

Adolescents

The Problem

Adolescence (10 to 19 years) is the transitional period of physical, physiological and psychological development from puberty to adulthood. More than 1.2 billion people worldwide are adolescents; this indicates that roughly one in every six people is an adolescent. About 21 percent (243 million) of India’s total population is in the age group of 10 to 19 years (Census of India, 2011). This share is slightly lower at 19 percent (9 million) in Andhra Pradesh (AP). Adolescents face challenges like poverty, lack of access to healthcare services, unsafe environments, etc., and have specific needs that vary with gender, life circumstances and socioeconomic conditions. Adolescents face challenges like poverty, lack of access to healthcare services, unsafe environments, etc., and have specific needs that vary with gender, life circumstances and socioeconomic conditions.

With about nine million adolescents among its total population of 49 million, AP has one fifth of its total population in the age group of 10-19 years, offering a potential demographic dividend to the state’s economy.

In this study, the authors have analysed three key issues affecting the development of adolescents in Andhra Pradesh – high rate of child marriage, widespread anaemia among adolescent girls and mental health disorders.

Solutions

Interventions	BCR	Total benefit (INR crore)	Total cost (INR crore)
Delaying child marriage via direct incentives	3.0	4401	1449
Preventing anemia among adolescent girls	14.9	655	44
School based behavioral screening and further mental health services for the adolescents	2.4	296	122

Total costs and benefits are discounted at 5%

The full paper by **SD Gupta, Md Mahbub Hossain, Neeraj Sharma, PR Sodani and DK Mangal** of IIHMR University, Jaipur is available on www.rajasthanpriorities.com/adolescents

Delaying child marriage via direct incentives

The Problem

Andhra Pradesh has one of the highest child marriage rates in the country. As per National Family Health Survey-4 (2015-16), 33 percent of women in the age group of 20-24 years in Andhra Pradesh are married before 18 years - the legal age of marriage.

Child marriage poses huge social as well as economic costs. All major states and the Union government in

India have different schemes encouraging the protection and education of the girl child.

The Solution

The proposed intervention will provide incentives to households in rural areas in the form of a consumable on the condition that their girl children are not married before 18 years of age. The decision on the consumable can be taken by policy makers depending on local needs. The consumable is transferred at regular intervals in a year to the eligible household on the condition that the girl is not married off in this period.

This intervention aims to target around 4.5 lakh 14-year-old girls who are both in school and out of school and follow this cohort for next the 4 years till they reach 18 years of age.

It is proposed that this will be implemented through the Panchayati Raj Government by the department in charge of women and child development in the state.

Costs

successful program in Bangladesh. The direct cost of the incentive (household consumable) is the major component of the cost. This comes to around Rs. 2,903 per beneficiary, which is 2.4 percent of the state’s per capita income, for a total cost of Rs. 398 crores over four years.

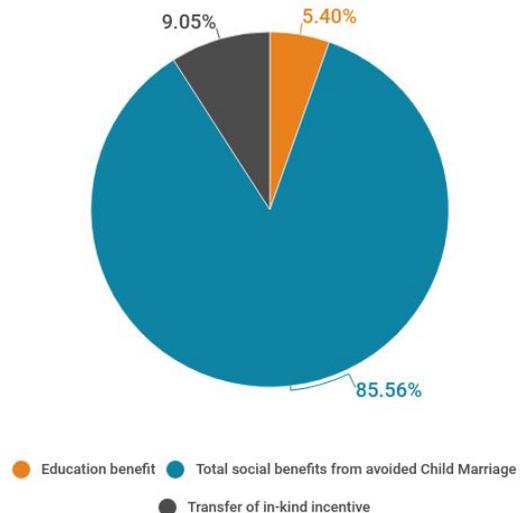
Reduction in child marriage also results in higher enrolment in schools. The marginal cost of education due to increased schooling resulting from the intervention is estimated at Rs. 23 crores. And lastly, the implementation cost of the program that includes transport, staff and other program-related expenses is estimated at Rs. 1027 crores. Total cost of this proposed intervention is Rs. 1,449 crores over a period of four years, applying a discount rate of 5 percent.

Benefits

The major benefit of the intervention arises from averted child marriages and associated benefits. The intervention is expected to reduce the child marriage rate from the existing 33 percent to 25 percent. This translates to around 37,500 fewer child marriages in the state in four years due to the intervention. The averted social costs of child marriage and incremental benefits in wages with increased years of schooling have also been factored.

Finally, the amount of incentives provided to each beneficiary within the program has been included, as this is a transfer and hence also a benefit for the household. The total of benefits from the intervention for one cohort amounts to Rs 4,400 crores after discounting at 5 percent.

Benefits from delayed child marriage



Preventing anaemia among adolescent girls through iron and folic acid supplementation

The Problem

At the current prevalence rate, more than 30 lakh adolescent girls suffer from any type of anaemia, of which around 80 thousand are suffering from severe anaemia. In Andhra Pradesh, the prevalence of anaemia among women aged 15 to 49 years is 60 percent, higher than the nationwide prevalence (NFHS-4: Andhra Pradesh, 2016). The immediate impact of iron deficiency is reduced physical fitness, which affects academic performance. In the long run, this affects maternal and child health and further increases the burden of the disease.

The District Level Household and Facility Survey 2012-13 has revealed that the prevalence of anaemia among adolescent girls in Andhra Pradesh is 69 percent. The requirement for iron increases in adolescence due to nutritional needs for growth. This requirement further increases for girls due to the onset of menstruation, making them more vulnerable to anaemia and posing a major threat to safe

motherhood in the future. Though there are existing programs that target adolescents, the larger focus for preventing anaemia has been on pregnant and lactating mothers, and infants and young children. Hence, the needs of adolescent girls may remain unmet.

The Solution

The proposed intervention aims to provide weekly iron and folic acid supplementation and biannual deworming with an aim of covering all adolescent girls aged 10 to 19 years. For school-going girls, the intervention will be implemented through the existing educational set up, where teachers can act as supervisors and spread awareness about the efficacy of this program. For out-of-school adolescent girls, monthly counselling sessions by healthcare providers at the community level will be conducted for awareness generation. This intervention is in line with the existing weekly iron and folic acid supplementation (WIFS) program.

Costs

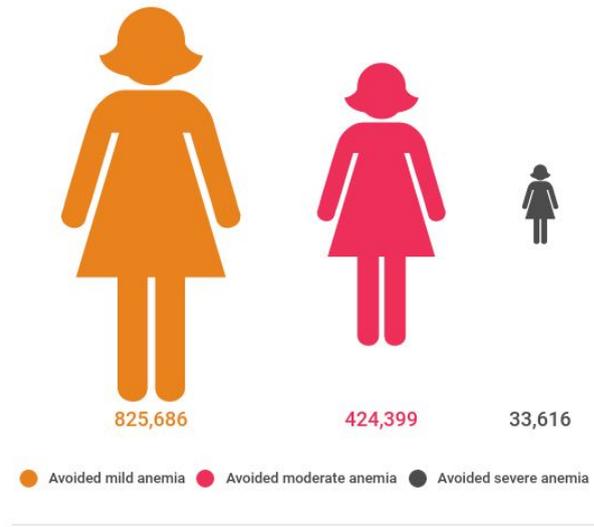
The costs of providing iron and folic acid supplements and of facilitating counselling sessions for the program are considered as direct costs. The opportunity cost of time spent by the out-of-school girls for attending counselling sessions has also been included in the cost and has been valued on the basis of the existing wage rate for the given education level in the state. Adding these two components, the total annual cost of the intervention is Rs 44 crore.

Benefits

The intervention is expected to bring down the prevalence rate from the existing 69 percent to 40 percent, a reduction of 42 percent- averting 13 lakh cases in the target group. The benefit from this intervention is the averted number of cases in different categories and the total value of averted YLDs after excluding the impact of side-effects suffered by some beneficiaries during the course of the program. The estimated total value of benefits per annum is Rs. 655 crores at 5 percent discount rate.

Total anemia cases averted

Anemia in adolescent girls averted due to the proposed intervention



School-based behavioral screening and further mental health services for the adolescents

The Problem

Adolescent mental illness is a growing area of public health concern and a leading cause of disability in young people around the globe. The National Mental Health Survey of India (2015-16) has reported that the prevalence of mental disorders is 7.3 percent among children aged 13 to 17 years in India, including depressive disorders (2.6 percent), disabilities affecting intellectual status (1.7 percent), agoraphobia (2.3 percent), autism (1.6 percent), psychotic disorders (1.3 percent) and phobic anxiety disorders (1.3 percent).

The prevalence among children in urban metros is nearly double (13.5 percent) compared to rural children (6.9 percent).

The Solution

This intervention will consider adolescents from classes VI to XII enrolled in both private and public schools, which roughly covers the 11-17 years age group of the state’s school-going population. It comprises screening the mental health status of

adolescents, referring them to appropriate care providers and treating them for respective disorders. The participation will be voluntary and require the consent of the adolescent and their parent or guardian. The screening will be carried out through a self-administered questionnaire based on three scales - mood and feeling questionnaire, youth self-report aggression scale and 3-point Likert scale.

The students screened positive for illnesses will be scheduled for clinical behavioural health evaluation. Positive cases found at that stage will be referred for specialized mental healthcare services with adequate follow-ups to ensure that the child is linked to a facility for proper treatment.

Costs

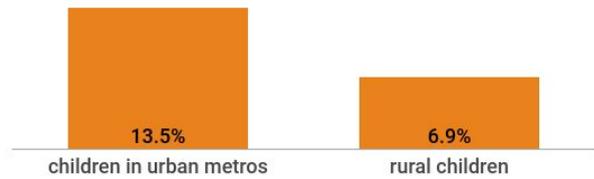
The cost of human resources dedicated to different stages of screening, material development and dissemination for the screening, and other costs related to the intervention are calculated. Additionally, the proportional cost for clinical assessment and to prepare the students for referral, cost for successful linkage to specialized care providers and the average cost of mental health services for each adolescent is calculated as the cost per beneficiary. The total annual cost of the intervention amounts to Rs. 122 crores at 5 percent discounting.

Benefits

The number of years of life lost (YLL) and years lived with disabilities (YLD) due to mental illness among the

adolescents is calculated from the Global Burden of Diseases data. Further, the number of averted YLL and YLD is calculated following the intervention and it is multiplied with the respective values of statistical life years and disability adjusted life. The sum of annual benefit for the intervention at 5 percent discount rate is Rs. 296 crores.

Mental disorders in the age group 13-17



Source: Authors paper National Mental Health Survey of India - 2016