



Baseline Survey: Adolescent Health and Development Project in Bihar, India



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Background

In 2014, the Government of India launched a national adolescent health program known in Hindi as Rashtriya Kishor Swasthya Karyakram (RKSK). The RKSK program has an ambitious mandate, focusing on sexual and reproductive health (SRH), nutrition, violence and injury, noncommunicable diseases, mental health, and substance abuse. To address the SRH needs of adolescents, RKSK uses a multipronged approach that includes clinical- and community-based interventions, such as adolescent-friendly health clinics, peer educators, and adolescent health days.

With funding from the David and Lucile Packard Foundation, EngenderHealth initiated a two-year pilot project in January 2017 in eight blocks (administrative areas) of the Sitamarhi district of Bihar in order to enhance implementation of the SRH component of the RKSK program. EngenderHealth began the pilot with activities that aimed to strengthen adolescent-friendly health clinics in the target areas and then introduced community-level activities in 2018. At the community level, EngenderHealth identified, selected, and trained peer educators; established peer groups and conducted monthly peer group meetings; organized adolescent health days; and formed adolescent-friendly clubs in health subcenters.

EngenderHealth received a subsequent grant from the David and Lucile Packard Foundation in April 2019. This funding enabled EngenderHealth to further strengthen the aforementioned facility- and community-based activities and to advocate for the engagement of nongovernment organizations to support RKSK activities in other districts across Bihar. Additionally, at the request of the Government of Bihar, we expanded our adolescent-friendly health clinic to nine additional blocks. (Note, however, that we did not introduce other community-based activities in these additional nine blocks.)

In August 2019, EngenderHealth, in collaboration with the government of Bihar, implemented a baseline cross-sectional survey to measure SRH knowledge, attitudes, and practices among adolescents to help inform and guide future interventions. We have also planned to conduct an end-line survey in May 2020 and will use evidence from that survey to evaluate project achievements and to identify recommendations for expanding the program in the future.

Sample and Methodology

EngenderHealth developed the study protocol and obtained ethical approval from the Sigma Institutional Review Board. Our sample size estimates included a conservative baseline value of 50% and assumed a 10% difference between baseline and end-line surveys across key indicators, at 80% power and a probability of <0.05 for a type I error. resulted in a sample of 816 adolescent males and 816 adolescent females aged 15 to 19 ($N=1,632$). We employed a multi-staged sampling approach to recruit adolescent respondents with probability proportional to size sampling, using a quota sample of adolescent males and females. Data collectors used a household roster to identify potential adolescent participants and randomly identified one adolescent participant per household. After obtaining parental and adolescent consent, the data collectors interviewed the adolescent in a private space using a pretested, paper-based questionnaire in Hindi. We adapted a globally validated questionnaire that was designed to discuss SRH issues with young people for this purpose (Cleland 2001). The questionnaire contained 59 questions related to socio-demographic characteristics, relationship status, communication skills, information-seeking behaviors, SRH service uptake, and perceptions and attitudes regarding various SRH topics.

Study Findings

Background Characteristics

Table 1 summarizes the socio-demographic characteristics of our sample group. More than 95% of study participants were able to read and write. The proportion of all adolescent male and female participants currently attending school was 71.7% and 51.4% respectively; however, there was a notable decline in school attendance with age, particularly among male adolescents (84.6% among males aged 15–16, versus 58.3% among males aged 17–19). In contrast, the proportion of adolescents who had participated in paid work in the past year notably increased with age, particularly among male adolescents (5.3% among males aged 15–16, versus 22.9% among males aged 17–19). Very few participants—1.6% of adolescent males and 3.1% of adolescent females—were currently married at the time of the survey. While 43.4% of male participants owned a smart phone, only 10.3% of their female counterparts owned one.

Table 1. Selected demographic characteristics, by sex and age

Characteristic	Males			Females		
	15–16 years	17–19 years	All Males (15–19)	15–16 years	17–19 years	All Females (15–19)
	N=414	N=402	N=816	N=498	N=318	N=816
Can read and write	99.0%	98.5%	98.8%	93.8%	95.0%	94.2%
Currently attends school	84.6%	58.3%	71.7%	59.2%	39.1%	51.4%
Participated in paid work in the past 12 months	5.3%	22.9%	14.0%	1.4%	7.5%	3.8%
Currently married	0%	3.2%	1.6%	2.0%	4.7%	3.1%
Owns a smart phone	27.3%	60.0%	43.4%	7.4%	14.8%	10.3%

SRH Knowledge and Awareness

Table 2 demonstrates adolescents' knowledge and awareness of key SRH rights and practices.

The survey included two separate questions regarding knowledge of the minimum legal age of marriage for females (which is 18) and knowledge of the minimum legal age of marriage for males (which is 21). Most respondents were knowledgeable of the minimum legal age for females (72.4% of adolescent males and 80.6% of adolescent females); fewer respondents were knowledgeable of the minimum legal age of marriage for males (43.9% of adolescent males and 53.2% of adolescent females).

Less than half of all respondents (28.3% of adolescent males and 37.6% of adolescent females) knew where to obtain a contraceptive method. Furthermore, the most commonly cited sources of contraceptives (as identified by those respondents who knew where to obtain a contraceptive method) were government hospitals, private clinics, and pharmacies. Less than 10% of all respondents reported adolescent-friendly health centers as a source. With regard to knowledge of healthy birth spacing, 34.2% of adolescent males and 53.9% of adolescent females knew that the recommended interval before attempting a subsequent pregnancy after a live birth is at least 36 months.

General awareness of HIV/AIDS was higher among adolescent males (58.0%) than adolescent females (32.8%). With regard to knowledge around sources of HIV transmission, the most commonly cited source of transmission was unprotected sex with a person living with HIV (95.7% of adolescent males and 84.2% of adolescent females). Knowledge of other sources of HIV transmission was much lower among both male and female adolescents. Furthermore, a much lower proportion of all

adolescent males and females knew common signs and symptoms of other sexually transmitted infections (STIs) (9.4% of males and 26.2% of females).

Table 2. SRH Knowledge and awareness, by sex and age

Aspect of Knowledge / Awareness	Males			Females		
	15–16 years	17–19 years	All Males (15–19)	15–16 years	17–19 years	All Females (15–19)
	N=414	N=402	N=816	N=498	N=318	N=816
Knows the minimum legal age of marriage for:						
<i>females</i>	71.3%	73.6%	72.4%	82.5%	77.7%	80.6%
<i>males</i>	43.0%	44.8%	43.9%	55.4%	49.7%	53.2%
Knows a source for obtaining contraceptives	16.7%	40.3%	28.3%	35.7%	40.6%	37.6%
Knows that after a live birth, the recommended interval before attempting a subsequent pregnancy is at least 36 months	30.2%	34.6%	32.4%	49.2%	61.3%	53.9%
Is generally aware of HIV/AIDS	44.9%	71.4%	58.0%	28.7%	39.3%	32.8%
Knows common signs and symptoms of other STIs	5.1%	14.0%	9.4%	25.9%	26.7%	26.2%

SRH Beliefs and Perceptions

The survey asked each participant to answer “true,” “false,” or “do not know” to a series of statements. Table 3 shows the percentages of respondents who responded correctly to each statement, illustrating positive beliefs or attitudes. For many of the statements, less than half of all adolescents responded correctly. For most statements, more adolescent females responded correctly than adolescent males.

For the statement “the loss of semen does not lead to physical weakness in males,” only 9.4% of adolescent males and 17.3% of adolescent females answered correctly. Similarly, for the statement “Masturbation does not cause serious damage to health,” only 11.6% of adolescent males and 28.7% of adolescent females responded correctly.

Approximately half of all adolescents (including 45.0% of adolescent males and 54.2% of adolescent females) correctly responded to the statement “A woman can become pregnant the first time she has sex if she is not using any contraception.”

The statement “There are adverse effects of child marriage,” received the highest number of correct answers from both adolescent males and adolescent females and this was the only statement that was answered correctly by more males than females; 80.5% of adolescent males and 59.4% of adolescent females responded correctly.

With regard to beliefs about menstrual hygiene, a series of statements were asked whether “during menstruation, females should be allowed to” attend school or play, enter the kitchen, take a bath, or enter a temple or other religious space, and correct responses by adolescent males ranged between 27.7% and 37.4%. A slightly higher number of females answered correctly. Further, adolescent females reported using different types of sanitary protection, including disposable sanitary pads (53.8%), a piece of normal cloth (44.9%), and/or homemade menstrual pads (23.5%). Participants who had experience using disposable pads most commonly reported obtaining these pads from local grocery shops (71.1%) or pharmacies (31.2%).

Table 3. SRH beliefs and perceptions, by sex and age

Statement	Males			Females		
	15–16 years	17–19 years	All Males (15–19)	15–16 years	17–19 years	All Females (15–19)
	N=414	N=402	N=816	N=498	N=318	N=816
The loss of semen does not lead to physical weakness in males	10.1%	8.7%	9.4%	17.5%	17.0%	17.3%
Masturbation does not cause serious damage to health	10.6%	12.7%	11.6%	27.7%	30.2%	28.7%
A person with HIV can still look healthy	15.0%	21.4%	18.1%	31.5%	28.9%	30.5%
After a woman has had sexual intercourse for the first time, she can continue to grow physically	33.8%	45.5%	39.6%	49.0%	51.9%	50.1%
A woman can become pregnant the first time she has sex if she is not using any contraception	37.9%	52.2%	45.0%	52.2%	57.2%	54.2%
There are adverse effects of child marriage	75.6%	85.6%	80.5%	57.8%	61.9%	59.4%
During menstruation, females should be allowed to:						
attend school or play	26.1%	32.3%	29.2%	39.2%	45.0%	41.4%
enter the kitchen	34.5%	38.6%	36.5%	39.6%	47.2%	42.5%
take a bath	34.5%	40.3%	37.4%	42.6%	48.1%	44.7%
enter a temple/religious place	25.4%	30.1%	27.7%	50.4%	52.2%	51.1%

Discussing SRH Issues with Parents

Table 4 demonstrates adolescents' comfort levels for discussing health issues with their parents. When asked if they felt comfortable talking to their mothers about health issues, nearly all male (90.8%) and female (98.6%) adolescents responded affirmatively. However, only 64.8% of adolescent males and a mere 7.3% of adolescent females responded that they were comfortable talking to their fathers about such issues.

Table 4: Comfort level in discussing health issues with parents, by sex and age

Parental Focus	Males			Females		
	15–16 years	17–19 years	All Males (15–19)	15–16 years	17–19 years	All Females (15–19)
	N=414	N=402	N=816	N=498	N=318	N=816
Comfortable talking to father	62.9%	66.9%	64.8%	7.4%	7.3%	7.3%
Comfortable talking to mother	89.7%	92.0%	90.8%	99.6%	97.1%	98.6%

Preferred Sources of SRH Information

Table 5 demonstrates adolescents' preferred sources for SRH information. Both adolescent males and females preferred to receive this from a family member (41.3% and 59.6%, respectively). Adolescent males and females ranked the remaining options differently. Most adolescent males preferred friends (37.9%) as a secondary option, followed by other sources not named (9.1%), then school teacher (8.7%), and finally peer educator (1.6%) or accredited social health activist (ASHA) (1.5%). Most adolescent females instead preferred an ASHA (15.7%) as a secondary option, followed by friends (13.1%), then other sources (6.7%), and then finally teacher (2.7%) or peer educator (2.3%).

Table 5: Preferred source of health information, by sex and age

Source of Information	Males			Females		
	15–16 years	17–19 years	All Males (15–19)	15–16 years	17–19 years	All Females (15–19)
	N=414	N=402	N=816	N=498	N=318	N=816
Family Member	43.2%	39.3%	41.3%	60.6%	57.9%	59.6%
Friends	31.2%	44.8%	37.9%	13.1%	13.2%	13.1%
ASHA	1.9%	1%	1.5%	16.9%	13.8%	15.7%
School Teacher	11.1%	6.2%	8.7%	2.2%	3.5%	2.7%
Peer Educator	2.2%	1%	1.6%	2%	2.8%	2.3%
Other(s)	10.4%	7.7%	9.1%	5.2%	8.7%	6.7%

Conclusion

The baseline study demonstrated knowledge gaps and persistent misconceptions among all adolescent groups surveyed, irrespective of age or sex. Therefore, any interventions meant to complement or support the RKSK program should focus on increasing knowledge and understanding of SRH topics, such as access to contraception, healthy timing and spacing of pregnancy, and STI awareness.

The data from this baseline study also highlighted the need to further analyze the impact of entrenched gender norms on adolescents' beliefs and perceptions related to adolescent SRH issues and related topics, such as menstruation, masturbation, and sexual debut. More specifically, as adolescent males and females demonstrated notable variations in their beliefs and perceptions, future programs will need to incorporate differentiated approaches for facilitating attitude and behavior change.

The data from this baseline study also suggest that future initiatives should be tailored to different age groups. While knowledge and belief data generally showed improvements with age (with a few exceptions), the survey identified important variations related to socio-demographic characteristics. For example, while 85% of adolescent males aged 15–16 and 59% of adolescent females aged 15–16 attended school, these percentage notably decreased with age—only 58% of adolescent males aged 17–19 and 39% of adolescent females aged 17–19 attended school. Therefore, while school-based outreach may be appropriate for younger adolescents, initiatives targeting older adolescents may need to extend beyond schools to maximize reach.

Similarly, findings related to phone ownership—particularly that less than half of all adolescent males and only approximately 10% of adolescent females own phones—suggest that mobile outreach campaigns that may be currently popular with donors and implementers (including the Government of India, which has recently launched an app for disseminating SRH messages digitally), may not be effective. In contrast, our findings show that family is the primary preferred source of SRH information and that nearly all—more than 90% of adolescent males and more than 98% of adolescent females—are comfortable discussing health issues with their mothers in particular. Therefore, approaches aimed at engaging mothers to ensure they are able to impart accurate information and promote positive health attitudes and practices may yield better results.

Reference List

Cleland, John. 2001. *Asking Young People about Sexual and Reproductive Behaviors: Illustrative Questionnaire for Interview-Surveys with Young People*. Geneva: World Health Organization.
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