16] Some teachers had been trained on adolescent health through the State Institute of Educational Research and Training.

School staff reported that health cards were issued to each student to record his or her visit and the services received. Students received a medical checkup twice per year from a team of doctors. Auxiliary nurse midwives and Anganwadi workers were not involved in the school health program.

Though, as IDIs with school staff indicated, science teachers informed children about the importance of a healthy diet, body hygiene, and related matters, there was no formal family life education program in Rajasthan schools. It was up to the teacher's discretion to discuss health issues, eliminate myths, and create awareness among students. Sometimes, topics related to superstitions, such as daayan,[17] and social problems, such as

[15] Democratically elected body of decentralized governance at village level. A Gram Panchayat may be comprised of one to three villages.
[16] A district is comprised of several Community Development Blocks, popularly known as blocks.
[17] In India, a woman identified as a *daayan* (witch) is regarded as a bad omen or a black magician. Such women may be isolated by the community or even brutally beaten and murdered.

child marriage and the inferior role of women in society, were discussed in school assemblies. In Uttar Pradesh schools, three slots per week had been allotted to Moral Science, which covered cleanliness, hygiene, healthy diet, drugs and substance abuse, gender discrimination, etcetera. However, IDI participants reported that there were no specific topics on AYRH in the class modules.

The IDIs indicated that Whisper, a sanitary pad brand, organized a menstrual health program for girls in classes five to eight where menstrual health information was provided, and sanitary napkins were distributed directly to girl students. According to interviewees, the Rotary Club provided a sanitary pad vending machine to the girls' school in Hathras District, where girls could get a packet of three sanitary pads for Rs.10 (US$0.14). The machine was maintained by the school. Separate washrooms for boys and girls were provided in the schools.

IDI participants also mentioned that Rajasthan schools had books and videos on child sexual abuse, but schools did not have counselors; therefore, teachers had to fill that role. Teachers also played a de facto role counseling adolescents and explaining to them how to behave according to norms of social acceptability.

Key informants reported that the Department of Education coordinated with other departments, such as the Ministry of Health and Ministry of Women and Child Development, to introduce more health-related programs and initiatives; however, these relations are fraught with problems. For instance, because referrals alone were not effective, medicines had to be provided during school health checkups. The government was being supported by NGOs and the United Nations Children's Fund to implement various health activities in schools. Although a few companies were implementing corporate social responsibility programs, these were not need based.

Counseling

The study team observed that the Rajsamand district hospital is staffed with a reproductive, maternal, newborn, child, and adolescent health counselor. Because this counselor is located in the maternal and child health wing, she is relatively inaccessible to unmarried adolescent clients. Because counseling for adolescents is almost nonexistent, adolescents are more dependent on television, film, video, and other media to fulfill their natural curiosity. However, broadcast media are insufficient to satisfy the questions and doubts of adolescents.

Key informants reported that counseling services are better in Uttar Pradesh. A team of counselors is provided at the district hospital: a male and female AYRH counselor, an FP counselor, a mental health counselor, a nutrition counselor, and an RTI/STI counselor. The female AYRH counselor works with female adolescents only and covers topics such as nutrition, hygiene, education, career advice, RH problems, menstruation, mental health, premarital counseling, stress, learning problems, violence (including sexual abuse), depression, and suicidal tendencies. According to the key informants, sanitary napkins are provided free of cost to adolescent girls who come for counseling. The number of adolescent girls visiting the counselor ranges from five to 15 per day. The counselor also visits schools and talks to students from classes eight to 12.

From the key informant interviews, we also learned that both male and female adolescents are counseled by male and female AYRH counselors, respectively, on RH, nutrition, substance abuse, mental health, and physical violence. Often, the adolescents worry about their height and growth, masturbation, nocturnal emissions, jealousy, school-related stress, and substance abuse (e.g., chewable tobacco consumption, smoking, and alcoholism). Approximately 15 male clients visit the AYRH counselor daily. Those in the 10- to 14-year-old age group were more concerned about learning problems and their studies; whereas those in the 15- to 19-year-old age group were stressed by exam pressure and family expectations.

We observed that the AYRH counseling program is nascent and grappling with several challenges. Outreach programs (such as lectures and debates) were organized in schools in 2016. However, outreach activities were not funded in the 2017 budget. According to our observations, proper monitoring and support for AYRH counseling is insufficient. There is a lack of doctors for referring clients through the AYRH counseling center, leading to improper follow-up with patients. The AYRH counselors themselves were contractual staff, who receive consolidated salary and must renew their contracts yearly. There was no synergy with the IEC teams, and the IEC material was not seen as being very useful to the AYRH counselors.

During our observations, we recorded that the FP counselor serves around 25–30 clients daily. The counselor distributes contraceptives (condoms and pills), pregnancy testing kits, and counsels on FP methods and services. Clients seeking MTP are counseled on postabortion contraception. The FP counselor thought the health facility was overcrowded, lacked privacy, and lacked funds for outreach.

A mental health counselor has been provided at the district hospital under the National Mental Health Programme. We observed a dedicated counseling room to ensure privacy, with a proper waiting room designated as *Man Kaksha* ("mind room" in Hindi), is provided at the Hathras district hospital. The hospital is also staffed with a dedicated psychiatrist and clinical psychologist.

Under the National Tobacco Control Programme, one social worker, one psychologist, and one consultant were to be appointed. However, in Hathras, we observed that the posts were still vacant.

Under the HIV/AIDS program, RTI/STI drugs are available at the district hospital, and antiretroviral drugs are available at the antiretroviral center located in the nearby city of Aligarh. Those living with HIV must travel to Aligarh to obtain antiretroviral therapy drugs for HIV treatment. However, continuity of treatment is not maintained, because the dropout rate is high and follow-up is difficult. Respondents thought it necessary to have an antiretroviral center in Hathras itself.

Policy Effectiveness

All medical services are available in the state. Use of public health services has risen at the community level. Vitamin A supplementation, weekly IFA supplementation, and midday meals are effectively provided through schools. The menstrual health and hygiene program is also running effectively. The District Coordination Committee of Rajsamand, chaired by the district collector and composed of officials from all departments in the district, meets regularly. This enables coordination among different departments.

The FP policy is proving effective, and the TFR reported by Rajsamand district was 2.4 in 2017–2018 (Directorate of Medical Health & Family Welfare Society, Government of Rajasthan, 2018). Use and quality of health services, including FP services, has improved, though the data on client satisfaction of services is lacking. Despite the slow pace of change, equity of care has also improved. The medical department alone cannot achieve the country's equity goals; it requires a joint effort among different government departments. Though funding has remained consistent over the years, the increase in the number of programs to be implemented has led to resources being spread thin and reduced effectiveness. Community participation is relatively low because programs are not demand based. It is difficult to increase interest in the national family welfare program, particularly when budgets lack funds to promote or market the programs. Awareness about health issues has greatly increased, which can be seen in the reduction of deaths caused by diarrhea and waterborne diseases. Trust in the public health system has also increased.

KAP Study among Young People

KAP Respondents' Demographics

Out of the total study respondents, slightly more than half (51.3%) were female, in the 10- to 14-year-old age range (50.4%), and out of school (54.8%) (those who had completed schooling or dropped out), as depicted in Table 2. All were from rural areas. Thirty-three respondents (14.3%) were illiterate, one was literate but not formally educated, and 196 (85.2%) were literate and had been to school.

Most respondents (198; 86.1%) were unmarried. Among the 32 married respondents, about two-thirds (21; 65.6%) had been married when they were younger than 18 years of age. Four married respondents (12.5%) belonged to the 10- to 14-year-old age group, 21 (65.6%) to the 15- to 19-year-old age group, and the remaining seven (21.9%) to the 20- to 24-year-old age group.

Table 2. Age and sex disaggregation of young study respondents

Sex	Age group n (%)			Total n (%)
	10–14 years	15–19 years	20–24 years	
Male	59 (25.7)	38 (16.5)	15 (6.5)	112 (48.7)
Females	57 (24.8)	42 (18.3)	19 (8.3)	118 (51.3)
Total	116 (50.4)	80 (34.8)	34 (14.8)	230 (100.0)

Discussion of Important Issues

A quarter of younger males and females had knowledge of the importance of discussing important issues with parents, and about one-third of participants ages 15–19 strongly agreed with this point (Table 3). Fewer than 10 percent of males in both age groups reported discussing important issues with parents, discussing changes in their body, or discussing relationships with girls. Significantly more females than males in both age groups had knowledge of the importance of discussing various topics with parents and also engaged in these discussions. A small percentage of males and females discussed issues like pubertal changes in the body and relationships with the opposite sex.

Table 3. Knowledge and practices related to discussions with parents and friends

Knowledge about the importance of having various discussions with parents	Male (%)		Female (%)		P Value
	10–14 yrs	15–19 yrs	10–14 yrs	15–19 yrs	
Important issues (strongly agree)	25.4	34.1	25.2	35.8	<.414
Studies (strongly agree)	21.4	31.7	26.0	33.3	<.094
Body changes (strongly agree)	4.0	18.3	10.6	19.5	<.181
Relationships with the opposite sex (strongly agree)	3.2	11.9	0.8	12.2	<.041
Practice of discussing various topics with parents and friends					
Important issues (strongly agree)	9.5	20.6	4.9	21.1	.000
My studies (strongly agree)	10.3	23.8	21.1	24.4	.000
Body changes (strongly agree)	1.6	7.1	3.3	7.3	.009
Relationships with the opposite sex (strongly agree)	3.2	6.4	0.8	6.5	.000

Among the boys in the 10- to 14-year-old and 15- to 19-year-old age groups, the same percentage reported discussing important issues and worries (34.4%) and academic performance (27.8%) with their older brothers or siblings. Males and females in both age groups overwhelmingly turned to a friend or companion to discuss

body changes related to growth and their relationships with the opposite sex. Among females only, a higher proportion of younger participants discussed important issues and worries with a friend or companion. In the older age group, a higher proportion of females discussed important issues and worries with an older sibling.

Table 4. Attitudes toward family life issues

Attitude toward various issues* With whom do you discuss:	10–14 years (%)		15–19 years (%)	
	Older sibling	Friend/ companion	Older sibling	Friend/ companion
Males				
Important issues and worries	34.4	13.5	34.4	30.2
Academic performance	27.8	14.3	27.8	34.9
Body changes as you are growing up	9.5	32.5	14.3	46.8
Relationships with the opposite sex	4.0	41.3	4.0	51.6
Females				
Important issues and worries	15.6	28.5	36.9	31.7
Academic performance	18.7	33.3	29.3	36.6
Body changes as you are growing up	11.4	35.0	14.6	49.6
Relationships with the opposite sex	8.9	36.6	4.1	54.5

* The P value for all was <0.000.

Family Life Education

The highest percentage of male and female respondents in each age category reported that their sister-in-law was the primary person at home providing knowledge about family life education. Teachers were identified as a common choice outside the home by nearly three times as many respondents in the older age group.

Table 5. Source of knowledge on family life education

Source of knowledge on family life education	10–14 yrs (%)	15–19 yrs (%)	P value
Primary person providing knowledge about family life education at home			
Mother	19.8	43.7	<0.000
Sister-in-law	46.8	53.7	<0.000
Primary person providing knowledge about family life education outside the home			
Teacher	12.3	34.4	<0.021

A significantly higher percentage of older male and female adolescents than younger adolescents said that it was important to receive family life education, that family life education answered many questions, and that the teacher or trainer explained the topic in an understandable way. Apart from the statement about feeling embarrassed in family life education, the group that most strongly agreed with the other five statements was the older females.

Table 6. Family life education

Strongly agree with the following statements	Male (%)		Female (%)		*P value*
	10–14 years	15–19 years	10–14 years	15–19 years	
It is important to receive family life education	10.8	18.9	10.5	27.4	<0.170
Family life education answered many questions	11.1	22.2	7.7	26.9	<0.214
Teacher/trainer explained the subject in a way I understood	8.3	13.9	7.7	19.2	<0.235

I felt embarrassed in family life education	11.1	8.3	11.5	7.7	<0.019
I felt comfortable in family life education	11.1	16.7	11.5	19.2	<0.382
I am interested in attending future family life education classes	18.3	15.1	19.4	22.6	<0.001

The adolescent respondents were asked what topics should be included in family life education. The human body, healthy lifestyle, and changes in human body were the most popular choices among males and females in both age categories. In the younger age groups, a small percentage (less than 3%) of participants felt the need for the following topics: HIV/AIDS, RTIs/STIs, and violence against women. Although this may be because of lack of knowledge and awareness about such topics, very few (less than 4%) of the older adolescents also felt that RTIs/STIs (and substance abuse) were not important topics to cover under family life education.

Table 7. Topics that should be included in family life education

Topics	Males n (%)		Females n (%)	
	10–14 yrs (n=36)	15–19 yrs (n=36)	10–14 yrs (n=26)	15–19 yrs (n=25)
Human body	15 (41.7)	6 (23.1)	14 (38.9)	13 (50.0)
Healthy lifestyle	13 (36.1)	8 (30.8)	15 (41.7)	14 (53.8)
Changes in the human body	9 (25.0)	6 (23.1)	15 (41.7)	14 (53.8)
Relationships with boys and girls	2 (5.6)	2 (7.7)	2 (5.6)	2 (7.7)
HIV and AIDS	1 (2.8)	0 (0)	5 (13.9)	5 (19.2)
RTIs/STIs	1 (2.8)	0 (0)	1 (2.8)	1 (3.8)
Substance abuse	2 (5.6)	1 (3.8)	1 (2.8)	1 (3.8)
Discrimination against girls	2 (5.6)	2 (7.7)	7 (19.4)	6 (23.1)
Violence against women	0 (0)	0 (0)	6 (16.7)	6 (23.1)
Mental health issues	2 (5.6)	2 (7.7)	2 (5.7)	2 (8.0)

When the participants were asked to identify what health services are provided in schools, they identified health checkups, provision of medicine, and distribution of IFA tablets (as well as observing that the tablets are consumed). A higher percentage of boys than girls reported that health checkups and medicine were provided in schools. However, no more than 52 percent of the adolescents reported that health services are provided in schools.

Seeking Health Services

Fewer than a third (29.4%) of boys ages 15–19 years reported feeling comfortable approaching a health provider or center for issues related to body changes, compared to fewer than 6 percent of girls in the same age group. One-third (33.3%) of younger boys said they kept silent about mental health issues, while none of the older boys and none of the girls reported this. Conversely, girls were much less likely to keep silent if they were experiencing health-related issues. For males and females in both age groups, parents were the first choice and health workers were the last choice to discuss mental health-related issues. A quarter (25.4%) of the older girls, compared to less than 10 percent of the older boys, said they discuss mental-health issues with friends or peers (Table 8).

Table 8. Attitudes and practices toward adolescent health services

Health issues	Male (%)		Female (%)		P Value
	10–14 yrs (n = 62)	15–19 yrs (n = 38)	10–14 yrs (n = 54)	15–19 yrs (n = 42)	
Feel comfortable approaching a health provider or center for issues related to body changes	11.8	29.4	0	5.9	<0.004
Keep silent if experiencing health-related issues (e.g., changes in body and menstruation)	8.2	6.0	0.9	0	<0.068
Keep silent about mental health issues (e.g., anxiety, stress, depression, and suicidal tendencies)	33.3	0	0	0	<0.150
Discuss mental-health related issues with:					
1. Parents	33.0	38.0	42.6	45.1	
2. Friends or peers	7.0	8.5	10.4	25.4	
3. Teachers	3.5	2.8	3.5	4.2	
4. Healthworkers	0.9	1.4	0.9	1.4	

Gender Discrimination and Violence

Although the vast majority of respondents did not have attitudes supporting gender discrimination or violence, some did. The participants were asked if they strongly agreed with various statements related to gender-based discrimination or violence. No significant differences were found among the three age groups of males and females in terms of gender discrimination or violence; however, more males than females of every age group—particularly boys ages 10–14—strongly agreed with discriminatory statements. For example, 11 percent of the younger boys strongly agreed that it is okay if a husband beats his wife, although none of the females agreed with this statement (Table 9).

Table 9. Attitudes toward and experience with gender-based discrimination or violence

Strongly agree with the following statements on gender discrimination/ violence	Male			Female			P Value
	10–14 yrs (n = 62)	15–19 yrs (n = 38)	20–24 yrs (n = 15)	10–14 yrs (n = 54)	15–19 yrs (n = 42)	20–24 yrs (n = 19)	
At home girls/women should eat last	13.8	8.8	8.8	6.0	7.5	2.9	0.000
Fine if girls/women get less food	11.2	5.0	5.9	0.9	2.5	0.0	0.000
Boys should get more clothes, books, and toys	11.2	7.5	2.9	0.9	2.5	2.9	0.000
Fine if husband beats wife	11.2	5.0	2.9	0.0	0.0	0.0	0.000
In my family girls/women eat last	12.1	6.2	14.7	10.3	5.0	17.6	0.000
Personal experience with gender-based discrimination/violence							
In my family girls/women get less food	3.3	5.0	2.9	0.9	1.2	2.9	<0.001
In my family, boys get more clothes, books, and toys	3.4	2.5	8.8	2.6	1.2	2.9	<0.002

In my family, I have seen discrimination against girls/women	4.2	2.5	5.9	2.6	1.2	0.0	<0.026
In my family, I have seen violence against girls/women	2.6	1.2	0.0	2.6	1.2	2.9	<0.035

Fewer than half of youth ages 10–24 strongly agreed that there should be a legal minimum age of marriage for boys and girls. For both males and females, those in the 15- to 19-year-old age group agreed the most with this statement (36.2% and 38.8%, respectively). Regarding a minimum age of marriage for girls specifically, the highest agreement was among females ages 20–24 years (41.2%).

RTIs, STIs, and HIV

Knowledge of RTIs/STIs was low. Only 40 percent of 20- to 24-year-old males and 21 percent of 15- to 19-year-old males had heard about these infections. None of the youngest males and none of the females in the study reported hearing about them. Television was reported to be the main source of information for RTIs/STIs by over 83 percent of the males in the two older age groups, and two-thirds of respondents in the 20- to 24-year-old age group also reported doctors and relatives/friends as sources of information. All male respondents ages 15–19 were knowledgeable that RTIs/STIs are transmitted through unsafe sex, yet fewer (83.3%) older respondents were aware of this. None of the females reported facing any RTI/STI problem (Table 10).

Table 10. Knowledge of and experience with RTIs/STIs

RTI/STI Knowledge	Male (%)			Female (%)		
	10–14 yrs (n = 62)	15–19 yrs (n = 38)	20–24 yrs (n = 15)	10–14 yrs (n = 54)	15–19 yrs (n = 42)	20–24 yrs (n = 19)
Heard of RTIs/STIs*	0.0	21.1	40.0	0.0	0.0	0.0
Source of information:						
1. Television	0.0	87.5	83.3	0.0	0.0	0.0
2. Cinema	0.0	12.5	0.0	0.0	0.0	0.0
3. Newspaper/magazine	0.0	12.5	16.7	0.0	0.0	0.0
4. Brochure/pamphlet/poster/wall notice	0.0	12.5	16.7	0.0	0.0	0.0
5. Doctor	0.0	37.5	66.7	0.0	0.0	0.0
6. Other facility-based health worker (in the field)	0.0	25.0	33.3	0.0	0.0	0.0
7. ASHA	0.0	0.0	16.7	0.0	0.0	0.0
8. School teacher	0.0	37.5	0.0	0.0	0.0	0.0
9. Partner (spouse, boyfriend, or girlfriend)	0.0	12.5	0.0	0.0	0.0	0.0
10. Relative or friend	0.0	12.5	66.7	0.0	0.0	0.0
Awareness of source of RTI/STI						
1. Unhygienic practices	0.0	37.5	66.7	0.0	0.0	0.0
2. Unsafe sex	0.0	100.0	83.3	0.0	0.0	0.0
Faced any RTI/STI problem						
1. Painful urination	0.0	12.5	16.7	0.0	0.0	0.0
2. Ulcers/sores in genital area	0.0	12.5	0.0	0.0	0.0	0.0
3. No problem	0.0	87.5	83.3	0.0	0.0	0.0

* The P value was <0.002

Awareness and knowledge of HIV and AIDS was low. Among males, only 30 percent of participants in the 15–19 age group, and even fewer in the older and younger age groups, had heard about HIV and AIDS. Although females across all age groups had less awareness of HIV and how it is transmitted than their male counterparts, they also did not believe as many misconceptions about HIV transmission as the males. Television was listed as the most common source of information about HIV and AIDS.

Table 11. Knowledge of HIV/AIDS

HIV and AIDS knowledge	Male (%)			Female (%)		
	10–14 yrs (n = 62)	15–19 yrs (n = 38)	20–24 yrs (n = 15)	10–14 yrs (n = 54)	15–19 yrs (n = 42)	20–24 yrs (n = 19)
Heard of HIV and AIDS*	7.8	30.0	26.5	0.9	15.0	2.9
Source of information on HIV and AIDS	75.0	42.9	77.8	0.0	11.4	0.0
1. Television	0.0	2.9	0.0	0.0	0.0	0.0
2. Cinema	0.0	17.1	22.2	0.0	5.7	11.1
3. Newspaper/magazine	0.0	2.9	11.1	0.0	0.0	11.1
4. Brochure/pamphlet/poster/wall notice	0.0	5.7	0.0	0.0	0.0	0.0
5. Doctor	12.5	17.1	33.3	0.0	0.0	0.0
6. Other facility-based health worker	0.0	5.7	11.1	0.0	0.0	0.0
7. ASHA	87.5	48.6	33.3	12.5	14.3	0.0
8. School teacher	0.0	11.4	22.2	0.0	0.0	0.0
9. Partner (spouse or girlfriend or boyfriend)	25.0	20.0	44.4	0.0	5.7	0.0
10. Relative or friend	0.0	0.0	11.1	0.0	0.0	0.0
11. Workplace	0.0	2.9	0.0	0.0	0.0	0.0
12. Exhibition/mela (rural community fair)	0.0	2.5	0.0	0.0	7.1	0.0
13. School books						
Knowledge of source of HIV infection						
1. Unsafe sex	44.4	47.2	60.0	0.0	11.1	10.0
2. Infected mother to child	25.0	19.4	30.0	0.0	2.8	10.0
3. Transfusion of infected blood	62.5	38.9	50.0	0.0	5.8	10.0
4. Use of infected syringe	75.0	38.9	50.0	0.0	5.6	10.0
5. Shaking hands with infected person	50.0	16.7	20.0	12.5	30.6	10.0
6. Hugging an infected person	12.5	25.0	50.0	0.0	13.9	0.0
7. Kissing an infected person	37.5	38.9	60.0	0.0	0.0	10.0
8. Sharing clothes with infected person	25.0	16.7	20.0	0.0	16.7	0.0
9. Sharing food with infected person	33.3	25.0	20.0	0.0	5.6	0.0
10. Stepping on urine/stool of infected person	0.0	22.2	30.0	0.0	0.0	0.0
11. Mosquito, flea, or bedbug bites	12.5	19.4	50.0	0.0	2.8	0.0
12. Don't know	0.0	2.8	10.0	12.5	19.4	0.0

* The P value is <0.003

When asked about protection from HIV transmission, again, more males than females know about modes of HIV transmission with older females and males, in general, being more knowledgeable. The group most

knowledgeable about where HIV tests are offered was 20- to 24-year-old males. None of the females had been tested for HIV, and no more than 20 percent of the males had been tested.

Table 12. Knowledge of HIV prevention

Knowledge about protection from HIV transmission	Male (%)			Female (%)		
	10–14 yrs (n = 62)	15–19 yrs (n = 38)	20–24 yrs (n = 15)	10–14 yrs (n = 54)	15–19 yrs (n = 42)	20–24 yrs (n = 19)
Abstain from sex	33.3	11.4	33.3	0.0	2.9	11.1
Use condom with every sex	0.0	22.9	40.0	0.0	0.0	0.0
Limit sex to one partner	25.0	31.4	50.0	0.0	8.6	0.0
Limit number of sexual partners	12.5	25.7	30.0	0.0	0.0	0.0
Avoid sex with sex workers	25.0	25.7	20.0	0.0	0.0	0.0
Avoid sex with homosexuals	0.0	14.3	20.0	0.0	0.0	0.0
Avoid sex with injecting drug users	50.0	22.9	30.0	0.0	0.0	0.0
Avoid untested blood	62.5	28.6	30.0	0.0	8.6	10.0
Avoid sharing razors and blades with others	25.0	22.9	50.0	0.0	8.6	10.0
Avoid getting pregnant if HIV-positive	37.5	25.7	40.0	0.0	0.0	0.0
Don't know	0.0	0.0	0.0	12.5	22.9	0.0
Knowledge of HIV testing places						
1. Government hospital	77.8	57.1	90.0	11.1	31.4	10.0
2. PHC	25.0	11.4	10.0	0.0	2.9	0.0
3. Subcenter	0.0	0.0	10.0	0.0	0.0	0.0
4. Voluntary counseling and testing center/ integrated counseling and testing center	0.0	2.9	0.0	0.0	0.0	0.0
5. RTI/STI clinic	0.0	0.0	10.0	0.0	0.0	0.0
6. NGO hospital/clinic	0.0	0.0	10.0	0.0	0.0	0.0
7. Private hospital/clinic	37.5	17.1	30.0	0.0	5.7	0.0
Have been tested for HIV	10.0	13.9	20.0	0.0	0.0	0.0

Puberty and Menstruation

Only the female participants were asked about menstruation, given that this is still a taboo topic for boys (Table 13). Very few (3.2%) young respondents and well under half (37.3%) of the older participants knew about puberty. In all age groups, the main source of information on menstruation was the mother. Among participants in the 15- to 19-year-old age group, friends were mentioned as the second most popular source. Knowledge of menstruation as a normal, healthy part of a young woman's life was fairly low. Fewer older females (20–24 years) had knowledge that menstruation is a normal, physiological phenomenon than did females 15–19 years (22.8% versus 35.4%), yet 100 percent of all older females reported that they were having regular menstrual periods. Across all age groups, all females agreed that menstrual hygiene should be maintained. Almost an equal percentage of participants were using cloth and sanitary pads during menstrual periods, and the most common place to procure sanitary pads was the general store.

Table 13. KAP related to puberty and menstruation

Knowledge	Female (%) (n = 115)		
	10–14 yrs	15–19 yrs	20–24 yrs*
Knowledgeable about puberty	3.2	37.3	
Source of knowledge about puberty			
1. Mother	3.9	33.3	
2. Friend or companion	0.0	21.6	
Source of information on menstruation			
1. Mother	20.3	39.2	22.8
2. Grandmother	0.0	1.3	0.0
3. Aunt/relative	3.8	10.1	5.1
4. Friends	3.8	21.5	5.1
5. Teacher	7.6	6.3	1.3
6. Health worker	2.5	2.5	0.0
Menstrual periods are a normal part of growing up	15.2	35.4	22.8
We should keep our body clean during our menstrual periods	100	100	100
Attitude			
I feel embarrassed when I get my menstrual period (strongly agree)	37.5	25.6	11.1
Experiences and practices			
Started regular menstrual periods	80.0	91.1	100.0
Faced any problem related to menstrual periods in past three months	0.0	12.8	0.05
Problems faced in past three months			
1. No period	0.0	25.0	0.0
2. Painful period	0.0	75.0	0.0
3. Frequent/short period	0.0	0.0	100.0
4. Irregular period	0.0	25.0	0.0
Addressed these issues	0.0	75.0	100.0
Material used during menstrual period			
1. Cloth	43.8	45.9	52.9
2. Locally prepared napkins	18.8	21.6	5.9
3. Sanitary napkins	43.8	54.1	47.1
4. Nothing	6.2	2.7	0.0
Place where sanitary napkins were sourced			
1. General store	42.9	38.1	66.7
2. Chemist shop	25.0	47.6	33.3
3. Vending machine in school	37.5	33.3	0.0

* Respondents under the age of 19 were asked questions relating to relationship with parents, family life education, and adolescent-friendly health services. These sections were skipped for respondents in the age group 20–24.

Conception and FP

There is lack of knowledge about conception and pregnancy. Only up to half of the study participants were knowledgeable about conception. Although all the 15- to 19-year-old males knew that kissing does not cause pregnancy, only about half of the 20- to 24-year-old males knew this. None of the 15- to 19-year-old females were knowledgeable about when the fertile period is. Males reported a strong preference for a boy child and girls reported a preference for a girl child, though not nearly as strong as males' preference for a boy (Table 14).

Table 14. Knowledge and attitudes about conception and pregnancy

Conception	Male (%) (n = 53)		Female (%) (n = 61)	
	15–19 yrs	20–24 yrs	15–19 yrs	20–24 yrs
Knowledge about how pregnancy occurs	44.4	40.6	33.3	50.6
Kissing alone does not cause pregnancy	100.0	53.3	80.0	88.2
First time intercourse might cause bleeding	50.0	46.7	0.0	11.8
Pregnancy might occur after first intercourse	75.0	46.7	20.0	5.9
Pregnancy is possible when intercourse is halfway between menstrual periods	75.0	40.0	0.0	5.9
Pregnancy				
Knowledge about prenatal test/ sex determination (n =106*)	22.4	6.1	35.1	36.4
Preference sex of future child (n = 106*)				
1. Boy	100.0	66.7	0.0	14.3
2. Girl	0.0	0.0	20.0	7.1
3. Doesn't matter (i.e., leaving it up to fate)	0.0	22.2	60.0	57.1
4. Up to God (i.e., is a matter of faith)	0.0	11.1	20.0	21.4

***** This question was asked to all the respondents above the age of 15 years.

Awareness of FP was low, with fewer than half the participants reporting an awareness of contraception. Most participants reported that their source of FP information was a spouse, partner, friend, or peer. All the respondents were aware of female sterilization, yet fewer than half of males and females were aware of other common FP methods, such as condoms, pills, injectables, and IUDs. More 20- to 24-year-old females were aware that pills and condoms can be obtained at government hospitals, pharmacies, or through an ASHA/Anganwadi worker than were males in the same age group. When asked with whom they discuss FP issues, most males overall said male friends, and an even higher percentage of females said their female friends. None of the females reported discussing FP with any type of health worker. Few said they discuss these issues with their spouses, and even fewer were currently using contraception (Table 15).

Table 15. Knowledge about contraception

Knowledge about contraception	Male (%)		Female (%)	
	15–19 yrs	20–24 yrs	15–19 yrs	20–24 yrs
	n=114			
	(n=38)	(n=15)	(n=42)	(n=19)
Aware of FP	33.3	31.2	44.4	43.8
Source of FP information				
1. Mother	0.0	3.1	0.0	6.2
2. Sister	0.0	0.0	0.0	6.2
3. Spouse/partner	22.2	0.0	0.0	6.2
4. Friends/peers	11.1	28.1	44.4	25.0
5. Healthcare provider	11.1	6.2	0.0	0.0
6. Teacher/school/college	0.0	3.1	0.0	0.0
7. Doctor	0.0	3.1	0.0	0.0
8. Books/ magazines	0.0	0.0	0.0	3.1
9. Television	0.0	0.0	11.1	6.2
10. Others	0.0	0.0	0.0	3.1
Awareness of FP methods				
1. Female sterilization	100.0	100.0	100.0	100.0
2. Male sterilization	0.0	33.3	14.3	4.2

3. IUD	0.0	16.7	28.6	25.0
4. Oral pill	0.0	25.0	57.1	50.0
5. Emergency contraception	0.0	16.7	14.3	4.2
6. Injectable	0.0	8.3	28.6	33.3
7. Male condom	42.9	41.7	14.3	29.2
8. Withdrawal	0.0	8.3	0.0	4.2
Place to obtain pills or condoms				
1. Government hospital	0.0	9.1	42.9	54.5
2. Dispensary	14.3	9.1	0.0	4.5
3. PHC	0.0	4.5	0.0	0.0
4. Subcenter	0.0	4.5	0.0	0.0
5. Doctor	0.0	4.5	14.3	0.0
6. Nurse/auxiliary nurse midwife	0.0	4.5	0.0	0.0
7. ASHA/Anganwadi worker	28.6	22.7	0.0	27.3
8. Home visit by health worker	0.0	4.8	0.0	0.0
9. Chemist/ pharmacy	28.6	45.5	42.9	50.0
Discussion of FP				
1. Mother	0.0	0.0	0.0	8.3
2. Sister	0.0	0.0	0.0	20.8
3. Male friend (including boyfriend)	28.6	29.2	0.0	0.0
4. Female friend (including girlfriend)	0.0	12.5	28.6	37.5
5. Neighbor	0.0	4.2	14.3	0.0
6. Other females	28.6	0.0	0.0	12.5
7. Other males	14.3	0.0	0.0	0.0
8. Doctor	14.3	8.3	0.0	0.0
9. Nurse/auxiliary nurse midwife	0.0	12.5	0.0	0.0
10. Healthcare provider	0.0	12.5	0.0	0.0
11. Sister-in-law/brother-in-law	14.3	0.0	0.0	4.2
12. Husband/wife	14.3	8.3	14.3	0.0
Currently using contraception, yourself	**1.8**	**1.8**	**0.0**	**3.5**
	n=8			
Current method used	(n= 3)	(n=3)	(n=0)	(n=2)
1. Female sterilization*	0.0	0.0	0.0	50.0
2. IUD*	0.0	0.0	0.0	50.0
3. Male condom*	50.0	50.0	0.0	0.0
Place of availability				
1. Government hospital	0.0	0.0	50.0	50.0
2. CHC	0.0	0.0	0.0	20.0
3. Anganwadi Center	66.7	0.0	0.0	0.0
4. Chemist/ pharmacy	33.3	60.0	0.0	0.0
Who motivated you to use FP?				
1. Anganwadi worker	100.0	40.0	0.0	0.0
2. ASHA	0.0	0.0	0.0	50.0
3. Relative/ friend	0.0	20.0	0.0	50.0
Very satisfied with current FP method	**100.0**	**33.3**	**0.0**	**33.3**
Somewhat satisfied with current FP method	**0.0**	**0.0**	**0.0**	**33.3**
	n=24			
Reason for not currently using FP method	(n=1)	(n=6)	(n=5)	(n=12)
1. Pregnant	0.0	16.7	16.7	5.6
2. Not having sex	0.0	0.0	80.0	12.5
3. Spouse away	0.0	0.0	20.0	0.0
4. Breastfeeding	0.0	0.0	0.0	18.8
5. Believe pregnancy is up to god	0.0	0.0	0.0	18.8

6. Respondent opposed	0.0	12.5	20.0	6.2
7. Spouse opposed	20.0	12.5	40.0	43.8
8. Others opposed	0.0	0.0	40.0	18.8
9. Interferes with body's normal process	0.0	0.0	0.0	6.2
10. Did not like chosen method	0.0	6.2	0.0	0.0
Interested in using FP in future				
1. Strongly disagree	100.0	16.7	0.0	0.0
2. Neither agree nor disagree	0.0	5.6	60.0	83.3
3. Somewhat agree	0.0	0.0	20.0	0.0
4. Strongly agree	0.0	83.3	20.0	16.7
Want to start using FP in one to two years	0.0	66.7	0.0	0.0
Undecided when to start using FP	100.0	33.3	100.0	100.0
Which FP method would you prefer				
1. Female sterilization	100.0	16.7	0.0	0.0
2. Condom	0.0	83.3	20.0	8.3
3. Undecided	0.0	0.0	80.0	91.7

*These were the only FP methods mentioned.

Pregnancy and Delivery

Out of the 118 female study participants, 11 had given birth to at least one child at the time of the survey. Among these women, nine had attended antenatal care services. During an antenatal checkup, 80 percent or more reported having their abdomen and blood pressure checked, urine and blood tested, and weight measured. Only one woman delivered at home because she could not get to the hospital in time. Five of the mothers stayed at the health facility for the recommended 48 hours postpartum. No MTPs were reported.

Table 16. Experience with antenatal care and delivery

Antenatal care	Females 20–24 years (n=9) %
Underwent pregnancy test	81.8
Attended antenatal care and registered pregnancy	81.8
Place of registration	
1. Government hospital	27.3
2. CHC	54.5
3. Subcenter	9.1
4. Anganwadi/integrated child development services center	63.6
5. Private hospital/ maternity home	9.1
Checkup during antenatal visit	
1. Weight measured	100.0
2. Height measured	66.7
3. Blood pressure checked	100.0
4. Blood tested	100.0
5. Urine tested	88.9
6. Abdomen examined	80.0
7. Breasts examined	30.0
8. Ultrasound done	60.0
9. Delivery date identified	10.0
10. Delivery advice given	40.0
11. Nutrition advice given	30.0
12. Advised to visit health facility in case of complication	10.0
13. Advised for institutional delivery	60.0
14. Advised for breastfeeding	30.0

15. Advised to keep body warm	10.0
16. Advised to keep the genital area clean	20.0
17. Advised on FP for child spacing	20.0
Person who conducted the most recent delivery	
1. Doctor	60.0
2. Nurse/auxiliary nurse midwife/lady health visitor	30.0
3. Dai (female midwife from the community)	10.0
Place of delivery	
1. Government hospital	20.0
2. CHC	60.0
3. Private hospital	10.0
4. At home	10.0
Stayed at the health facility for 48 hours after delivery	71.4

DISCUSSION

Policy Agenda and Implementation

In the 70 years since India's independence, policies have been formulated to reorient the health system toward a primary healthcare approach. The evolution of policy can be divided into three phases: Phase I, 1947–1977; Phase II, 1978–1990; and Phase III, post-1991 (Singh, 2010). In a phased manner, India is moving toward integrating primary healthcare goals with curative healthcare goals, resolving the dichotomy between urban and rural health, merging vertical disease programs under the umbrella of NHM and NHP, and aiming to align national health goals with sustainable development goals. The population policy and RCH program, which were segregated from the national health programs, have also been subsumed under the NHM, NHP, and RMNCH+A. RMNCH+A is much more than a rechristening of the RCH program. Based on a life cycle approach, RMNCH+A distinguishes "adolescents" and suggests several strategies to address the needs of this group. It also accounts for the RH needs of all adolescents irrespective of gender or marital status. Thus, the present policy agenda provides an integrated, all-encompassing framework for health policy implementation in the country.

Given the poor nutritional status of women and children in India, RMNCH+A provides a comprehensive, broad-based strategy on nutrition, including institutional interventions (through schools and Anganwadi Centers), community interventions, and service delivery, such as provision of meals, IFA supplements, counseling, and nutrition information.

Although the RMNCH+A envisages implementation of a life skills education program in schools, it has yet to be formulated and implemented in either of the two study states. Discussing RH issues in public spaces and institutions is considered taboo in India. RH issues are discussed in the family setting (often with mothers) or in the peer group. Discussing RH in the classroom is a morally, socially, culturally, and to some extent politically sensitive issue. Though there are movies like "Padman" and "Period. End of Sentence," films about villagers in India trying to revolutionize the manufacturing of sanitary napkins, which could be shown in schools to initiate the discussion around RH, it remains a "personal" issue.

There is an enormous push to promote menstrual health and hygiene, especially among school-going girls. The onset of menstruation, lack of modern methods of sanitary protection, and lack of separate toilets for girls has been among the major reasons for high rate of school dropout among adolescent girls. The present programs of menstrual health and hygiene, such as IEC, counseling, and distribution of sanitary pads, are likely to retain girls in school.

At the district level, RBSK and RKSK are programs that aim to provide comprehensive healthcare services to children and adolescents. These have been launched since 2014, and implementation is underway. It is a little early to assess the actual impact of these programs on the lives of the target groups. JSY, a well-established program that aims to enhance safe motherhood, works on financial incentives to health providers and clients who undergo institutional deliveries. In 2011, the newborn care component, JSSK, was added to JSY to make it more comprehensive. The extensiveness of programs focused on newborn care, child health, and adolescent health and their integration with safe motherhood highlight the importance accorded to the life cycle approach in the health policy framework.

At the state level, different ministries and government departments, such as the MOHFW, Ministry of Women and Child Development, and the Department of School Education, are responsible for formulating policies for different components of the health programs. To implement the policies, the various functionaries, be it a

school or Anganwadi Center, work together to deliver services such as distributing IFA tablets, carrying out health checkups, or organizing camps in villages. Private hospitals work with government facilities in such areas as conducting institutional deliveries under JSY and providing in-patient treatment under Bhamashah Yojana (state health insurance scheme) in Rajasthan. On the other hand, in Uttar Pradesh we found little involvement of private hospitals implementing government programs. Though the concept of public-private partnership is not new, it is slowly catching up, and there are a few schemes in which private hospitals work with the government. To improve access, use, and quality, the government should create incentives to enhance the participation of private hospitals and NGOs in delivering health services.

Additionally, comprehensive health insurance is needed for children in all states, because childhood sickness imposes a huge financial burden on the family, and can lead to loss of education or even life.

Adolescent Reproductive Health Care for Youth

Services related to FP counseling and methods largely remain focused on married women and with more of an emphasis on permanent methods. Moreover, adopting any FP method is based on financial incentives provided to the provider and the client. The financial incentive for adopting a permanent method is higher than that for nonpermanent methods. This raises two important ethical concerns: one, how can the clients have a free and informed choice when the use of FP methods is incentivized, and, two, is voluntary sterilization an appropriate method of FP for youth except under life-threatening circumstances? For women, there are effective long-acting reversible contraceptive methods, such as injectables and the 10-year IUD, which have been introduced by the government but are still overshadowed by voluntary female sterilization.

Though the key informants reported that adolescent health clinics are operating, few survey respondents reported being counseled by such a clinic. Moreover, the clinic in Rajsamand District hospital was not conveniently located. The infrastructure and resources for adolescent counseling already exist; however, it seems to be underused. Furthermore, given the very low awareness and knowledge of RH issues (e.g., STIs, HIV, FP, and menstruation) among the study population, it appears the adolescent clinics should be doing more outreach. Thus, access to and use of adolescent health clinics need to be enhanced.

Several health initiatives are implemented at school. However, only about half of the adolescents noticed that health services were being provided in the schools. This implies either that the school-based health services are not reaching them or are not being promoted well or the students are not able to recall seeing, hearing about, or seeking those services. The focus of the School Health Programme is to screen for diseases. The AYRH component consists of distributing weekly IFA tablets and sanitary pads. A formal family life-education program has not been included in the school curriculum, nor has AYRH counseling been provided through the schools. This is a stark gap that needs to be addressed. It is imperative for policymakers in education and health to formulate policies and implement programs related to family life education that include the entire gamut of AYRH care.

Overall, unmarried people in the 10- to 24-year-old age group—both in and out of school—need to be brought into AYRH programs. AYRH policies are needed that focus on nutrition and the equitable distribution of food in the household (for example, presently girls are given tea and boys are given milk), life skills (i.e., a program for students that covers how to be happy, manage depression, and think positively), self-defense training for girls, teacher training on AYRH, multimedia materials on AYRH (i.e., books, pamphlets, and films), AYRH education in school curriculums, school health counselors, IEC on AYRH for the 10-plus age group, and organized talks for students and parents on health issues. Many school children are from families where the father and/or mother have migrated to urban areas in search of work. In such cases, it is

even more important to inform and counsel the children and these parents, or the extended family members that have the closest relationships with the children, about nutritious food and leading a healthy lifestyle.

KAP Study

The KAP study comprised an equal mix of males and females, all in rural areas. Half the sample was in the 10- to 14-year-old age group, close to 35 percent belonged to the 15- to 19-year-old age group, and the remainder belonged to the 20- to 24-year olds age group. Approximately 86 percent of the respondents were unmarried, and a similar proportion of the respondents were literate, because of the greater proportion of people from the younger age group in the sample.

Though one-third of the sample recognize the importance of discussing important issues, mental health, and academic performance/studies with parents, no more than a quarter actually discuss these issues with parents. An issue of concern is the low proportion of respondents who discuss body changes and relationships with the opposite sex with their parents. Among the very young adolescents, knowledge of puberty was very low. The higher knowledge in the 15- to 19-year-old age group may be because as a child grows and develops, their maturity and understanding of things and the environment increases. Nonetheless, there is poor communication with parents because of social norms that hinder these discussions. Therefore, it is important for programs and initiatives to reach out to parents and families to support adolescents' healthy transition from childhood to adulthood. This requires adults having correct information about puberty, menstruation, RH, and FP.

The main source of knowledge about puberty and family life education is the mother in most of the cases, followed by a sister-in-law. Outside the home, the teacher is the main source of information about these topics. Since awareness of puberty and family life education itself is low, the proportion of respondents reporting the importance of receiving family life education is also low. These data reveal the shyness or inhibition faced by young people in discussing sensitive, yet important, issues related to AYRH with trusted adults, such as parents, teachers, or healthcare providers. Young people are more comfortable discussing these issues with their peer group, who often share myths and misinformation. A peer education campaign could be useful in disseminating information about AYRH. However, policymakers would need to consider ways to involve parents and teachers in disseminating accurate AYRH information to young people in a culturally appropriate way, particularly the 10- to 14-year-old age group.

Few respondents reported that mental health issues should be addressed in family life education, despite adolescence being a critical period for mental, social, and emotional well-being and development. Clearly this group of respondents does not view mental health as important. This could be a result of the stigma around mental health or the view that mental health issues (e.g., anxiety, depression, behavior disorders) are part of "normal development." This attitude could be the reason that one-third of younger boys said they kept silent about mental health issues.

In the case of menstruation, the mother is the main source of information for the female respondents. More than half of the respondents use sanitary pads, which could be attributed to the sanitary pad distribution scheme being implemented in schools and the greater awareness of menstrual hygiene.

Low awareness of RTIs and HIV was reported, which could be a result of the taboo of publicly addressing RH issues, nonexistent or ineffective HIV awareness campaigns in the rural areas (where the young study respondents live), and unfamiliarity of the respondents with technical terms. The respondents were not probed by mentioning specific symptoms of RTI, because the purpose of the study was to know the general awareness

of RH topics rather than specific knowledge of particular topics. The source of knowledge is mainly television, which points to broadcast media being an important means of information dissemination in rural areas. The use of mobile phones/smartphones and the Internet for information about RH topics was not reported.

No more than half of both male and female respondents know how a baby is conceived. Considering that the mean age at first birth for rural mothers in India is around 20 years old (IIPS and ICF, 2017), this signifies a major knowledge gap, especially in Uttar Pradesh and Rajasthan, where early marriage is prevalent. More younger males (ages 15–19) are knowledgeable about conception than are older males (ages 20–24) and females in both age groups, indicating the need for continued RH information and education among all young people. They find information gathered from books, magazines, youth counselors, and through pornography, with its increasing accessibility. Those exposed to sexually explicit content on the television and Internet are more likely to initiate early/premarital sex, which comes with a host of negative implications that they often find themselves unequipped to deal with. This applies to a quarter of India's young people who have engaged in premarital sex (Shashikumar, et al., 2013).

Knowledge of contraception is higher among females than males, yet fewer than half of males and females are aware of FP methods other than voluntary female sterilization, signaling a need to increase awareness of and demand for nonpermanent modern contraceptives. Out of the 32 married respondents, only eight respondents said they are using any method of FP (which includes voluntary female sterilization, IUD, and condoms only). This implies that the health system has a greater role to play in creating awareness of FP (especially for young people), promoting a range of modern FP methods, and motivating sexually active young people to adopt a method of modern contraception that suits their FP needs.

Among the 11 respondents who have delivered babies, a high proportion registered the pregnancy, sought antenatal care, had an institutional delivery, and adhered to the recommended 48-hour postpartum hospital stay. This demonstrates high awareness and uptake of antenatal care and institutional delivery. It also implies that the health system is functioning well, through its infrastructure and human resources, in implementing maternal health policies.

LIMITATIONS

We would have preferred a larger sample size of young respondents; however, it was difficult to find a cross section of out-of-school young people for comparison purposes, because education in India is compulsory. In the study sample, 85.2 of our respondents were ages 10–19 years, and only 13.9 percent of the total respondents were married. Furthermore, the study respondents were all from rural areas. This could be one of the reasons why we found that awareness of HIV and RTIs was low, and that very few respondents were using any type of FP method or had experienced a delivery. The study results may vary in urban settings, where information about and access to RH care is typically better.

Because premarital sex is strongly discouraged in India—and discussing issues related to sex is extremely sensitive from a social, cultural, and religious perspective—none of the 10- to 14-year-olds and none of the unmarried young people in the other age groups were asked questions related to pregnancy, conception, MTP, antenatal care, and delivery. Thus, there may have been some young respondents and/or unmarried young people who had experienced a pregnancy, MTP, or delivery, for example, that the study missed. Therefore, the results of the study are more relevant for the 15- to 24-year-old age group comprising unmarried respondents.

RECOMMENDATIONS

The adolescent population is large and diverse with needs that cannot be addressed by small, fragmented programs. The Medical and Health Department within the MOHFW is already overburdened with the plethora of health programs being implemented and demanding resources. We offer the following recommendations to address the gaps in RH care for adolescents and better integrate AYRH care in existing structures and programs:

- Institute a dedicated adolescent health program with earmarked financial and human resources to address adolescents' emotional, mental, and physical health needs, per the RMNCH+A strategy.
- Base government programs or schemes on demand generation and not just supply orientation.
- Make RTI/STI specialists available at both district-level and lower-level institutions.
- Integrate health issues in the school education program by including family life education and counseling on health topics (e.g., preventing unwanted pregnancy, drug and alcohol abuse, mental health issues, fertility awareness, and menstrual hygiene).
- Train schoolteachers on how to talk about and counsel adolescents on RH topics to meet the needs of adolescents and accurately satisfy students' natural curiosity.
- Staff schools with designated, trained mental health and adolescent health counselors.
- Capitalize on youth's familiarity with social media, television, and film to promote accurate RH information and care. Show movies such as "Padman" and "Period. End of Sentence" in schools to create awareness about RH, because audiovisual media can be more effective in conveying messages than conventional media. Develop discussion guides for teachers to prepare them for questions the students may have about RH topics.
- Make family life education compulsory in all schools from class five (around age 10) onward. A family life-education curriculum should be developed incorporating issues related to puberty, menstruation, mental health, RTI/STI, HIV/AIDS, contraception, pregnancy, nutrition, violence, and gender discrimination.
- Because the main source of information for AYRH issues for most respondents was broadcast media, and respondents preferred to discuss AYRH issues with parents or friends, design messages and programs wherein parents and the wider community are counseled and involved in discussions about AYRH issues. This could be implemented through regular parent-teacher meetings in schools and counseling of parents by AYRH counselors.
- Ensure adherence of standards of practice for FP counseling and method provision for adolescents. The focus should be on providing youth with a range of modern FP methods.

CONCLUSION

This research aimed to provide evidence related to AYRH policy, implementation, service delivery, and KAP in two states in northern India: Uttar Pradesh and Rajasthan. The study sought to reveal gender differences in KAP related to RH.

The results of the study revealed a number of policies, programs, and schemes both at the national and state levels aimed at RMNCH+A. Previously fragmented, vertical, disease-specific programs have been integrated under NHM. RMNCH+A is based on a life cycle approach and covers many aspects of life: birth of a child, nutrition in early years, life skills education in adolescence, contraception, pregnancy, and delivery.

The results of the KAP study reveal low knowledge about RH issues. Very few respondents believe that receiving family life education is important. Health services provided in schools include health checkups and weekly IFA supplementation, yet almost half of the study respondents are unaware of school-based health services. Most of the respondents discuss puberty and bodily changes with friends and peers, and mental health issues with parents, followed by friends and peers. More than 10 percent of 10- to 14-year-old boys believe that gender discrimination and violence are acceptable in the family. Fewer than half of male and female respondents across all age groups agree that there should be a minimum legal age for marriage. Fewer than one-quarter of 20- to 24-year-old female respondents are aware that menstruation is a normal part of development. None of the female respondents are aware of RTIs/STIs, and fewer than half of males are aware. Awareness of HIV/AIDS is also very low, with female respondents again having less knowledge of HIV and AIDS than do males. The respondents believe many misconceptions about HIV transmission. Although women are more aware of FP than males are, awareness overall is less than 50 percent. FP use is extremely low for males and females.

The study makes several recommendations to increase knowledge of RH issues; provide support to adolescents during this milestone in their emotional, social, cognitive, and physical development; and ultimately improve RH outcomes for adolescents.

REFERENCES

Baru, R. V. & Nundy, M. (2008). Blurring of boundaries: Public-private partnerships in health services in India. *Economic and Political Weekly, 26 January*, 62–71. Retrieved from https://www.researchgate.net/publication/287682687_Public-private_partnerships_in_health_care_in_India_Lessons_for_developing_countries

Bearinger, L. H., Sieving, R. E., Ferguson, J., & Sharma, V. (2007). Global perspectives on the sexual and reproductive health of adolescents: Patterns, prevention and potential. *Lancet, 369,* 1220–1231. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/17416266

Blum, R. W., Bastos, F. I. P. M., Kabiru, C. W., & Le, L. C. (2012). Adolescent health in the 21st century. *Lancet, 379,* 1567–1568. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/22538177

Chandra-Mouli, V., Lane, C., & Wong, S. (2015). What does not work in adolescent sexual and reproductive health: A review of evidence on interventions commonly accepted as best practices. *Global Health Science & Practice, 3*(3), 333–340. Retrieved from http://www.ghspjournal.org/content/3/3/333

Chandra-Mouli, V. & Patel, S. V. (2017). Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries. *Reproductive Health, 14*(30), 1–16. Retrieved from https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-017-0293-6

Chothe, V., Khubchandani, J., Seabert, D., Asalkar, M., Rakshe, S., Firke, A., Midha, I., & Simmons, R. (2014). Students' perceptions and doubts about menstruation in developing countries: A case study from India. *Health Promotion Practice, 15*(3), 319–326. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24618653

Directorate of Medical Health & Family Welfare Society, Government of Rajasthan (2018). *Family Welfare Department, Progress Report 2017–18*.

Drakshayani, D. K. & Venkata, R. P. (1994). A study on menstrual hygiene among rural adolescent girls. *Indian Journal of Medical Science, 48*(6), 139–143. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/7927585

Every Woman Every Child. (2015). The global strategy for women's, children's and adolescents' health (2016–2030). Retrieved from http://www.everywomaneverychild.org/wp-content/uploads/2016/12/EWEC_Global_Strategy_EN_inside_LogoOK_web.pdf

Glasier, A., Gülmezoglu, A. M., Schmid, G. P., Moreno, C. G., & Van Look, P. F. A. (2006). Sexual and reproductive health: A matter of life and death. *Lancet, 368,* 1595–1607. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/17084760

Government of India. (1994). *Pre-conception & pre-natal diagnostic techniques act, 1994*. Retrieved from https://indiacode.nic.in/bitstream/123456789/8399/1/pre-conception-pre-natal-diagnostic-techniques-act-1994.pdf

Goyal, A. & Dreze, J. (2003). Future of Mid-Day Meals. *Economic and Political Weekly, 38*(44), 4673–4683. Retrieved from https://www.epw.in/journal/2003/44/special-articles/future-mid-day-meals.htmlHindin, M. J. & Fatusi, A. O. (2009). Adolescent sexual and reproductive health in developing countries: An overview of trends and interventions. *International Perspectives on Sexual and Reproductive Health, 35*(2), 58–62. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/19620089

Igras, S. M., Macieira, M., Murphy, E., & Lundgren, R. (2014). Investing in very young adolescents' sexual and reproductive health. *Global Public Health, May, 9*(5), 555–569. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4066908/

IIPS. (2010). *District-level household and facility survey (DLHS-3), 2007-08: India.* Mumbai: IIPS.

IIPS (2016) *National family health survey-4 (NFHS-4), 2015-16: India fact sheet.* Mumbai: IIPS.

International Institute for Population Sciences (IIPS) and ICF. 2017. National Family Health Survey (NFHS-4), 2015-16: India. Mumbai: IIPS. Retrieved from: https://dhsprogram.com/pubs/pdf/FR339/FR339.pdf

Jejeebhoy, S. J., (1998). Adolescent sexual and reproductive behavior: A review of the evidence from India. *Social Science & Medicine, 46*(10), 1275–1290. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/9665560

Jejeebhoy, S. J. & Santhya, K. G. (2011). *Sexual and reproductive health of young people in India: A review of policies, law and programmes.* New Delhi: Population Council.

McManus, A., & Dhar, L. (2008). Study of knowledge, perception and attitude of adolescent girls towards STIs/HIV, safer sex and sex education: (A cross sectional survey of urban adolescent school girls in South Delhi, India). *BMC Women's Health, 8*(12), 1–6. Retrieved from https://bmcwomenshealth.biomedcentral.com/articles/10.1186/1472-6874-8-12

Ministry of Finance, Government of India. (2017). *Economic survey 2016-17.* New Delhi: MoF.

MOHFW, Government of India. (2013). *A strategic approach to reproductive, maternal, newborn, child and adolescent health (RMNCH+A) in India.* New Delhi: MOHFW.

MOHFW, Government of India. (2015a). *Janani Suraksha Yojana.* Retrieved from https://www.nhp.gov.in/janani-suraksha-yojana-jsy-_pg

MOHFW, Government of India. (2015b). *Janani Shishu Suraksha Karyakram.* Retrieved from: https://www.nhp.gov.in/janani-shishu-suraksha-karyakaram-jssk_pg

MOHFW, Government of India. (2017). *National health policy 2017.* New Delhi: MOHFW.

Ministry of Human Resource Development, Government of India. (2016). *National Institutional Ranking Framework.* Available at: https://www.nirfindia.org/ranking

Ministry of Human Resource Development, Government of India. (2018). *About the Mid Day Meal Scheme.* Available at: http://mdm.nic.in/

Ministry of Women and Child Development, Government of India. (2010). *Approval of Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) – SABLA.* Available at: http://wcd.nic.in/sites/default/files/1-SABLAscheme_0.pdf

Nair, M. K., Leena, M. L., Thankachi, Y., George, B., & Russell, P. S. (2013a). ARSH 1: Reproductive and sexual health problems of adolescents and young adults: A cross sectional community survey on knowledge, attitude and practice. *Indian Journal of Paediatrics, 80 Suppl2,* S192–198. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/23934098

Nair, M. K., Leena, M. L., Thankachi, Y., George, B., & Russell, P. S. (2013b). ARSH 2: Reproductive and sexual health knowledge, attitude and practices: comparison among boys and girls (10-24y). *Indian Journal of Paediatrics, 80 Suppl2,* S199–202. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/23904064

National Health Mission (NHM). (2014a). *Framework for implementation: National Health Mission 2012-17.* National Health Mission, MOHFW, Government of India. Retrieved from http://nhm.gov.in/images/pdf/NHM/NHM_Framework_for_Implementation__08-01-2014_.pdf

NHM. (2014b). *Janani Shishu Suraksha Karyakram: Introduction.* Retrieved from http://nhm.gov.in/janani-shishu-suraksha-karyakram.html

NHM. (2018). *State Program Implementation Plans.* Available at: http://www.nhm.gov.in/nrhm-in-state/state-program-implementation-plans-pips.html

Office of the Registrar General & Census Commissioner, India, Ministry of Home Affairs, GoI. (2011). *C-14 five year age group data by residence and sex.* Available at: http://www.censusindia.gov.in/2011census/C-series/C-14.html

Pande, R., Kurz, K., Walia, S., MacQuarrie, K., & Jain, S. (2006). *Improving the reproductive health of married and unmarried youth in India.* Washington, D.C.: ICRW.

Patton, G. C., Coffey, C., Cappa, C., Currie, D., Riley, L., Gore, F., . . . Ferguson., J. (2012). Health of the world's adolescents: A synthesis of internationally comparable data. *Lancet, 379,* 1665–1675. Retrieved from https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)60203-7/fulltext

Population Action International. (2002). *In this generation: Sexual and reproductive health policies for a youthful world.* Washington, D.C.: Population Action International.

RBSK (2015) *Rashtriya Bal Swasthya Karyakram: For More Information.* Retrieved from http://nhm.gov.in/images/pdf/programmes/RBSK/For_more_information.pdf

RKSK (2014) *Rashtriya Kishor Swasthya Karyakram: Strategy Handbook.* MOHFW, GoI.

Shashi Kumar, R., Das, R. C., Prabhu, H. R. A., Bhat, P. S., Prakash, J., Seema, P., & Basannar, D. R. (2013). Interaction of media, sexual activity and academic achievement in adolescents. *Medical Journal Armed Forces India.* 69:138–43. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3862597/

United Nations Development Program. (2016). *Human development report 2016.* Available at: http://hdr.undp.org/en/composite/GDI

United Nations Population Fund. (2014). *State of world population 2014.* New York: UNFPA.

United Nations Population Fund. (2016). *State of world population 2016.* New York: UNFPA.

Venkat Raman, A. & Björkman, J. W. (2009). *Public-private partnerships in healthcare in India: Lessons for developing countries.* Oxon: Routledge.

World Health Organization. (2014). *Recognizing adolescence.* Available at: http://apps.who.int/adolescent/second-decade/section2/page1/recognizing-adolescence.html

APPENDIX 1. SCHEDULE FOR KAP STUDY

Project Title: Engendering Evidence-Based Policy for Young People's Sexual and Reproductive Health in India

Funding Agency: MEASURE Evaluation Project, University of North Carolina at Chapel Hill

Implementing Agency: Indian Institute of Health Management Research, Jaipur

Schedule 1: Knowledge, Attitudes and Practices Regarding RH Among Young People in the Age Group 10-24 years

Introduction:
The project, Engendering Evidence-Based Policy for Young People's Sexual and Reproductive Health in India, is a one-year long project funded by MEASURE Evaluation Project (supported by USAID), University of North Carolina at Chapel Hill, North Carolina, USA. The focus of this research is on policy, service delivery and knowledge, attitude and practices related to sexual and reproductive health among young people (10-24 years age group).

The present tool (schedule) has been developed to collect data from males/females in the 10-24 years' age group. Informed written consent would be taken from the respondents/parents of minors prior to filling up the schedule.

S.No. _____ Date: _____

A.	**Socio-Demographic Profile**		
1.	Name (optional):		
2.	Sex	Male	Female
3.	Date of birth	__/__/____ (DD/MM/YYYY)	
4.	Age (in completed years):	_____ years	
5.	In school/out of school (only for respondents <19 years)	1. In school 2. Out of school	
6.	State educational level	1. Illiterate 2. Literate but not formally educated 3. Number of yrs of formal schooling completed ____ 4. Graduate and higher	
7.	Working status (in last one week)	1. Worked (paid money for work) 2. Not worked	
8.	Number of days worked (in last one week)	_____ days	
9.	Occupation	1. Student 2. Salaried 3. Self-employed 4. Farmer 5. Daily wage laborer 6. Housewife 7. None	
10.	Monthly family income Rs. _____	1. Upto Rs. 2000 2. Rs.2001-4000 3. Rs.4001-6000 4. Rs.6001-8000 5. Rs.8001-10000 6. Rs10001 and above	

11.	Religion	1. Hindu 2. Sikh 3. Christian 4. Muslim 5. Jain 6. Other specify ----------	
12.	Caste		
13.	Category	1. General 2. SC 3. ST 4. OBC 5. Other (specify) ----------	
14.	Marital status	Married	Unmarried
15.	For unmarried respondent → Currently who are you living with?	1. Both parents 2. Father 3. Mother 4. Neither parent	
	→ (If unmarried and age under 19, go to section B. If unmarried and age completed 19 years, go to section E)		
16.	For married respondent → What is your current marital status?	1. Currently married & living with spouse 2. Currently married but not living with spouse 3. Married but gauna not performed 4. Separated **→ If response is 4,5,6,7, skip Q.18** 5. Deserted 6. Divorced 7. Widower/widow	
17.	At what age did you get married? (age in completed yrs)	_____ years	
18.	Spouse's age (in completed years)	_____ years 99. Don't know	
19.	Spouse's educational status	1. Illiterate 2. Literate but not formally educated 3. Number of yrs of formal schooling completed _____ 4. Graduate and higher	
20.	Spouse's occupation	1. Student 2. Salaried 3. Self-employed 4. Farmer 5. Daily wage laborer 6. Housewife 7. None	
21.	Current pregnancy status of self/spouse	1. Pregnant 2. Not pregnant 99. Don't know	
22.	Total number of pregnancies of self/spouse till now	_____ **→If '0' and age <19, go to section B. If response '0' and age completed 19 years, go to section E)**	
23.	Number of living children	Sons _____	
		Daughters ___	
24.	Number of spontaneous/ induced abortions	Spontaneous _____ Induced abortion_____	
25.	Number of stillbirths	____	
26.	Number of children died during delivery	Boys ____	
		Girls ____	
27.	Number of children died after birth	Boys ____	
		Girls ____	

→ Respondents under the age of 19, proceed to section B. Respondents 19 years old or more, go to Section E.

S. No.	Item	Response	
B.	**Relationship with Parents (Only for respondent age less than 19 years)**		

28.	"A child should discuss important issues and worries with their parents."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
29.	"A child should discuss their studies and academic performance with their parents."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
30.	"A child should discuss with parents about changes in the child's body as they grow up."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
31.	"A child should discuss with parents about their relationships with boys/girls."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
32.	"I discuss important issues and worries with my parents."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
33.	"I discuss my studies and academic performance with my parents."	5.Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
34.	"I discuss with my parents about changes in my body as I am growing up."	5.Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
35.	"I discuss with my parents about my relationships with boys/girls."	5.Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
36.	With who else do you discuss important issues and worries? (Record all mentioned)	A. Older brother/sister B. Younger brother/sister C. Cousin D. Friend/ companions E. Other (specify) _____	
37.	With who else do you discuss your studies and academic performance?	F. Older brother/sister G. Younger brother/sister H. Cousin I. Friend/ companions A. Other (specify) _____	
38.	With who else do you discuss about changes in your body as you are growing up? (Record all mentioned)	J. Older brother/sister K. Younger brother/sister L. Cousin M. Friend/ companions A. Other (specify) _____	

39.	With who else do you discuss your relationships with boys/girls? (Record all mentioned)	N. Older brother/sister O. Younger brother/sister P. Cousin Q. Friend/ companions A. Other (specify) _____	
C.	**Family Life Education (Only for respondent age less than 19 years)**		
40.	Are you aware of puberty, ie., how our body changes as we grow up?	1. Yes 2. No → **If no go to Q.42**	
41.	What has been the most important source of information for you on this topic?	1. Mother 2. Father 3. Brother 4. Sister 5. Spouse/partner 6. Sister-in-law 7. Friends/peers 8. Healthcare provider 9. Youth club/mandal 10. NGO worker 11. Sex education expert 12. Teacher/school/college 13. Doctor 14. Books/ magazines 15. Films/videos 16. Television/ radio 17. Other (specify) _____ 18. Don't know	
42.	It is important for young people to receive family life education, ie., about their bodies, growing up, etc.	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
43.	From what age and standard do you think young people should receive family life education?	Age ____ years DK/ Can't say Standard ___ DK/ Can't say	
44.	According to you, who should provide family life education to children at home/ in the family?	A. Mother B. Father C. Brother D. Sister E. Spouse/partner F. Sister-in-law G. Friends/peers H. Books/ magazines I. Films/ videos J. Other (specify) _____ K. None L. Don't know	
45.	According to you, who should provide family life education outside the home/ family? (Record all mentioned)	A. Healthcare provider B. Youth club/ mandal C. NGO worker D. Sex education expert E. Teacher/ school/ college F. Doctor G. Friends/peers H. Books/ magazines I. Films/ video J. Other (specify) _____ K. None	

		L. Don't know	
46.	Have you ever received formal family life education outside the home/ family?	1. Yes 2. No → **If no go to Q.53**	
47.	If yes, where did you receive that? (Record all mentioned)	A. NGO programme/ camp B. Govt. programme/ camp C. School/ college D. Youth club E. Other (specify) _____	
48.	"The family life education programme answered many of the questions I had."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
49.	"The teacher/trainer explained the subject in a way I understood.	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
50.	"I felt very embarrassed in the family life education programme."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
51.	"I felt comfortable in the family life education programme."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
52.	The family life skills education programme informed you about which topics? (Record all mentioned. Probe, if respondent unable to answer on his/her own).	A. Human body B. Healthy lifestyle (exercise, healthy diet) C. Changes in human body as we grow up D. Relationships with boys/girls E. HIV/AIDS F. RTI/STI G. Substance abuse (alcohol/ tobacco/ drugs) H. Discrimination against girls I. Violence against women J. Mental health issues, such as anxiety, stress, depression, suicidal tendencies, etc.	
53.	"I am interested in attending a family life education programme in future."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
D.	**Adolescent Friendly Health Services (only for respondent less than 19 years)**		
54.	→ **Only for in-school respondent. Out-of-school male respondent go to Q.58 Out-of-school female respondent go to Q.56)** Have you undergone any health check-up in your School?	1. Yes 2. No 3. Don't remember	
55.	Have you got any medicines from your school (such as for deworming)? → **Male respondent go to Q.58**	1. Yes 2. No 3. Don't remember	
56.	→**For female respondent only** Have you got iron folic acid tablets provided by school/ Anganwadi Centre?	1. Yes 2. No 3. Don't remember	
57.	→ **For female respondent only**	1. Yes 2. No	

	Do you take iron folic acid tablets provided by school/ Anganwadi Centre?		
58.	"If I face a health issue related to changes in my body/ menstruation, I should keep silent."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
59.	"I faced a health issue related to changes in my body, and I approached a health worker/health centre/doctor."	1. Yes 2. No → **Go to Q.61**	
60.	"For the issue related to changes in my body, I felt comfortable approaching a health worker/health centre/doctor."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
61.	"If I face mental health issues, such as anxiety, stress, depression, suicidal tendencies, etc., I should keep silent. "	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
62.	If you face mental health issues, such as anxiety, stress, depression, suicidal tendencies, etc., who do you discuss it with? " (Record all mentioned)	A. Parents B. Friends/ peer group C. Teachers D. Health workers E. Other _____ (specify) F. 99. No body	
63.	"I faced a mental health issue, such as anxiety, stress, depression, suicidal tendencies, etc., and I approached a health worker/ health centre/ doctor/ counsellor."	1. Yes 2. No →Go to Section E	
64.	"For the mental health issue, I felt comfortable approaching a health worker/health centre/ doctor/ counsellor."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
E.	**Substance Abuse**		
65.	How many times in the last month, have you been to a mela?	____ times 98. Never	
66.	How many times in the last month, have you been to the cinema hall to watch a movie?	____ times 98. Never	
67.	How many times in the last month have you consumed alcohol?	____ times 98. Never	
68.	How many times in the last seven days have you smoked a cigarette?	____ times 98. Never	
69.	How many times in the last seven days have you chewed/ sniffed tobacco?	____ times 98. Never	
70.	"If we consume alcohol, tobacco or drugs, we become popular among our friends."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
F.	**Gender Discrimination/ Violence**		
71.	"In the household, men and boys should eat meals first and women and girls should eat last".	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
72.	"It is okay if girls get less food than boys".	5. Strongly Agree	

		4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
73.	"Boys should get more clothes, books and toys than girls."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
74.	"It is okay if a husband beats his wife."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
75.	"In my family, men and boys eat meals first, and women and women and girls eat last".	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
76.	"In my family girls get less food than boys".	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
77.	"In my family, boys get more clothes, books and toys than girls."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
78.	"In my family, I have seen discrimination against girls/women."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
79.	"In my family, I have seen violence against girls/women."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
G.	**Age at Marriage**		
80.	"There should be a legal minimum age at marriage for boys."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
81.	"There should be a legal minimum age at marriage for girls."	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
82.	What is the legal minimum age at marriage for boys?	____ years Don't know/Can't say	
83.	What is the legal minimum age at marriage for girls?	____ years Don't know/Can't say	
	Reproductive Health		
H.	**Menstruation → For female respondent only. For male respondent, go to section I**		
84.	What changes occur in girls' bodies as they grow	_____	

	→If respondent does not mention 'menstrual periods' go to section I		
85.	From which source of information did you learn about menstrual periods? (Record all mentioned)	A. Mother B. Grandmother C. Aunt/relative D. Friends E. Teacher F. Health worker/ ANM/ASHA G. Other (specify)	
86.	Menstrual periods are a normal part of growing up.	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
87.	Do you have menstrual periods?	1. Yes 2. No → **Go to section I**	
88.	I feel embarrassed/ scared when I get my menstrual period.	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
89.	We should keep our body clean during menstrual periods.	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
90.	Did you face any problems related to menstruation during the last three months?	1. Yes 2. No → **Go to Q.93**	
91.	Mention the problems you faced related to menstruation during the last three months. (Record all mentioned)	A. No periods B. Painful periods C. Frequent/ short periods D. Irregular periods E. Prolonged bleeding F. Scanty bleeding G. Inter-menstrual bleeding H. Blood clots/ excessive bleeding	
92.	What did you do to address these problems?) (Record all mentioned)	A. Did nothing B. Took home remedy ? C. Consulted health worker/ANM/nurse D. Consulted doctor E. Other (specify)	
93.	Women use different methods of protection during menstrual period to prevent bloodstains from becoming evident. What do you use for this? (Record all mentioned)	A. Cloth B. Locally prepared napkins (If use A&B go to Section I) C. Sanitary napkins (If use C go to Q 94) D. Nothing E. Other (specify) (If use D&E go to Section I)	
94.	From where do you get sanitary napkins?) (Record all mentioned)	A. ANM/ ASHA B. General store/ grocery C. Chemist shop D. Vending machine in school E. Other (specify) _____	
I.	**RTI/STI**		
95.	Have you ever heard of an illness called Reproductive Tract Infection/ Sexually Transmitted Infection?	1. Yes 2. No → **If no, go to section J**	
96.	From which sources of information have you heard about RTI?	A. Radio B. Television	

	(Record all mentioned)	C. Cinema D. Newspaper/ magazine E. Slogans/pamphlets/ posters/ wall hoardings F. Doctor G. Health worker H. ASHA I. Adult education programme J. Religious leaders K. Political leaders L. School teachers M. Partner N. Community meetings O. Relatives/ friends P. Work place Q. Exhibition/ mela R. Other _____	
97.	How does a person get RTI? (Record all mentioned)	A. Unhygienic practices (not keeping the body clean) B. Unsafe sex C. Other _____ D. Don't know	
98.	→ **For Women (for men, go to Q.99)** During the last three months, did you face any of the following problems? (Record all mentioned)	A. Abnormal vaginal discharge B. Itching or irritation over vulva C. Boils/ ulcers/ warts around vulva D. Pain in lower abdomen (not related to menses) E. Pain during urination or defecation F. Swelling in the groin G. Painful blister like lesions in and around vagina H. Low backache I. Pain during sexual intercourse J. Spotting after sexual intercourse K. No problem→ **go to section J**	
99.	→ **For Men (for women, go to Q.100)** During the last three months, did you face any of the following problems (Record all mentioned)	A. Discharge from penis B. Pain during urination C. Ulcers/ sores in genital area D. No problem→go to section J	
100.	Did you discuss about these problems with your spouse/ partner/ anybody else?	1. Yes 2. No	
101.	Did you consult anybody or seek treatment for these problems?	1. Yes 2. No →go to section J	
102.	If yes, where did you go for consultation or treatment of your problems?	1. Government hospital 2. Government dispensary 3. CHC/Rural hospital 4. Primary Health Centre 5. Sub Centre 6. VCTC/ICTC 7. RTI/STI Clinic 8. AYUSH hospital/ clinic 9. NGO/Trust hospital/ clinic 10. Private hospital/clinic 11. Outreach camp in village 12. Chemist/ medical store 13. Home remedy 14. Traditional healer 15. Other (specify) _____	
J.	**HIV/AIDS**		
103.	Have you ever heard of HIV/ AIDS?	1. Yes 2. No → go to section K	

104.	From which sources of information have you heard/read about HIV/AIDS?) (Record all mentioned	A. Radio B. Television C. Cinema D. Newspaper/ magazine E. Slogans/pamphlets/ posters/ wall hoardings F. Doctor G. Health worker H. ASHA G. Adult education programme H. Religious leaders I. Political leaders J. School teachers K. Partner L. Community meetings M. Relatives/ friends N. Workplace O. Exhibition/ mela P. Other (specify)	
105.	How is HIV/AIDS transmitted? (Record all mentioned)	A. Unsafe sex B. Infected mother to child C. Transfusion of infected blood D. Use of infected syringe E. Other _____ (specify) F. Don't know	
106.	Which are the ways through which one can get HIV/AIDS?, (Record all mentioned)	A. Shaking hand with a person who has HIV/AIDS. B. Hugging a person who has HIV/AID C. Kissing a person who has HIV/AIDS. D. Sharing clothes with a person who has HIV/AIDS E. Sharing food with a person who has HIV/AIDS. F. Stepping on urine/stool of someone who has HIV/AIDS. G. From mosquito/flea/ bedbug bites.	
107.	Is there anything else a person can do to avoid or reduce the chances of getting HIV/AIDS? (Record all mentioned)	A. Abstain from sex B. Using condoms correctly during each sexual intercourse C. Limit sex with one partner/ stay faithful to one partner D. Limit number of sexual partners E. Avoid sex with sex workers F. Avoid sex with homosexuals G. Avoid sex with persons who inject drugs H. Use tested blood I. Use only new/ sterilized needles J. Avoid sharing razors/blades K. Avoid pregnancy when having HIV/AIDS L. Others (specify) _____ M. Don't know	
108.	Where people can go to get tested for HIV /AIDS? (Record all mentioned)	A. Government hospital B. Primary Health Centre C. Sub Centre D. VCTC /ICTC ohlhVhlh@vkbZlhVhlh E. RTI/STI Clinic F. NGO/Trust hospital/ clinic G. Private hospital/ clinic H. Other _____ (specify)	
109.	Have you ever undergone HIV test?	1. Yes 2. No	
K	**Contraception**		

	➔ **For unmarried respondent (below the age of 15 years, go to END).** ➔ **For married respondent (below the age of 15, continue)** ➔ **For unmarried/married respondent (15-24 years), continue.**		
110.	Are you aware of how a couple can have a child/ or how pregnancy occurs?	1. Yes 2. No 3. Not sure	
111.	Are you aware of family planning – the various ways or methods that a couple can use to delay or avoid a pregnancy.	1. Yes 2. No →**For unmarried respondent (15-24 years), go to section L.** **For married respondent, go to Q.117**	
112.	What has been the most important source of information for you on this topic?	1. Mother 2. Father 3. Brother 4. Sister 5. Spouse/partner 6. Sister-in-law 7. Friends/peers 8. Healthcare provider 9. Youth club/mandal 10. NGO worker 11. Sex education expert 12. Teacher/school/college 13. Doctor 14. Books/ magazines 15. Films/videos 16. Television/ radio 17. Other (specify) ____ 18. Don't know	
113.	Which ways or methods of family planning have you heard about? (Record all mentioned)	A. Female sterilization (women can have an operation to avoid having any more children). B. Male sterilization (men can have an operation to avoid having any more children) C. IUD (Women can have a device placed inside the uterus by a doctor or a nurse) D. Pill (Women can take a pill every day or once a week to avoid becoming pregnant) E. Emergency contraception (Women can take pills within three days after sexual intercourse to avoid becoming pregnant) F. Injectables (Women can have an injection by a health provider that stops them from becoming pregnant for one or more months G. Condom/ Nirodh (Men can put a rubber sheath on their penis before sexual intercourse). H. Female condom (Women can place a sheath in their vagina before sexual intercourse I. Rhythm method (Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant) J. Withdrawal (Men can be careful and pull out before climax) K. Other (specify) _____	
114.	Have you heard of other ways or methods that women or men can use to avoid pregnancy?	1. Yes Specify _____ 2. No	
115.	If the respondent is aware of pill/condom, ask: Do you know from where to get pill/condom? (Record all mentioned)	A. Government hospital B. Dispensary C. Primary Health Centre	

		D. Sub Centre E. AYUSH hospital/ clinic F. Doctor G. Nurse/ANM H. ASHA/AWW I. Home visit by health worker J. Chemist/ pharmacy K. Other (specify) _____	
116.	With whom have you discussed about contraception? (Record all mentioned)	A. Mother B. Father C. Brother D. Sister E. Male friend F. Female friend G. Neighbour H. Other females I. Other males J. Doctor K. Nurse/ANM L. Other community organization M. Healthcare provider N. Sister-in-law/ brother–in-law O. Teacher P. Other (specify) _____	
	→ For unmarried respondent, go to section L . For married respondent, continue.		
117.	Are you or your spouse, currently doing something/ using any method to delay or avoid getting pregnant?	1. Yes 2. No **→ go to Q.123**	
118.	Which method are you or your spouse currently using? (If more than one method mentioned, specify)	A. Female sterilization B. Male sterilization C. IUD D. Daily pills E. Weekly pills F. Injectables G. Condom/ nirodh H. Female condom I. Rhythm method J. Withdrawal K. Other (specify) _____	
119.	If the response to the above is A to H, ask: where did you obtain the (current method) the last time?	L. Government hospital M. Dispensary N. Primary Health Centre O. Sub Centre P. AYUSH hospital/ clinic Q. Doctor R. Nurse/ANM S. ASHA/AWW T. Home visit by health worker U. Chemist/ pharmacy 1. Other (specify) _____	
120.	For how long have you been using current method continuously (without stopping)?	____ days/ _____ months/ _____ year	
121.	Who facilitated or motivated you to use current family planning method?	1. Doctor 2. ANM 3. Health worker 4. Anganwadi worker 5. ASHA 6. NGO/CBO	

		7. Spouse 8. Mother-in-law 9. Mother 10. Relatives/friends 11. Dai (Trained birth attendant) 12. Self 13. Other (specify) _____	
122.	"My spouse/I am fully satisfied with current family planning method".	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
	After answering Q.122, go to section L.		
123.	**To be asked only if answer to Q.117 is 'no'.** What is the main reason for currently not using any modern method of family planning? (Record all mentioned	A. Pregnant B. Not having sex C. Infrequent sex D. Spouse away E. Menopause F. Hysterectomy G. Subfecund/ infecund/ unable to bear children H. Postpartum amenorrheic I. Breastfeeding J. Up to God K. Respondent opposed L. Spouse opposed M. Others opposed N. Religious prohibition O. Knows no method P. Knows no source Q. Health concerns R. Fear of side effects S. Lack of access/ too T. Costs too much U. Difficult/ inconvenient to get method V. Inconvenient to use W. Interferes with body's normal processes X. Do not like existing methods Y. Afraid of sterilization Z. Cannot work after sterilization AA. Other (specify) _____ BB. Don't know	
124.	In future, I am interested in using any family planning method.	5. Strongly Agree 4. Somewhat Agree 3. Neither agree nor disagree 2. Somewhat disagree **1.** Strongly disagree	
125.	When do you want to start using any modern family planning method?	1. Within one year 2. One to two years 3. More than two years 4. Undecided	
126.	Which family planning method would you prefer to use?	1. Female sterilization 2. Male sterilization 3. IUD 4. Daily pills 5. Weekly pills 6. Injectables 7. Condom/ nirodh 8. Female condom	

		9. Rhythm method/ periodic abstinence 10. Withdrawal 11. Undecided 12. Other (specify) _____	
L.	**Reproduction**		
127.	It is possible to know the sex of the baby before birth by medical test.	1. True 2. False 3. Don't know/ Not sure	
128.	Pregnancy can occur by kissing or hugging.	1. True 2. False 3. Don't know/ Not sure	
129.	When a woman has intercourse for the first time, she has to bleed.	1. True 2. False 3. Don't know/ Not sure	
130.	A woman can get pregnant on the very first time she has sexual intercourse.	1. True 2. False 3. Don't know/ Not sure	
131.	A woman is most likely to get pregnant is she has sexual intercourse halfway between her periods.	1. True 2. False 3. Don't know/ Not sure	
132.	In future, when you have a child, would you prefer your child to be a boy or girl?	1. Boy 2. Girl 3. Doesn't matter 4. Up to God	
	→ For male respondent, go to END. **→ For unmarried female respondent, go to END.** **→ For married female respondent, continue**.		
*	**Ask married female respondent, "Have you ever been pregnant"?**	1. Yes **→ Go to section M** No **→ Go to END**	
M.	**Abortion (for married women only, who have been pregnant at least once)**		
133.	Did you ever have an induced abortion?	1. Yes 2. No **→ Go to section 'N'**	
134.	How many months pregnant were you when you had the induced abortion?	_____ months (If less than one month, record 0)	
135.	Did you have an ultrasound test before the induced abortion?	1. Yes 2. No	
136.	Who advised you for the induced abortion? (Record all mentioned)	A. Doctor B. ANM/Nurse/LHV C. Male health worker D. ASHA E. Dai F. Spouse G. Mother-in-law H. Mother I. Relatives/ friends J. Self K. Other (specify)	
137.	Where was the last induced abortion performed?	1. Government hospital 2. Govt. dispensary 3. CHC/ Rural hospital 4. Primary Health Centre 5. Sub Centre 6. NGO/ Trust hospital/ clinic 7. Private hospital/ maternity home/ clinic 8. Home 9. Other (specify)	
N.	**Antenatal Care (with reference to last pregnancy) or married women only/have been pregnant at least once)**		

138.	Did you undergo pregnancy confirmation test (urine test) during the last pregnancy	1. Yes 2. No 3. Don't know	
139.	Did you register your last pregnancy?	1. Yes 2. No → **Go to Q.141**	
140.	With whom did you register your pregnancy?	1. Government doctor 2. Private doctor 3. ANM 4. Anganwadi Worker 5. ASHA 6. Other (specify)	
141.	After how many months of last pregnancy did you receive first antenatal care?	_____ months Don't know	
142.	How many times you received antenatal checkup during last pregnancy?	_____ times Don't know	
143.	Where did you receive antenatal care for last pregnancy? (Record all mentioned)	A. Government hospital B. Govt. dispensary C. CHC/ Rural hospital D. Primary Health Centre E. Sub Centre F. Anganwadi/ ICDS Centre G. NGO/ Trust hospital/ clinic H. Private hospital/ maternity home/ clinic I. Home J. Other (specify)	
144.	As part of your antenatal care during last pregnancy, were any of the following done at least once? (Record all mentioned)	A. Weight measured B. Height measured C. Blood pressure checked D. Blood tested E. Urine tested F. Abdomen examined G. Breast examined H. Ultrasound done I. Delivery date told J. Delivery advice given K. Nutrition advice given L. Informed about pregnancy complications (bleeding, convulsions or prolonged labour) M. Advised to visit health facility in case of pregnancy complications N. Advised for institutional delivery O. Advised for breastfeeding P. Advised for keeping the baby warm Q. Advised for cleanliness at the time of delivery R. Advised for family planning for spacing S. Advised for family planning for limiting T. Advised for better nutrition for mother and child	
145.	Who facilitated or motivated you for antenatal care? (Record all mentioned)	A. Doctor B. ANM C. Health worker D. Anganwadi worker E. ASHA F. NGO/CBO G. Spouse H. Mother-in-law I. Mother J. Relatives/ friends K. Self	

		L. Others (specify)	
146.	How many IFA tablets/syrup bottles did you receive/ purchase during last pregnancy?)	____ Number of tablets ____ Number of bottles Don't remember	
147.	From where did you get IFA tablets/ syrup?	1. Hospital/ dispensary 2. Primary Health Centre 3. Sub Centremi 4. AYUSH hospital/ clinic 5. Doctor 6. Nurse/ANM 7. ASHA/AWW 8. Home visit by health worker 9. NGO/ trust hospital or clinic 10. Private hospital/ clinic 11. AYUSH hospital/ clinic 12. Chemist/ pharmacy 13. Other (specify) _____	
148.	During last pregnancy, for how many days and how much did you take IFA tablets/ syrup?	_____ tablets _____ bottles Don't know	
149.	During last pregnancy, how many times did you get Tetanus injection?	_____ times Don't know	
150.	During last pregnancy, did you receive any supplementary nutrition from Anganwadi centre?	Yes No	
O.	**Delivery → For married women only, who have undergone at least one delivery. For others, go to END**		
151.	Who conducted your last delivery	1. Doctor 2. ANM/ Nurse/ Midwife/ LHV 3. Other health personnel 4. Dai 5. Relatives/ friends 6. Other _____ (specify) 7. No one	
152.	During last pregnancy, where did you have your delivery?	1. Government hospital 2. Dispensary 3. CHC/ Rural hospital 4. Primary Health Centre 5. Sub Centre 6. AYUSH hospital/ clinic 7. NGO/trust hospital or clinic 8. Private hospital/ clinic 9. On the way to hospital 10. At own home 11. At parents' home 12. Workplace 13. Other (specify)	
	→ In case of institutional delivery, go to Q. 153. **→ In case of other place of delivery, go to Q. 156**		
153.	What was the main mode of transportation used by you to reach the health facility for delivery?	1. Ambulance 2. Jeep/ car 3. Motorcycle/ scooter 4. Bus/ train 5. Tempo/ auto/ tractor 6. Cart 7. Foot march 8. Other _____ (specify)	
154.	Did you receive any government financial assistance for delivery care under Janani Shishu Suraksha Yojana (JSSY)/ State specific scheme?	1. Yes 2. No 3. Don't know	

155.	Did you stay for 48 hours at the hospital/ health centre at the time of delivery? **Go to Q.157**	1. Yes 2. No 3. Don't know	
156.	**→If delivery was not conducted at health facility** What were the reasons for not going to health facility for delivery? (Record all mentioned)	A. Cost too much B. Poor quality service C. Too far/ no transport D. No time to go E. Not necessary F. Not customary G. Better care at home ? H. Family did not allow I. Lack of knowledge J. Other (specify)_____	
157.	At the time of last delivery, disposable delivery kit/ Mamta kit was used.	1. Yes 2. No 3. Don't know	
158.	At the time of last delivery, baby was immediately wiped dry and wrapped without being bathed.	1. Yes 2. No 3. Don't know	
159.	At the time of last delivery, new sterilized blade was used.	1. Yes 2. No 3. Don't know	
160.	After your delivery, were any of the following done at least once? (Record all mentioned)	A. Advised for breastfeeding B. Advised for keeping the baby warm C. Advised for cleanliness at the time of delivery D. Advised for family planning for spacing E. Advised for family planning for limiting F. Advised for better nutrition for mother and child	
161.	How many days after your delivery did you have your first check-up?	_____ days 98. Check-up not done at all → **Go to Section P** 99. Don't know → **Go to Section P**	
162.	Where did you have your first check-up after delivery?	1. Government hospital 2. Dispensary 3. CHC/ Rural hospital 4. Primary Health Centre 5. Sub Centre 6. AYUSH hospital/ clinic 7. NGO/trust hospital or clinic 8. Private hospital/ clinic 9. At own home 10. At home, by nurse/ANM 11. Other (specify)	
163.	During the check-up, was your abdomen examined?	1. Yes 2. No 3. Don't know	
164.	Within six weeks of delivery, how many check-ups did you receive?	_____ times 99. Don't know	
P.	**Neonatal Care→ For women whose last delivery was a live birth. For others, go to END**		
165.	Did your child have any check-up within 24 hours of birth?	1. Yes 2. No	
166.	How many check-ups took place within 10 days of child's birth?	_____ times 97. Check-up not done at all 98. Child did not survive till 10 days 99. Don't know → **(If response is '0' or 97, 98, or 99, go to END of Interview)**	
167.	Where did the first check-up take place for your child?	1. Government hospital 2. Dispensary	

		3. CHC/ Rural hospital 4. Primary Health Centre 5. Sub Centre 6. AYUSH hospital/ clinic 7. ICDS Centre 8. NGO/trust hospital or clinic 9. Private hospital/ clinic 10. At home by doctor 11. At own home 12. At home, by Nurse/ANM 13. Other (specify)	
168.	Within six weeks of birth, how many check-ups did your child receive?	_____ times 97. Check-up not done at all 98. Child did not survive till 6 weeks 99. Don't know	
169.	When did you first breastfeed your child?	1. Immediately/ within one hour of birth 2. Within 24 hours of birth 3. 2 to 3 days 4. After 3 days 5. Never breastfed	
170.	Did you feed milk colostrum/ khees (yellowish thick milk) secreted during first few days after childbirth?	1. Yes 2. No	

END: Thank the respondent and end the interview.

Observation

_____
_____
_____
_____
_____
_____

WORKING PAPER

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
Phone: +1 919-445-9350
measure@unc.edu
www.measureevaluation.org

This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement AID-OAA-L-14-00004. MEASURE Evaluation is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill in partnership with ICF International; John Snow, Inc.; Management Sciences for Health; Palladium; and Tulane University. Views expressed are not necessarily those of USAID or the United States government.
WP-19-234