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# BMJ Open Progress and challenges in implementing adolescent and school health programmes in India: a rapid review

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#### **ABSTRACT**

**Objectives** To review the overall planning, implementation and monitoring of adolescent and school health programmes currently implemented in India and determine if they are in alignment with the indicators for achieving universal health coverage for adolescents in India. Methods A rapid review, with key informant interviews and desk review, was conducted using World Health Organization's tool for Rapid Assessment of Implementation of Adolescent Health and School Health Programmes. Operational guidelines, reports and relevant publications (surveys, policy briefs and meeting proceedings) related to India's adolescent and school health programmes were reviewed. Key informant interviews were conducted in New Delhi (India) with senior officials from the health and education departments of the Government of India, representatives from the private health sector and civil society organisations. Data were analysed using World Health Organization's framework for universal health coverage for adolescents and summarised according to the key indicators.

Results Key informant interviews were conducted with 18 participants: four each from health and education department of the government, one clinician from private health sector and nine representatives from civil society organisations. Manuals and operational guidelines of India's existing adolescent and school health programmes were reviewed. India's national adolescent and school health programmes align with many priority actions of the World Health Organization's framework for delivering universal health coverage for adolescents. These programmes require strengthening in their governance and implementation. While adolescent health and school health programmes have robust monitoring frameworks, however, there is a need to strengthen research and policy capacity.

Conclusions Various national health programmes have targeted adolescents as a priority population. A better translation of these programmes into implementation is needed so that the investments provided by the government offer sufficient opportunities for building collective national action for achieving universal health coverage with adolescents as an important section of the population.

#### INTRODUCTION

Adolescence is a complex stage in one's life, with unique physical, cognitive, social and emotional facets that lay the groundwork

#### STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This study provides a comprehensive overview of the national adolescent and school health programmes in India with a focus on strengths and limitations in the planning and implementation of these programmes.
- ⇒ A robust methodology (desk review and interviews) has been adopted to triangulate the findings and synthesise the results.
- ⇒ Recommendations for further strengthening and scaling up of the adolescent and school health programmes in India that can be used as best practice for replication, have been discussed in this article.
- ⇒ A limitation of the study was that all government and programme officials interviewed were national-level representatives. State-level and regional-level programme officers and government officials were not interviewed for the study, thus in-depth state-level innovations have not been captured.

for adulthood.1 Many health and healthrelated behaviours acquired by individuals during adolescence continue to their adult lives.<sup>2</sup> Hence, promoting healthy behaviour during this phase and investing in adolescent health is key to national development. With less than a decade left to 2030, Universal Health Coverage (UHC) for the population is essential to achieve the Sustainable Development Goals (SDG), however, adolescents are often overlooked in various political agendas. Ensuring good governance, optimal coverage of adolescents through health programmes, good quality of service and avoidance of poverty due to health-related expenditure are some of the indicators of UHC.<sup>3 4</sup> While financial coverage is imperative for UHC, it should also be understood that UHC includes a range of health services, including health promotion and disease prevention.<sup>5</sup> Policies and programmes that prioritise adolescent health and well-being through their



preventive and promotive health services and adopt a multisectoral approach are important in achieving the SDGs.<sup>4</sup>

India has made a commitment to achieve UHC for its population. To achieve this, various policies and institutional mechanisms have been altered to increase coverage and access to health services. 6 The Government of India (GOI) introduced the Ayushman Bharat National Health Protection Scheme (also known as Avushman Bharat Scheme) in 2018, a flagship programme to achieve UHC in India. The GOI deems 'preventive and promotive health' as the cornerstone of the scheme.<sup>7</sup> A National School Health Programme has also been introduced under the Ayushman Bharat Scheme.<sup>8</sup> The programme includes health promotion and preventive activities to be conducted in supplementation to existing adolescent health programmes in India. In addition to the Ayushman Bharat Scheme, adolescents are targeted in programmes by various ministries and departments within the GOI at both national and state levels. This includes Ministries of Health and Family Welfare (MoHFW),9-14 Human Resource Development (MHRD - renamed to Ministry of Education), 15 16 Women and Child Development (WCD) 17 18 and Youth Affairs and Sports. 19 20 The current National Health Policy<sup>21</sup> also recognises schools as a site for primary healthcare and to deliver preventive, promotive and curative health services to the target population.

In India, with multiple programmes for adolescents' health and development, such efforts must align with the target population's priority needs and ensure UHC for adolescents. There is a dire need to evaluate the current adolescent and school health programmes to inform their status of implementation; assess their strengths and understand the existing gaps. This can help in developing recommendations for scale-ups that can be used as best practices for global or regional replication. Hence, this study was conceptualised to review the overall planning, implementation and monitoring of adolescent and school health programmes of India and assess their alignment with the indicators for achieving UHC.

#### **METHODS**

#### **Settings and sampling**

A qualitative study was conducted using key informant interviews (KIIs) and a desk review. KIIs were conducted in New Delhi (India) with senior officials from the health and education department of GOI, representatives from private health sector and civil society organisations (CSO). All participants were recruited using a 'snowball' sampling approach. Participants were selected based on their current position or nature of work in adolescent or school health programmes and asked for referrals for subsequent interviewees. Participants were sampled till no additional data was being reported by our study participants in context to the assessment tool used for data collection.<sup>22</sup>

#### **Data collection**

Data were collected during February–June 2019, using a tool developed by the World Health Organization (WHO) for assessing the implementation of adolescent health and school health programmes. This tool was used to collect data through semi structured interview with participants and from the desk review. The tool explored implementation status and components of various adolescent and school health programmes in India such as human resources, staffing structure, activities conducted, intrasectoral and intersectoral convergence, enablers, barriers and best practices.

Each KII was conducted by qualitative researchers (DB and NJ) accompanied by a notetaker (AB). Standardised protocol was followed wherein the study and its purpose were first introduced to the participant and prior permission to record the interview was sought from each participant. All interviews were conducted in English and the average duration of each interview was 50–60 min.

Desk review included reviewing national and regional surveys, policy briefs, meeting proceedings, relevant reports and operational guidelines related to existing adolescent and school health programmes in India.

### **Data analysis**

All interviews were recorded and transcribed verbatim. Data were analysed using WHO's framework for UHC for adolescents<sup>4</sup> and summarised according to relevant indicators (table 1). Data were indexed according to the identified themes and subthemes (ie, priority actions) after mutual discussion among authors (SB, DB and NJ).

Written informed consent was obtained from all the participants, who were assured confidentiality of their responses. All personal identifiers were stripped from the transcriptions of the recordings before data analysis. All data were stored using a password-protected folder.

#### **Patient and public involvement**

Patients or the public were not involved in the design or conduct of the study.

#### **RESULTS**

In total 18 participants were interviewed, eight of which were senior officials at national level of the GOI (four from health and four from education department), eight were representatives from CSO, one was a member of technical support unit of adolescent health programme and one was a clinician. Operational guidelines and manuals of Rashtriya Kishor Swasthya Karyakram (RKSK), Rashtriya Bal Swasthya Karyakram (RBSK), School Health Programme under Ayushman Bharat, National Tobacco Control Programme (NTCP), Menstrual Hygiene Scheme, Weekly Iron Folic Acid Supplements Programme, Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA), Kishori Shakti Yojana and National Programme for Youth and Adolescent Development were reviewed. Additionally, policy documents of Adolescence Education Programme,



	Indicators for priority action	Description	Rashtriya Kishor Swasthya Karyakram	School health programme (Ayushman Bharat)	Programmes with other ministries (WCD, MoYAS)
l.	Strengthen service deliv	ery across the sectors and platforms			
A	Prioritise adolescents in UHC benefit packages	Develop comprehensive, evidence-based adolescent health programmes and services responding to disease burden and needs, tackling a full spectrum of adolescent health issues including and beyond sexual and reproductive health.	$\checkmark$	√	$\sqrt{}$
В	Invest in education of health workers	Invest in the education of health workers, the public health workforce and other professionals, including leadership models, to improve the quality of and demand for adolescent services.	V	V	V
С	Implement legal frameworks	Implement legal frameworks that adopt a human rights approach and guarantee access to services in the best interest of adolescents, including those most marginalised and vulnerable	√	V	V
D	Develop and implement national quality standards	Develop and implement national quality standards for adolescent responsive healthcare services that are both technically sound and attractive to adolescents themselves.	V	-	-
E	Improve efficiency by codelivering or bundling health services	Improve efficiency by codelivering or bundling health services and information for adolescents and deploying interventions across multiple platforms such as health facilities, schools, e-health and community-based initiatives	V	√	V
F	Engage and act beyond the health sector	Engage and act beyond the health sector, addressing the broader structural, environmental and social determinants of adolescent health as a path for prevention.	$\checkmark$	$\sqrt{}$	$\checkmark$
II.	Improve governance-e	nhance financing			
G	Acknowledge the economic benefit of investment in adolescent health	Acknowledge the economic benefit of investment in adolescent health so that it is included in health spending considerations.	√	V	-
Н	Assess the impact of out-of-pocket payments	Assess the impact of out-of-pocket payments on adolescents and remove user fees or reduce costs accordingly	X	X	X
I	Cover all adolescents with mandatory, prepaid, pooled funding	Cover all adolescents with mandatory, prepaid, pooled funding for the health services that comprehensively address adolescent health needs	X	X	X
J	Increase spending of allocated budget for adolescent health	Increase spending on adolescent health by improving capacity in the states and districts, while strengthening the costing and budgeting of programmes	X	X	X
K	Include adolescent specific focus in UHC investment plans	Include adolescent-specific focus in UHC investment plans so that investments reach beyond domain-specific service delivery and include comprehensive provisions for adolescent health	√	V	
L	Ensure that financing and service delivery are designed so to 'leave no one behind'	Ensure that financing and service delivery are designed so that 'leave no one behind' by focusing on the needs of the most vulnerable and marginalised adolescents, reducing disparities driven by gender, sexual orientation, age, socioeconomic status, migrant status or disability	V	<b>√</b>	
III.	Through accountability,	research, monitoring and evaluation			
M	Engage adolescents in national and subnational policy, legislation and programme processes	Engage adolescents in national and subnational policy, legislation and programme processes through formal and informal mechanisms. Deploy technology and increase capacities of adolescents for a shared role in design, implementation, monitoring and evaluation	√	√	-

Continued



Table 1 Continued

	Indicators for priority action	Description	Rashtriya Kishor Swasthya Karyakram	School health programme (Ayushman Bharat)	Programmes with other ministries (WCD, MoYAS)
N	Monitor adolescent health	Monitor adolescent health and service coverage, quality and spending of budget through existing national data systems and surveys (eg, national HMIS, Global Youth Tobacco Survey and STEPS on non-communicable diseases risk factors) across different ministries.	√	X	-
0	Report regularly on adolescent health indicators	Report regularly on adolescent health indicators, with disaggregation by sex and age (10–14/15–19/20–24 years) and use the information to take public health actions.	V	V	-
P	Drive evidence-based programming, policy and resource allocation	Drive evidence-based programming, policy and resource allocation by identifying priority health needs of different adolescent groups and using the monitoring reports	V	V	Х
Q	Strengthen research and policy capacity	Strengthen research and policy capacity to increase understanding of health determinants, disease burden and evidence-based action specific to adolescent health	X	Х	Х

<sup>√:</sup> Indicator covered/included in the health programme.

National Youth Policy<sup>19</sup> and National Health Policy<sup>21</sup> were also reviewed. Analysed data and information obtained from desk review and rapid assessment tool<sup>22</sup> has been presented in three broad domains that are important for ensuring UHC—service delivery for adolescents, governance mechanisms and accountability, research monitoring and evaluation of adolescent and school health programmes (table 1). Each indicator within the three domains in the table is classified as: (1) covered/included in the health programme; (2) not planned for/covered in the health programme and (3) not relevant for the health programme (programme's objectives does not target that particular indicator). Indicators that are covered in the health programme may still have gaps and challenges in implementation. These are further discussed below:

#### **SERVICE DELIVERY**

### Prioritise adolescents in UHC benefit packages

The National Health Policy 2017<sup>21</sup> emphasises on the health challenges of adolescents and investing in their healthcare. GOI launched programmes and services that target adolescents and youth to ensure UHC. These programmes focus on providing information and services covering a spectrum of adolescent health issues, including but not limited to, sexual and reproductive health, nutrition, mental health, non-communicable diseases, gender disparity, substance misuse, injuries and violence. These programmes render services like counselling, health check-ups, immunisation, supplementation, provision of commodities, referrals and skill development.

## Invest in education and training of health workers and teachers

A cascade model for training is generally adopted, wherein master trainers of the programme are trained at national level who then further train the service providers at state, district and block level. The focus of the training is dependent on the strategic areas covered under each health programme. These trainings usually range from two to six days. Under the NTCP, a wide range of stakeholders, including the police, members of Food and Drug Administration, judiciary, academicians, students and media, receive training and are invited to tobacco control workshops on advocacy, laws and policies.

However, participants during KII reported various challenges like insufficient training duration, limited number of training sessions, lack of quality control measures and lack of uniformity in the training content. Significant variations were particularly noted in RKSK's Saathiyas or Peer Educators (PEs) training across states of India. 'This training duration might be insufficient to cover all components extensively' (Representative from MoHFW).

In the School health programme under Ayushman Bharat, the national-level trainings are being conducted jointly by MoHFW and MHRD. Teachers from each school are trained as Health and Wellness Ambassadors by block-level trainers, who then transact health promotion and disease prevention information to the students through interactive activities, every week. Training a large number of teachers and implementing the school programme through two teachers only and teachers' lack of time were considered some of the challenges in implementing the school health programme. 'We have more

X: Indicator is not planned or covered in the health programme.

<sup>-:</sup> Indicator not relevant for the health programme.

HMIS, Health Management Information System; MoYAS, Ministry of Youth Affairs and Sports; UHC, Universal Health Coverage; WCD, Women and Child Development.



than 8.6 million teachers and this is a huge number to be trained. Resources are always crunch' (Representative from Department of Education).

'There are a lot of government schools in rural areas which are manned by one or two nodal teachers only. So sparing those two teachers for five days training will itself will be a big challenge' (Representative from MoHFW).

#### Legal and policy provisions for adolescent health

Nationally, several policies pay adequate attention to adolescents and young people, including the National AIDS Prevention and Control Policy 2002,<sup>24</sup> National Population Policy 2000<sup>25</sup> and National Youth Policy 2014.<sup>19</sup> Several laws in India that protect adolescents including the Prohibition of Child Marriage Act 2006;<sup>26</sup> Article 15 and 39 of Part IV of the Constitution of India, Juvenile Justice (Care and Protection of Children) Act, 2015,<sup>27</sup> Child labour (Prohibition and Regulation) Act 1986,<sup>28</sup> Cigarette and other Tobacco Products Act 2003,<sup>29</sup> Mines Act of 1952<sup>30</sup> and Protection of Children from Sexual Offences Act, 2012.<sup>31</sup>

#### **Develop and implement national quality Standards**

Adolescent Friendly Health Clinics (AFHCs) were retained from the national adolescent reproductive and sexual health strategy of 2005 and subsequently launched under the RKSK in 2014 as part of its facility-based approach. The focus of the programme is on strengthening existing clinics at all levels of health system (primary healthcare centres, community health centres, district hospitals and medical colleges) by ensuring privacy and confidentiality, training of existing staff and dedicated counsellors, and provision of necessary commodities and equipment. Reported shortcomings included—unavailability of the appropriate cadre of counsellors and inadequate training provisions for counsellors to address sensitive issues like sexual and reproductive health (SRH), mental health and gender-based violence. Presence of AFHCs inside hospitals hinders adolescents from seeking these services due to lack of privacy. Lack of appropriate space, dedicated counsellors and lack of awareness about AFHCs were some additional reported barriers. Our counsellors are not capacitated to deal with sensitive issues like SRH, mental health, gender-based violence' (Representative from MoHFW).

#### Improve efficiency by using innovative approaches

Participants believed that RKSK is a comprehensive programme. Some states in India have exceeded others in the implementation of the programme through innovative methods. The reported innovative strategies ranged from e-learning modules for counsellors, Dashboards (decision-making tool), scorecard in the form of statelevel fact sheets, adaptation of the PE manual into flip books and comic books, district saturation model (implementing programmes in all blocks of the district), hybrid trainings (virtual and offline), 'Hand Held Projectors' for counsellors, mobile application to supplement the data

collection and installing vending machines in schools for the provision of sanitary napkins. 'Uttarakhand is the first state to provide counsellors with 'Hand Held Projectors'. We have seen that the counsellors download appropriate videos from YouTube and the internet and display them on projectors for groups of adolescents. This device assists them in using audio-visual informatics, even in low-resource settings' (Representatives from MoHFW).

'Punjab has put up sanitary napkins vending machine in schools. This approach relieves the Accredited Social Health Activists (ASHA) workers from distribution of the napkins' (Representatives from MoHFW).

The participants reported interactive activity-based learning using mascots, Peer Educator programme, question-box, role plays, folk dances, painting competitions and creative writing as best strategies and approaches for transacting health promotion messages and information to students. They also emphasised the need for regular sessions to impart health promotion knowledge. Involvement of religious leaders and community members was also suggested for a significant programme impact. 'At least, once a week transaction of important messages through activities, instead of a routine lecture should be done' (Representative from MoHFW).

#### Engage and act beyond the health sector

RKSK operational guidelines ensure convergence both within and outside the health department. These guidelines also state that convergence is required with the MHRD to provide informal education to out of school adolescents. Various programmes under the MoHFW and WCD converge to some extent for reporting on health indicators. These indicators are also used for monitoring other health programmes such as the 'Anaemia Mukt Bharat' (Anaemia free India).

However, despite provisions, limited inter-sectoral convergence has taken place during the implementation. Lack of knowledge and understanding among service providers at the state level and departments other than health, have led to poor participation by stakeholders in RKSK implementation. 'We always talk about 'convergence' in any programme. And convergence is missing in most of the programmes. The day we will have solid convergence, half of the implementation battles are won' (Representative from CSO).

# GOVERNANCE MECHANISMS OF ADOLESCENT AND SCHOOL HEALTH

### **Enhance financing**

In the RKSK, the budget is allocated in alignment with the needs on the ground. It covers the cost for adolescent health services, establishment of AFHCs, nonfinancial incentives for PEs, organising adolescent health days (AHDs) and hiring human resources (counsellors). It also covers costs associated with capacity building, programme management, 'Information Education and Communication' (IEC), 'Behaviour Change

Communication' procurement and new strategic intervention (eg, adolescent helpline). Such financial allocation is done under the National Health Mission. Most of the adolescent health activities under RKSK are budgeted within the umbrella of the Reproductive Maternal Neonatal Child and Adolescent Health (RMNCH+A) programme. However, there is no dedicated marking of funds for RKSK within RMNCH+A, and utilisation of funds depends on the state's priorities. 'We do not have separate allocations; it comes under RMNCH+A. There are no watertight compartments as there is no fixed percentage for RMNCH+A or adolescent health' (Representative from MoHFW).

States are required to implement the plan and use the approved funds, however, utilisation of funds varies in states across India. In the year 2018–2019, the annual financial commitment for RKSK was nearly US\$43 million or INR300 Crores. 'Most states of India have reported a utilisation of 60%, except for North-Eastern states, Himachal Pradesh, Jammu and Kashmir and Uttarakhand. For these states, 90% utilisation has been reported' (Representative from MoHFW). To overcome the underutilisation, a CSO representative suggested that advocacy should be done at the state to consider RKSK a high priority. 'Funds can also be stratified according to programme and the need of the state. Issues like Anaemia may not be a big public health problem in a particular state, but some other issue like Mental Health may be a major issue in that state.' (Representative from CSO).

A national committee has been established in school health programme under the co-chairmanship of MoHFW and MHRD, responsible for budget allocation in Programme Implementation Plans. National Health Mission provides funds for specific purposes like training of teachers and IEC activities. According to a participant from the MoHFW, approximately US\$100000 (INR70 lakhs) has been allocated per district for implementing the planned activities under the school health programme.

Provisions have been made by the Ministry of WCD to specifically focus on the health needs of adolescent girls. Funds provided to the state include provisions for adolescent girls' education, IEC material and service provision under various programmes such as SABLA.<sup>17</sup>

#### Accountability, research, monitoring and evaluation

In RKSK, adolescents have been involved in strategic planning but not in legislation, monitoring and evaluation of the programme. Organisations working with youth and adolescents were involved during the planning phase to seek their advice on adolescent health issues. Few organisations involved were United Nations Population Fund, WHO, United Nations Children's Fund and TARSHI (Talking About Reproductive and Sexual Health Issues). 'There were agencies who were working with adolescents, inputs from them were also considered at the point of formulating the policy. But I don't remember if any adolescents were present' (Representative from MoHFW).

Adolescents are involved as the means of delivering the information as PEs. Selection and retention of PE were reported as challenges. 'According to the operational guidelines, ASHA has to select PEs from the village but this is not feasible at the ground level'. 'The problem is that after you train them, and in one year they leave. You train another batch and then they leave. There's no permanent solution to this. They will grow up and they will leave even if they are in the same village' (CSO Representative).

Adolescents are also involved in AHDs and it encompasses activities like screening, counselling and referral to the AFHCs. As per the operational guidelines, AHDs are organised quarterly in a year, however, the frequency of organising AHDs is not uniform across states of India. 'AHD's are not organised and are not being properly implemented. There are some states that are doing it only once or they are doing it bi-annually' (CSO representative)

In addition to the government's efforts, various adolescent health programmes are being implemented by CSOs and non-government organisations. 'We educate the adolescents on various aspects like hygiene and sanitation, including hand washing. How to do and when to do, not to do open defecation, simple messages which we know they can adopt in everyday life and the practices which we know they can change. We are going to give them these messages.' (Representative from CSO)

In school health programme, adolescents are engaged as health and wellness messengers. Two adolescents from every class will support the Health and Wellness Ambassador in facilitating their class's initiative and activities. Apart from this, adolescents will also be involved in the AHD's in deciding the themes, in conducting activities and also in organising theme-specific school assembly.

### Monitoring of adolescent health programmes

National Rural Health Mission has an established system of monitoring through Health Management Information System (HMIS). However, RKSK includes a broad spectrum of issues, thus the existing platform was revised for monitoring and evaluation. HMIS collects information at the facility level (eg, footfall of adolescents at AFHC) and aids in assessing services utilisation. To promote HMIS data use, standard ready-to-use reports including national, state, district and sub-district level key indicators are being generated on a monthly, quarterly and yearly basis. Further, to improve HMIS data quality, scorecards and dashboards have been developed to highlight programme areas that need more attention.

# Reports on adolescent health indicators disaggregated by sex and age

In the reporting formats prescribed in operational guidelines of RKSK, segregated data is available by age (10–14 years and 15–19 years), sex (male and female) and schooling (in school and out of school). To assess the impact of the programme, data is available for specific strategies like referrals by PE (segregated by age and sex),



AHD activities (number of male and female adolescents attending AHDs, Body Mass Index screening and contraceptives received by adolescents) and AFHC data (total number of adolescent visiting AFHC, health problems reported by adolescents).

There are reporting formats prescribed in the operation guidelines of the school health programme under the Ayushman Bharat. Segregated data are also available for adolescents consuming Iron and Folic Acid and deworming tablets, attending dedicated sessions, screened under the RBSK and referred to AFHCs.

Under the school component of the NTCP, the Principal Secretary is responsible for constant monitoring and supervision of the programme. A 'Tobacco Control Committee' is formed at the school level, responsible for monitoring tobacco control activities. Through a specific reporting format, the NTCP programmes assess the number of schools and school-going children covered under the programme. <sup>13</sup> However, there is no linkage or convergence with reportings of the RKSK and School Health programmes, even on overlapping indicators.

#### **DISCUSSION**

With less than a decade left to achieve the targets set in SDGs, we must particularly shed light on the SDG 3.8, that is, achieve UHC, which includes access to quality healthcare services. In addition to diagnostics and treatment services, adolescent health provisions need to be inclusive of prevention and health promotion. The GOI can accelerate its progress in achieving the SDGs by committing to the needs of the adolescents by prioritising three interlinked areas—service delivery, financing and governance. In our study, we reviewed the existing adolescent and school health programmes in India and analysed their alignment with the priority action areas for achieving UHCs for adolescents.

India's national adolescent health programme or the RKSK was designed to be a comprehensive and ambitious programme.<sup>32</sup> Our assessment revealed that, so far, RKSK is underimplemented across the districts and states of the country and overall, underused by the adolescents. However, due credit should be given to the government for adopting innovative models and methods to facilitate better implementation of this programme. The government has involved non-government organisations and CSOs for implementing RKSK, to provide focused policy attention.

Various adolescent and school health programmes in India tackle a wide spectrum of adolescent health issues that go beyond sexual and reproductive health. The School Health Programme under the Ayushman Bharat Scheme covers 11 themes, for adolescents' comprehensive health and well-being needs. Health promotion has become an integral part of the curriculum of the school health programme in India. The education sector is seeking expertise from the health sector especially to include topics of health embedded into the curriculum to aim for more holistic development of the adolescents.<sup>33</sup>

In line with the comprehensive operational guidelines of the national programmes like RKSK, <sup>11</sup> School Health Programme, <sup>8</sup> SABLA<sup>17</sup> and NTCP, <sup>13</sup> strengthening their cohesive and coordinated implementation would better align the nation to systematically achieve UHC for adolescent health. Investing further in education and training of health workers and teachers will capacitate them to interact with adolescents and serve them effectively. Innovative use of information and communication technology platforms for delivery of training sessions will facilitate uptake by the health workers and teachers. Strengthening the involvement of adolescents in the planning, implementation, monitoring and evaluation of the programmes will encourage them to take ownership and use the health services to improve their health.

Adolescent health programmes have outlined indicators to monitor and evaluate the programme but this data needs to be robustly used for mid-course correction. The availability of strong data for adolescent health would help policy-makers place adolescent health on a higher priority and strengthen the national response. There is a dire need to prioritise research concerning adolescents to understand their behaviours and understand the scalability and effectiveness of the programmes being implemented. Furthermore, the outbreak of the COVID-19 pandemic in 2020 and the subsequent lockdown have led to all schools' closure across the country. The current situation highlights a need to revamp the programmes pragmatically to ensure their continuity in times of emergencies/epidemic so that the needs of the adolescents are met in an undisrupted manner.

This article provides a comprehensive review of all adolescent and school health programmes in India. Findings from the desk review were supplemented with the findings of in-depth interviews with key stakeholders working in adolescent health and school health programmes in India. All participants in this study, especially the government officials who were interviewed, were responsible for the national-level implementation of the programmes. Hence, a limitation of the study is that while this study provides a national-level perspective, in-depth information from grass-root level is missing in this study. Second, the study participants were recruited using snowball sampling, thus participants' years of experience was not considered as inclusion criteria. A further in-depth analysis is required to understand the financing of adolescent and school health programmes in India.

In conclusion, various national policies and health programmes have indeed targeted adolescents as a priority population. A better translation of these policies and programmes into implementation on the ground in India's states and districts is the need of the hour so that the government's investments offer sufficient opportunities for building collective national action for achieving UHC. With only a decade left for achieving the SDGs, we must strive to optimising the momentum to ensure that the health and development of the adolescents is the cornerstone for achieving an equitable and sustainable society.



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Patient consent for publication Not applicable.

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Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request. As per our Institutional's data sharing policy, prior approval is required from Research Management Committee (RMC) and principal investigator (PI) of the study. After Committee's approval on the request, deidentified data can be shared for publication. The raw data are archived at Institutional Research data Repository.

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#### **REFERENCES**

- 1 Patton GC, Sawyer SM, Santelli JS, et al. Our future: a Lancet commission on adolescent health and wellbeing. *Lancet* 2016;387:2423–78.
- 2 Lau RR, Quadrel MJ, Hartman KA. Development and change of young adults' preventive health beliefs and behavior: influence from parents and peers. J Health Soc Behav 1990;31:240–59.
- 3 The Lancet Child and Adolescent Health Group. Universal health coverage and the forgotten generation. Lancet Child Adolesc Health 2019;3:749 http://www.thelancet.com/article/S2352464219302998/ fullbext
- 4 Lehtimaki S, Schwalbe N. Adolescent health: the missing population in universal health coverage, 2019. Available: https://plan-uk.org/ sites/default/files/Adolescent Health UHC Report\_FINAL May 2019. pdf
- 5 World Health Organization. Universal health coverage (UHC), 2021. Available: https://www.who.int/news-room/fact-sheets/detail/ universal-health-coverage-(uhc)
- 6 Zodpey S, Farooqui HH. Universal health coverage in India: Progress achieved & the way forward. *Indian J Med Res* 2018;147:327.
- 7 Sharma NC. Govt launches school health programme under Ayushman Bharat, 2020. Available: https://www.livemint.com/news/ india/govt-launches-school-health-programme-under-ayushmanbharat-11581517583719.html
- 8 Ministry of Health and Family Welfare and Ministry of Human Resource Development. School health programme under Ayushman Bharat, operational guidelines, New Delhi, 2018. Available: http:// www.dnmurthy.com/go/opshp.pdf
- 9 Adolescent Health Division Ministry of Health and Family Welfare, Government of India. RKSK operational framework, translating strategies into programmes. New Delhi, 2014. Available: http://

- nhm.gov.in/images/pdf/programmes/RKSK/RKSK\_Operational\_Framework.pdf
- Ministry of Health and Family Welfare, Government of India. Weekly iron folic acid supplementation (WIFS) programme. Available: https:// nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1024&lid=388
- 11 National Health Mission. Rashtriya BAL Swasthya Karyakram (RBSK), operational guideline. Available: http://www.nhm.gov.in/images/pdf/programmes/RBSK/Operational\_Guidelines/Operational Guidelines\_RBSK.pdf
- Ministry of Health and Family Welfare, Government of India. Scheme for promotion of menstrual hygiene among adolescent girls in rural India, 2016. Available: https://nhm.gov.in/WriteReadData/l892s/ 61090433691481276612.pdf
- 13 Ministry of Health and Family Welfare, Government of India. National tobacco control programme: operational guidelines. New Delhi, 2015. Available: http://nhm.gov.in/NTCP/Manuals\_Guidelines/ Operational\_Guidelines-NTCP.pdf
- Ministry of Health and Family Welfare, Government of India. National mental health programme revised operational guidelines. Available: https://mohfw.gov.in/sites/default/files/ComprehensiveReport Part 2-83145794\_1\_0.pdf
- Ministry of Human Resource Development, Government of India. National education policy 2019 draft, 2019. Available: https://www.mhrd.gov.in/sites/upload\_files/mhrd/files/Draft\_NEP\_2019\_EN\_Revised.pdf
- 16 Ministry of Human Resource Development. Adolescence education programme. Available: https://mhrd.gov.in/adolescence\_programme
- 17 Ministry of Women and Child Development, Government of India. Rajiv Gandhi scheme for empowerment of adolescent girls - sabla, implementation guidelines, 2010. Available: https://wcd.nic.in/sites/default/files/2-sablaguidemar11.pdf
- 18 Ministry of Women & Child Development, Government of India. Kishori Shakti Yojana. Available: https://wcd.nic.in/kishori-shakti-yojana
- 19 Ministry of Youth Affairs and Sports Government of India. National youth policy, 2014. Available: http://www.rgniyd.gov.in/sites/default/ files/pdfs/scheme/nyp\_2014.pdf
- 20 Ministry of Youth Affairs and Sports, Government of India. National programme for youth and adolescent development scheme guidelines. Available: https://yas.nic.in/sites/default/files/NPYAD Scheme Guidelines 2014-15.pdf
- 21 Ministry of Health and Family Welfare Government of India. National health policy. New Delhi, 2017. Available: http://cdsco.nic.in/ writereaddata/National-Health-Policy.pdf
- 22 World Health Organization. Rapid assessment of implementation of adolescent health and school health programmes assessment tool, 2020. Available: https://apps.who.int/iris/bitstream/handle/10665/ 341483/sea-cah-40-eng.pdf?sequence=1&isAllowed=y
- 23 Ministry of Youth Affairs and Sports Government of India. National programme for youth and adolescent development: scheme guidelines, 2014. Available: https://yas.nic.in/sites/default/files/ NPYAD Scheme Guidelines 2014-15.pdf
- 24 Government of India. National AIDS prevention and control policy.
- 25 Government of India. National population policy, 2000. Available: http://nhm.gov.in/images/pdf/guidelines/nrhm-guidelines/national\_population\_policy\_2000.pdf
- 26 Government of India. The prohibition of child marriage act, 2006. Available: https://legislative.gov.in/sites/default/files/A2007-06.pdf
- 27 Ministry of Law and Justice Government of India. The juvenile justice act (care and protection of children), 2015. Available: http://cara.nic. in/PDF/JJ act 2015.pdf
- 28 Ministry of Labour and Employment Government of India. Child labour (prohibition and regulation) act, 1986. Available: https://clc. gov.in/clc/acts-rules/child-labour-prohibition-and-regulation-act-1986
- 29 National Health Mission, Government of India. COTPA 2003 and rules made thereunder. Available: https://nhm.gov.in/index4.php?lan g=1&level=0&linkid=459&lid=692
- 30 Government of India. The mines act, 1952. Available: http://www.dgms.gov.in/writereaddata/UploadFile/Mines Act, 1952.pdf
- 31 Ministry of Women and Child Development, Government of India. The protection of children from sexual offences act, 2012. Available: https://wcd.nic.in/sites/default/files/POCSO-ModelGuidelines.pdf
- Barua A, Watson K, Plesons M, et al. Adolescent health programming in India: a rapid review. Reprod Health 2020;17:87.
- 33 National Council of Educational Research and Training. Health and physical education. textbook for class IX. New Delhi, 2016. Available: http://www.ncert.nic.in/publication/Miscellaneous/pdf\_files/ iehped101.pdf