PROJECT PROPOSAL FOR ESTABLISHING

KISHOR SWASTHYA PARMARSH SEVA KENDRA

(KSPSK)

Mobile Application, web site & Help Line Call Centre

National | Zonal | Regional | State | District Level

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Executive Summary

Adolescence is a phase of rapid growth and development during which physical, physiological and behavioral changes occur. They constitute more than 1.2 billion worldwide, and about 21% of Indian population. Morbidity and mortality occurring in this age group is mostly due to preventable causes. Young and growing children have poor knowledge and lack of awareness about physical and psychological changes that occurs during adolescence and the ill health affecting them. Existing Adolescent health programmes focus on rendering services like immunization, health education for sexual and reproductive health, nutritional education and supplementation, anemia control measures and counseling. Adolescent health programmes are fragmentary at present and there is no comprehensive programme addressing all the needs of adolescents. Access and availability of health care services are severely limited. Lack of accurate information, absence of proper guidance, parent's ignorance, lack of skills and insufficient services from health care delivery system are the major barriers. Interventions should focus on providing psychological and mental health services and behaviour change communication towards leading a healthy lifestyle, restricting advertisement related to junk food products, awareness creation about reproductive and sexual health, educating parents to prevent early marriage, teenage pregnancy and to counsel their children on nutrition and reproductive health. Universal coverage of Adolescent friendly clinics is highly recommended. To be cost effective, all health services addressing adolescent should come under single programme. This review is intended to create awareness among the stakeholders about the importance of strengthening adolescent health services in order to meet their felt needs.

Background

Adolescence is a period where there is huge window of opportunity to influence them to become a constructive force for social and economic transformation and contribute to the sustainable and inclusive growth.
At 253 million, India has the largest share of the adolescent population in the world. With a view to address the health and development needs of this age group which is 21percent of India's population, This project is proposed.
The health of the adolescents during this period is paramount to achieve this and the this project aims to achieve the same through a comprehensive package of strategies and intervention

Introduction

Adolescents are the young people aged between 10 to 19 y. It is a transitional stage of physical, physiological and psychological development from puberty to legal adulthood. Worldwide more than 1.2 billion are adolescents: this indicates that roughly one in every six persons is an adolescent [Table/Fig-1] [1]. About 21% of Indian population is adolescents (about 243 million) [2]. They are the future of the nation, forming a major demographic and economic force. They have specific needs which vary with gender, life circumstances and socio economic conditions. They face challenges like poverty, lack of access to health care services, unsafe environments etc. It is a period of preparation for undertaking greater responsibilities like familial, social, cultural and economic issues in adulthood.

Adolescent Health Problems

Adolescents are a group of apparently healthy individuals. The health status of an adolescent determines the health status in his/her adulthood. Many serious diseases in adulthood have their roots in adolescence. Also, many adolescents do die prematurely due to various reasons that are either preventable or treatable and many more suffer from chronic ill-health and disability. We can categorize the health needs of the adolescents broadly into three categories- physical, psychological and social. The main health issues faced by the adolescents include: Mental health problems, early pregnancy and childbirth, human immunodeficiency virus/sexually transmitted infection (HIV/STI) and other infectious diseases, violence, unintentional injuries, malnutrition and substance abuse.

Adolescents form a socially important segment of the population. Apart from physical health, a positive social health constitutes holistic health of the adolescents. Prevalence of sexual abuse, violence and physical abuse are increasing among the adolescents. For a long time, there was no organized system to govern and monitor the social needs of adolescents. The Committee on the Gopalakrishnan4Rights of the Child (CRC, WHO), published guidelines in 2013 on the rights of children and adolescents and issued guidelines on States' obligations to recognize the special health and development needs and rights of adolescents and young people. This has been further envisaged in WHO report in 2014 titled "Health for the world's adolescents" [3].

In India, data on adolescents from national surveys including National Family Health Survey III (NFHS-3), District Level Household and Facility Survey III and Sample Registration System call for focused attention with respect to health and social development for this age group. It has therefore been realized that, investing in adolescent health will yield demographic and economic dividends for India. In view of this, Government of India launched its first comprehensive programme for adolescents, 'Rashtriya Kishor Swasthya Karyakram', during January 2014 which has a sharp focus on adolescents' sexual health. The programme envisages that all adolescents in India are able to realize their full potential by making informed and responsible decisions related to their health and well-being [4].

Global Scenario

About 1.3 million adolescents died from preventable or treatable causes during 2012 as per WHO reports [5]. Road traffic injuries were the leading cause of death among adolescents [Table/Fig-2] [6]. About 15% of global maternal death occurs among adolescents girls [7]. The major causes for Disability Adjusted Life Years (DALY) in adolescents were given in [Table/Fig-3] [8]. Injuries and neuro-psychiatric disorders were the major issues in adolescents. There is an increasing trend in adolescent obesity due to great shift in diet and activity pattern [9]. Nearly 35% of the global burden of disease has roots in adolescence. Half of all mental health disorders in adulthood starts by 14 y of age, most cases are undetected and untreated [3].

In the South East Asian Region (SEAR), unipolar depressive illnesses in females, and road traffic injuries in males were the major health issues and it remains at the top throughout the years. AIDS has emerged as a third leading cause of DALYs in adolescents in the last decade [Table/Fig-4] [10]. These issues need to be addressed for the wellbeing of adolescents.

Problem Status in India

India has the largest adolescent population in the world. The decadal comparison of State wise distribution of adolescent population is shown in [Table/Fig-5][11].The distribution of percentage of adolescents among the top and bottom five States are shown in [Table/Fig-6][11]. There were few studies done on the prevalence of diseases and their risk factors and disease pattern among adolescents in these States. Some of the major health problems of adolescent population are briefly discussed below.

Adolescent's percentage in the top and bottom five States

Top Five State	% Adolescent	Bottom Five State	% Adolescent
Uttar Pradesh	24.5	Kerala	16.3
Rajasthan	22.9	Tamil Nadu	17.2
Uttarakhand	22.5	Karnataka	18.9
Bihar	22.5	Maharashtra	19.0
Jharkhand	22.2	Andhra Pradesh	19.3

Reproductive and Sexual Health

Adolescents have diverse sexual and reproductive health problems. Some of the important determinants of adolescent reproductive and sexual health are given in [Table/Fig-7]. As per NFHS–3 data, 2.7% boys and 8 % girls reported sexual debut before the age Statesof 15 and most of the sexual activity happens in the context of marriage, this leads to early pregnancy due to social pressure. Even though contraceptive awareness is 94% among girls aged 15–19, only 23% of the married and 18% of the sexually active unmarried girls in this group, used a contraceptive once at least [13]. All the three NFHS shows almost equal prevalence (59.1%, 59.8% and 58.2%) of pregnant and mothered adolescent and there is a steady increase in percentage of first pregnancy among adolescents (11.7%, 12.4% and 14.4 %). Early marriage and low contraceptive usage are the reasons behind this trend.

Reproductive and sexual health status of Indian adolescents

S. No	Factors	Male (%)	Female (%)
1	Sexual debut before the age of 15+	2.7	8.0
2	Contraceptive awareness (15-19)+	96.0	94.0
3	Ever used Contraceptives+	29.4	40.4
4	Condom used during first time+	19.0	3.0
5	Births by age 18 (2008-2012)*	-	21.7
6	Comprehensive knowledge of HIV among adolescents+	34.5	18.6
7	STI/ symptoms of STI in sexually active adolescents+	10.8	10.5
8	Prevalence of HIV among adolescents+	0.01	0.07

*UNICEF [12] + NFHS 3 [13]

The State wise adolescent fertility rates during the period of 2011 and 2012 are shown in the [Table/Fig-8] [14,15]. Adolescent fertility rates contribute 17% to the total fertility rate in India and about 14% of births in women aged below 20 were unplanned [2]. Early and unplanned adolescent pregnancies are highly prone for adverse pregnancy outcomes like eclampsia, low birth weight, early neonatal death and congenital malformation [16]. In addition, 34% of ever-married adolescent girls (15–19 y) reported that they suffered physical, emotional or sexual violence inflicted by their partner [2]. There is a remarkable decline in these rates as age of marriage raises. So, early marriage also carries the risk of subjecting girls to all forms of violence.

In India 19% girls and 35% boys had comprehensive knowledge about HIV/AIDS. Only 15% young men and women (15-24 y) reported that they received family life or sex education [2]. Eventually due to inadequate knowledge they are at greater risk of exposure to unprotected sex, unethical sexual practice and STIs. In the age group of 15–19 y, among those who had sexual intercourse, 10.5% of girls and 10.8% of boys reported having STI or symptoms of STI and 0.07% of girls and 0.01% of boys were found to be HIV positive [13]. The awareness regarding transmission of STIs is low among adolescents.

This, in addition to social stigma the diseases were often undisclosed, left untreated leading to complications like infertility, pelvic inflammatory disease and cancer.

Nutritional Health

Adolescents have increased nutritional requirements demanding diet rich in protein, vitamins, calcium, iodine, phosphorus and iron due to rapid growth spurt and increased physical activity. NFHS-3 data shows, in the age group 15–19 y, 47% girls and 58% boys were thin, 56% girls and 30% boys were anemic, 2.4% girls and 31.7% boys were overweight and 2/1000 adolescent girls and 1/1000 adolescent boys suffer from diabetes. They are also highly prone for eating disorders like anorexia nervosa or binge eating due to body dissatisfaction and depression.

Use of mass media is higher among adolescents (male 88.2% and female 71.5%) [12]. It plays an important role in habit picking and decides their lifestyle pattern. Its influence is clearly shown in a study from Chennai done in the age group 11 to 17 y reporting that, 90% eat either food or snacks while watching TV, 82% buy food products and snacks based on advertisement, 59% skipped outdoor activities for TV, 42% follows diet and 42% exercise to get the body like their favorite media personality [17]. Television viewing in childhood and adolescence is associated with overweight, poor fitness, smoking and raised cholesterol in adulthood [18].

Mental Health

Mental health problems are one of the most neglected issues among adolescent. Mortality and morbidity due to mental disorders in adolescents increased and topped in recent years. A study from Goa, among 16 to 24 y old, shows 3.9% of youths reported suicidal behaviours with females four times more prone than males. This suicidal behaviour is independently associated with factors like absenteeism, independent decision making, premarital sex, sexual abuse, physical abuse from parents and mental disorders [19]. In India suicide among adolescents is higher than any other age groups that is 40% of suicide deaths in men and 56% of suicide deaths in women occurred in 15–29 y of age [20].

The prevalence rate of child and adolescent psychiatric disorders in the community has been found to be 6.46% and in schools, it was 23.33% and the reporting systems of psychiatric disorders in children are found to be inadequate [21,22]. From the above studies it is evident that a considerable proportion of adolescent have mental health problems.

Accidental and Intentional Violence

In India, in 2001-03, deaths due to unintentional injuries constituted nearly 20% of the total deaths in 5–29 age groups [23]. About 77.5% of adolescents are at risky behaviours, ignores traffic rules leading to road-traffic accidents and deaths, as reported in a study from Delhi [24]. Sexual abuse is one of major problems faced by adolescent girls and boys equally. These problems mostly go unnoticed as the victim suffers in silence because of fear and social stigma. This indirectly affects the physical health, mental health and the academic performance [25].

Substance Abuse

Substance abuse is yet another serious issue as adolescents are ignorant about its consequences. NFHS–3 data shows, in the age group 15–19, about 11% of adolescent boys and 1% of adolescent girls had consumed alcohol, in that 3% consume it daily. About 29% boys and 4% girls use some kind of tobacco. The average age at tobacco use initiation was earliest at 12.3 y and alcohol usage at 13.6 y among adolescents [26]. About 11% of cannabis users were introduced to it before the age of 15 [2]. Initiating cannabis at this age is strongly associated with the development of Schizophrenia spectrum disorders in adulthood [27].

Challenges Concerning Adolescent Health

Though adolescence is usually a healthy period, several risk factors of adult diseases which begin in adolescence can be prevented with proper interventions during this period, though with challenges. Exclusive data pertaining to the adolescent health issues in Indian scenario is not available and hence we used the data pertaining to South East Asia Region for comparison in which India is a major constituent country. The data about important adolescent's health issues in different areas are limited. Hence detailed investigation and reports on adolescent's health issues is the need of the hour.

Reproductive and Sexual Health

From the studies done in the past, it is evident that adolescent have no proper knowledge regarding STIs and an educational intervention shows significant improvement in the knowledge level of the participant. At this age, curiosity about sexuality increases, they start showing sexual interest in opposite sex. Media also plays a major role in exposing them to sexually explicit materials which make them perpetrators of sexual violence.

Mental Health

In the past decade mental health problems have emerged as an important cause of adolescent morbidity. Alcohol use disorder and psychiatric problems are the important cause of Years Lost due to Disability [5]. Focus towards these problems in adolescent health programmes happens to be less when compared to Reproductive and Sexual Health. So it is essential to give equal importance to other key areas like mental health services and Behavioural Change Communication towards healthy lifestyle.

Nutritional Problems

Nutritional requirement are higher among adolescents than any other period of life. Inadequate diet intake at this age leads to stunted growth and delayed sexual maturation [42]. Lot of junk food products are promoted by celebrities with catchy advertisements leading to adaptation of unhealthy food habits. Media influences the diet and lifestyle among adolescents and leads to nutritional disorders by making them sedentary and giving false hopes. Habits like dieting and exercising inspired by a media celebrity cannot be taken as a positive impact, often they do it in an incorrect way and consume low quality protein supplements without proper guidance which may lead to complications like renal failure. Instead of taking balanced diet they starve and end up in anorexia nervosa. These issues can be reduced by routine screening and nutritional education.

Substance Abuse

Habits like smoking and alcoholism have lifelong impact and potential to cause health problems like coronary heart disease and diabetes in adulthood. Even though there is legal restriction, alcohol and tobacco products are available generously for under-18 age group. Primordial prevention from substance abuse with strict enforcement of law can prevent occurrence of such diseases. A study done in Chennai reported that parental substance abuse and lack of parental supervision leads to adolescent substance abuse [43]. Parents must know their responsibility and take every effort to monitor their children activities and should set a good example to their children.

Road Traffic Accidents

Road traffic injuries emerged as a leading cause of death among adolescents. Rash driving, driving without license, drunken driving and use of mobile phones while driving are factors associated with road traffic injuries in young drivers. This can be prevented by strict enforcement of law and by conducting awareness campaign targeting adolescents insisting the need for following safety rules.

Challenges in Parenting

Parents have greater responsibility in guiding their children but due to cultural barriers they neglect to talk about physical and physiological changes, in consequence of this, growing children learn about sexuality and secondary sex characteristics from their peer groups or other inappropriate sources leads to abnormal social behaviour. Most of the children's psychiatric disorders were unidentified because of parent's ignorance and negligence.

Challenges in Existing Adolescent Health Services

With so many programmes available, the services have not reached the target group adequately because resources like materials, money and man power are limited. There is no direct access, space for privacy and ideal timing (restrictions in days and time) for the target population. Service providers are not given proper training. For the health care providers it is usually an extra burden because no man power has been allotted separately for adolescent health services. Adolescents have little knowledge about the need of health services. They are scared of revealing personal issues to another person and getting examined by opposite sex health worker. So they themselves act as major obstacle for the services to reach them.

Though Adolescent Friendly Health Services (AFHS) based adolescent clinics are said to address all the health needs of adolescents, the delivery of services mainly targets reproductive and sexual health and all other issues are not adequately focused. Even with this great focus on ARSH, NFHS data shows no significant decrease in adolescent pregnancy. In fact there is an increasing trend in first pregnancy in adolescent and the birthrate in the age group 15 to 19 y is still 31.5 per thousand adolescent girls, which is high for the efforts and inputs given by the health system [15].

Adolescent health services are not comprehensive, so many schemes exist but these schemes were placed under different ministries and some of the schemes provide the same services as others which may result in unnecessary duplication. In 2014 Ministry of Health & Family Welfare (MoHFW), launched a comprehensive programme (Rashtriya Kishor Swasthya Karyakram), but similar services provided by MoHFW and other ministries are not going to be terminated. To avoid such confusions and to be cost effective, all the services for adolescents should come under a single programme. It is also essential to develop a screening tool specific for Indian adolescents. This has been already implemented in United States by National Adolescent and Young Adult Health Information Centre, University of California [44]. Innovating such tools based on our requirements can be very useful in diagnosing diseases and to search for and eliminate any risk factors as early as possible.

Having critically analyzed the problems and the services for the adolescents two questions arise in our minds: Are we going in the right direction? Is it enough to deal with the target population alone? To address this current scenario, we should consider redefining our approach; the target population should include elders like parents and teachers also in defining, planning, implementing and evaluating specific programmes for adolescents.

Approach:

Prior to launching of project, various advertisement campaign will be started about the KSPSK in all soft of digital, electronic & print media.

There will be an Approach to connect adolescent digitally as well as through telephone to subject experts of their physical, mental, social health etc. A mobile application will be developed for adolescent and experts of various domains of adolescent health will be made available on it.

Adolescent after registering them on the application can search various experts after going through their profile according to their problem.

They can communicate with their experts through chat, call & mail and seek solutions for their problem experts of various domains of A.H. will be registered on the application after gives through their experience & communication skills by our team. For these beneficiaries whom do not have their own smart phone or are unable to use this application due to any reason a dedicated call center will be established at company office and team of various subject experts will be hired on salary basis to responds to various problems of adolescent after being referred by call center people.

The way almost all adolescent of service are will have access of subject expert of their problems.

Coverage :

The new adolescent health (AH) strategy focuses on age groups 10-14 years and 15-19 years with universal coverage, i.e. males and females; urban and rural; in school and out of school; married and unmarried; and vulnerable and under-served.

Objectives:

1. Improve nutrition
1. Reduce the prevalence of malnutrition among adolescent girls and boys (including overweight/obesity)
2. Reduce the prevalence of iron-deficiency anaemia (IDA) among adolescent girls and boys
2. Enable sexual and reproductive health
1. Improve knowledge, attitudes and behaviour, in relation to SRH
2. Reduce teenage pregnancies
3. Improve birth preparedness, complication readiness and provide early parenting support for adolescent parents.
3. Enhance mental health
4. Prevent injuries and violence
5. Prevent substance misuse
6. Address conditions for NCDs

Advantages of digital web application:

1. Wide coverage:

This digital approach gives universal access to all adolescents even out of service area of project, if he/she is able to communicate in English/Hindi.

2. Privacy Ensured:

To overcome hitch & shyness of adolescent in showing their problems, this approach ensures complete privacy as there is no need to reveal identity for seeking experts services.

3. Availability as per beneficiary convenience:

This approach makes beneficiary able to call/connect any doctor during service hours as per their convenience.

4. Experts Advice:

Experts advice counselling/ solution / advices will be provided by an expert of field with sufficient knowledge / experiences with good communication.

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KEY REQUIRMENT OF THE PROJECT WITH EXCEPTED COST AND EXPANSES

Basis of Presumptions

NO, OF WORKING DAYS	365 DAYS
NO. OF HOURS	8 HOURS PER DAY

LAND REQUIREMENT WITH CONSTRUCTION/RENT COST FOR OFFICE HEADQUARTERS

Land requirement with construction or rent for office headquarter Jaipur.

7000 Sqft either constructed or rented all expanses like security, maintenance, Electricity, cleaning, and other man powers etc. will be handled by the institution.

Vehicles

Office Vehicles (Innova) – 3 as per the showroom price approx. 75 lac.

Maintenance 10% of vehicles

Fuel cost & Insurance amount of vehicles(As per insurance company) will be bear by the institution.

WEB &App Portal Design and DEVELOPMENT

Technical Specification for Web App

Technology Stack Software	Product
Database Server	SQL SERVER 2014
Operating system	Window
Development Environment	Angular JS,HTML, DHTML, XML, Microsoft .Net Framework 4.5, Ajax, JS and jQuery, .net web API

Technical Specification for Mobile App

Technology Stack Software	Product
Database Server	SQLite
Operating system	Android,Ios
Development Environment	Android Studio,XCode,Swift,javascript

List of Members for the project for developemt

Designation	person	monthly	Yearly
Project manager	1	1.5 lac	18 lac
Team lead	4 2(backend)(2frontend)	4 lac	48 lac
Sr.Developer	4	4 lac	48 lac
Developer	4	2 lac	24 lac
UI/UX dev. and designer	3	1.8 lac	21.6 lac
Database Manger	4	1.8 lac	21.6 lac
Networking/IT	3	1.20 lac	14.4 lac
Tester - 4 - 2 Manual and 2 Automation		1.6 lac	19.2 lac
IN THIS +4 MEMBERS FOR REQUIRNMENT APPROX		3 lac	36 lac

Server Cost Estimation on own property

A dedicated server for Appx. 1 lac people per month.

	Per month	One year cost
Server setup : Dell PowerEdge R630 Server	2 lac	24 lac

Development Estimated Duration 10 moths and 2 month testing.

DEVELOPMENT PER MONTHS COST OF EMPLOYEES APPX

Total monthly cost of project with server	**22.9 Lac**
Total yearly cost of project	**274.8 lac.**
5 year estimated cost	**1374 lac.**

Payment mode in 4 installments.

1 payment	**2021**	**343.3 lac**
2 payment	**2022**	**343.3 lac**
3 payment	**2023**	**343.3 lac**
4 payment	**2024**	**343.3 lac**

1374 lac.

LIST OF MEMBERS FOR THE PROJECT FOR MARKETING

Designation	perso	Monthly	Yearly
Digital marketing manager	3	3 lac	36 lac
SEO,SMO,Google adword Executive	10(5 sr exp -5 mid-level)	6 lac	72 lac
Content writer	4	1 lac	12 lac
Video editor	3	1 lac	12 lac
Graphics Designer	3	1 lac	12 lac

Total monthly cost of project with server **12 Lac**

Total yearly cost of project **144 lac.**

5 year estimated cost **720 lac**

Payment mode in 4 installments.

1 payment 2021 **180 lac**

2 payment 2022 **180 lac**

3 payment 2023 **180 lac**

4 payment 2024 **180 lac**

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720 lac

LIST OF MEMBERS FOR CALL CENTER

TEAM LEADER	1	1 lac
SENIOR LEVEL	2	1 lac
EXECUTIVE LEVEL	25	10 lac

Total monthly cost of project with server **12 Lac**

Total yearly cost of project **144 lac.**

5 year estimated cost **720 lac**

Payment mode in 4 installments.

1 payment	**2021**	**180 lac**
2 payment	**2022**	**180 lac**
3 payment	**2023**	**180 lac**
4 payment	**2024**	**180 lac**

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720 lac

Month wise: Staff Pattern on contract Bases and Regular Bases.

FOR JAIPUR (RAJASTHAN)

Doctors (Specialist)	Person		Month	Yearly
Pediatrician	6	Regular bases	7.2 lakh	86.40 lakh
Gynecologist	4	Regular bases	4.8 lakh	57.60 lakh
Physician /Community Phy.	6	Regular bases	7.2 lakh	86.40 lakh
Psychiatrist	6	Regular bases	7.2 lakh	86.40 lakh
Psychologist/ Counselor	6	Regular bases	3.6 lakh	43.2 lakh
Sociologists	6	Regular bases	3.6 lakhs	43.2 lakh

Total monthly salary of doctors **33.6 Lac**

Total yearly cost of project **403.2 lac.**

5 year estimated cost **2016 lac**

Payment mode in 4 installments.

1 payment 2021 **504 lac**

2 payment 2022 **504 lac**

3 payment 2023 **504 lac**

4 payment 2024 **504 lac**

2016 lac

OFFICE EQUIPMENT: NON-RECURRING EXPENSE FOR JAIPUR

Laptop and WIFI modems	20 units	12.00 Lacks.
Desktop Computer	15units	8.00 Lacks.
Colour Printer with wi-fi and UPS	5 units	2 lacks.
Refrigerator	3	1.00 lacks.
Air Conditioner	5	3.00 lacks.
Coffee/ Tea dispenser	2	.55 lacks.
R.O units	2	.20 lacks
Power generator	1	1.00 lacks

TOTAL EXPENSE RS. 27.75 LAC

Estimated Budget total cost to implement 4857.75 lakhs

CONTINGENCY (15 % OF TOTAL BUDGET)