



**AN EXECUTIVE SUMMARY OF A Ph.D. THESIS
ON
DEVELOPING OF MARKETING STRATEGIES FOR ADOLESCENCE EDUCATION
IN GUJARAT, WESTERN INDIA**

**SUBMITTED TO
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA, VADODARA
TOWARDS PARTIAL FULFILLMENT FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY IN
MANAGEMENT STUDIES**

**UNDER THE GUIDANCE OF
DR. JAYRAJ D. JADEJA**

**BY
MOHANLAL D. JYOT
FACULTY OF MANAGEMENT STUDIES,
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA,
VADODARA – 390 002.**

AUGUST, 2005

ACKNOWLEDGEMENTS

I sincerely acknowledge the guidance received from my guide, Dr. Jayraj D Jadeja, Reader in Marketing and the invaluable inputs received from Professor (Dr.) G.C Maheshwari, Head and Dean, Faculty of Management Studies, The M.S. University of Baroda, Vadodara.

The adolescents and their parents have responded despite the time constraint during academic timetable and doctors from medicine fraternity cooperated to answer my queries. This study is completed with their support and co-operation only. I am deeply indebted to the principals and administrators of the schools for permitting me to conduct the study in their school in spite of their busy academic schedule.

I am thankful to many teenagers and parents who interacted through e-mail on my website www.teensnparents.com designed with the help of Vcan Technologies.

I would like to thank my wife Rama who helped in collection of data, particularly in the schools for “only girls”. I would also thank my son Tanmay who carried the complete data entry as well as Mihir who helped in statistical analysis and Alkesh in printing.

I like to acknowledge the support received from the management of IPCL and PDS, for permitting me for the study and use of library books. Also I sincerely acknowledge the support from the various departmental library authorities of The M. S. University of Baroda, Vadodara. Viz., Faculty of Management Studies (FMS), Smt. Hansa Mehta Library, Women’s Studies Research Centre (WSRC), and medical college, Vadodara.

I am also grateful to Lions Club of Baroda (Main) for providing responses through their participants of Skills for Adolescence (SFA) programme. I like to appreciate the work and co-operation of NGO's as well as government departments, working in the field of 'Adolescence Reproductive and Child Health', AIDS and 'Girl child'.

I thank Dr. Meena Gallaria, Chairperson, of the social entrepreneurship cell at Narsee Monjee Institute of Management Studies for arranging responses from the teachers.

I would like to acknowledge my sincere gratitude towards all the authors and researchers, whose research work was referred, which had provided me the valuable guidance in my research work. I also thank all the persons, who have helped me directly or indirectly in my research endeavor. Finally I thank almighty God for inspiring me and gracing me at all the stages of my research work.

Mohanlal D Jyot
August, 2005.

Developing of marketing strategies for adolescence education in Gujarat, western India.

Indian society is experiencing a change in its human resources development. Improving quality of life is the “*mantra*’. Globalization and modernization is a welcome concept, but not at the cost of our values and culture. Adolescent and peer groups lead their lives by transforming challenges into opportunities, transforming adverse and harmful practices in to productive ones, changing attitudes and values in family, community and society at large.

Adolescents of twenty-first century are geared up to face global family norms. The exchange of students brings exchange of culture and values. The development in telecommunication and IT brought the sea change in sourcing of information with a click. The lifestyle, the beliefs and values will get adjusted with social and economic changes.

The emphasis is on shaping the individual and social life through rational action. The development of body and mind during puberty; will last for lifetime. The reproductive maturity attained during these four to seven years will pave the way for happy and healthy life.

Sincere efforts are made to bring out the current status of awareness among adolescents and their parents about body and mind development during puberty. The marketing strategies suggested to impart complete knowledge of physical, emotional, social, intellectual changes through their preferred sources of information.

The objectives of this research can be summarized as under:

1. To study the onset of different physical changes with respect to transition from child to adult, among girls and boys.
2. To study the existing sources of information as well as preferred additional sources of information on reproductive healthcare and personality development.
3. To study the awareness about teenage products and reproductive healthcare issues.
4. To study the importance of life skills development among the target groups.

The study is divided into two parts. First part covers the secondary data research mainly from books and similar research work carried out, while second part covers the primary data research and the recommendations for marketing strategies for adolescence education in Gujarat, Western India. The chapters are divided to facilitate the reading as under:

Part - I

- Chapter-I Relevance of adolescence education in human development.
- Chapter-II Initiatives of Indian Government on adolescence education
- Chapter-III Adolescence changes: Physical, Emotional, Social and Cognitive
- Chapter-IV Service marketing of adolescence education

Part- II

- Chapter-V Research Methodology
- Chapter-VI Data Analysis: Adolescents, Parents, Teachers,
- Chapter-VII Synthesis, conclusions and recommendations for marketing strategies

I hope that the objectives set out for this study have been meaningfully achieved.

Chapter – 1 : Relevance of adolescence education in human development

The human development process continues and various learning theories proposed by renowned experts in social science field. The major theories briefly mentioned in earlier chapters were:

1. Psychoanalytic-which focuses on unknown emotions and drives.
2. Learning-which studies observable behavior
3. Cognitive-which analyze thought processes
4. Evolutionary-which considers evolutionary and biological under-pinning of behaviour.
5. Contextual-which emphasizes the impact of the historical, social and cultural context.

Today, most developmental scientists recognize that development goes on throughout life and studied scientifically as life-span development to include description, explanation, prediction and modification of behavior. Growth of body and brain, sensory capacities, motor skills and health are part of physical development. Change and stability in mental abilities, such as learning, attention, memory, language, thinking, reasoning, and creativity constitute cognitive development. A main task of adolescence development is the search of identity-personal, sexual, and occupational. Adolescents differ in sex, height, weight, and body build; in constitutional factors such as health and energy level; in intelligence and in personality characteristics and emotional reactions. Heredity, genetic endowment, inner and outer environment, and experiences influence the development process. The influence of family, neighborhood, school, community and society mould the personality. SocioEconomic Status (SES) including education, income and occupation relate to development. Culture influence on total way of life, including customs, beliefs, traditions, values, language, and physical

products- all of these passed from parents to adolescents. Details of references are provided in the thesis.

According to Piaget, the capacity of abstract thinking begins around age 11 and events of concrete things were no longer required as objects of thought. Adolescents can come up with new, more general logical rules through internal reflections. Vygotsky's theory emphasized the importance of social context. Their classroom theory had common features like active participation and acceptance of individual differences. Vygotsky's assisted discovery suggests that teachers guide adolescent's learning, tailoring their interventions to children's zone of proximal development, fostered by peer collaboration. Classmates with varying abilities work in groups, teaching and helping each other.

Around the period 1990s, the policy environment has begun to recognize the need to address the sexual and reproductive health needs of young people. Notably the Programme of Action of International Conference on Population and Development (PoA- ICPD) at international level and the shift away from targets towards a client-centered approach at the national level have had considerable direct and indirect consequences for programmes for youth. Adolescents have been identified as a priority group by UNFPA in the Sixth Country Programme (2003-2007). The UN Inter Agency Working Group on Population and Development (UN IAWG-P&D) comprising UN sister agencies have identified 'adolescents' as a thematic area and have been promoting adolescent development and Life-Skills Education (LSE). A document entitled 'Adolescents in India: A Profile', prepared by the IAWG-P&D (2000), has been used as reference material by the Working Group on

Adolescents for the Tenth Five-Year Plan, Government of India. UNAIDS is the main advocate for global action on HIV/AIDS working to prevent the transmission of HIV, provide care and support, reduce of the vulnerability of individuals and communities to HIV/AIDS and alleviate the impact of the epidemic.

Review of NCERT textbooks for schools was carried out. The textbooks were updated in 2004 and 2005 and the detailed material included in this new books on various subjects related to adolescence education is reviewed in the thesis. One can observe that the content of puberty changes as well as in which standard it is included. The layouts of textbooks have improved a lot. The font size of text matter is big enough now to read without strain. The placement of graphics, tables, diagrams and pictures are better and also colorful. It will be up to the teachers how they teach in the classroom to their students or give it as self-study lessons.

Personal hygiene including oral care, eye care, hair care, and community hygiene are covered in standard-VI science textbook. Hair care does not include pubic and underarm hair. Adequate details are covered, but mainly as advisory notes. The importance of all the good habits as described in the textbooks needs some motivation to practice. It will depend on teachers how they teach this lesson to make a permanent imprints on students' mind.

Human reproductive system is covered in standard VII science textbook. InVitro fertilization and Birth Control could have been in higher standards instead of in VII standard. Pubic hair

is not covered any textbooks. The journey of sperm up to ova could have been elaborated. Size of ova may be checked.

In Gujarat state, few schools follow a national level curriculum and examination system governed by Central Board of Secondary Education (CBSE). Other majority of schools in the state of Gujarat, follow curriculum developed by Gujarat Secondary and Higher secondary Education Board (GSHEB). Review of school textbooks of Gujarat State Board as well as Central Board for the standards VI to XII was considered with respect to puberty and human reproductive system in the existing textbooks (Appendix-1.3.5). Moral science subject is not compulsory now, which was mainly on human value system as well as cultural and social ethics.

In the science textbook of standard VII, male and female internal reproductive system, as well as endocrine system is described. Again in the science textbook of standard IX, more details are provided. Menstruation details are given stating it starts in the age of 10-12 years. Here also like NCERT books menstruation could have been explained better in the standard VI or VII instead of standard IX for the benefit of majority of girls. Complete cycle of menstruation and its purpose could have been dealt further. Breast development is not described at all, although girls are conscious about their breast development. Pubic hair development and hygiene were not described at all. Gland, hormones and its functions are covered well.

The food nutrients, minerals are explained in X standard science textbook. The sexually transmitted diseases and public health education in general are also explained. In standard XI

biology textbook, chromosomes and sex formation of embryo is explained well. Testosterone and estrogen, the male and female sex hormones are described in detail in the biology textbook of standard XII.

Harmful effects of tobacco and alcohol were included in Health and Physical Education (HPE) Textbook of standard VI. Various posture and effects of *yogasanas* were detailed well in HPE Textbook of standard VI, VII and VIII. Also Concentration, attention and relaxation were explained well in VII standard. HPE textbook of standard VIII covered pregnancy, infant care and childcare in depth. Such details could have been given in higher standards.

The review of textbooks as detailed above suggests that more details needed on pubic hair, breast development as well as personal hygiene care. Also how the teachers in the school teach these subjects is more important. Life skills learning through participative projects as well as made compulsory for all the students or not will result into real learning. Peer educator concept as explained in earlier chapter in the school for better understanding as resulted in activities of many NGOs could have been experimented while teaching these sensitive issues.

The scout, guide, NSS and NCC activities contribute in building character, discipline, national integration, adventurism, and teamwork and leadership qualities. Many schools are not actively promoting these activities for their adolescents. It should be made compulsory, so that every adolescent can avail the benefit from these national and international agencies. Their activities are already designed for appropriate age group, so state government; school

authorities and teachers can be motivated to introduce compulsory participation in such activities of personality development.

Chapter – 2: Initiatives of Government of India for adolescence education

It will be seen from the above that the present policies address themselves to specific sectors like education, health, family welfare, nutrition, HIV/AIDS, sports etc. or address certain population groups like women, children and youth. None of the policies however take an integrated view for adolescents as a group. The right approach to adolescent issues need more focus in all the policies. Adolescents in difficult circumstances like adolescents with disabilities, learning disorders, adolescent sex workers or children of sex workers and street children need much more visibility in policies. Most State Governments follow central policies and even when they do have their own policies, they tend to rely heavily on the central policy thrusts and strategies.

The Department of Family Welfare through its Reproductive & Child Health Programme provided for maternal care, including safe motherhood and nutrition facilities, prevention of unwanted pregnancies, safe abortion facilities to all women. Adolescents get subsumed under the general target group of women. The atmosphere and environment within which these services are provided are not at all conducive for adolescents. Services are denied to unmarried adolescents as well as lack of privacy and confidentiality prevent adolescents from accessing these facilities. Adolescent boys in the RCH programme need specific attention.

It is observed that the age limits of adolescents have been fixed differently under different programmes keeping in view the objectives of that policy and programme. However, keeping in view the totality of adolescents and the characteristics of this age group, it is felt that it would be most appropriate to consider adolescence as the age between 10-19 years. The Tenth Five Year Plan should attempt to translate this policy into reality. The policy lays stress on providing youth with 'more access to the process of decision making and implementation of these decisions'

The policies of government of India were promoted through many Non- Government Organizations working in the field of adolescence healthcare areas.

The peer educator theory is very much accepted for adolescence education as experimented by many NGOs. "Doosara Dashak", the second decade of life, project implemented in the state of Rajasthan by the Foundation for Education and Development (FED) can be promoted in every districts for adolescence education. Report of the working group on adolescents for 'tenth five year plan' prepared for under planning commission, Government of India is quite helpful for policy decisions on adolescents. Adolescents as a group to be mentioned separately in all the developments scheme on education and health. Indian governments run many schemes for youth, woman, and child. The schemes are promoted for Reproductive and Child Health (RCH) as well as for HIV/AIDS control. Girl child is considered a priority in every scheme. Government efforts have resulted into overall increase in literacy rate from 18.3 % in 1951 to 64.8 % in 2001. The last decade literacy rate growth was good, 52.21 % in 1991 to 64.8 % in 2001. Female literacy rate increased from 39.29 % in 1991 to 54.16 % in

2001 compared to male literacy rate of 64.13 % in 1991 to 75.85 % in 2001. 14.87 % growth in female literacy during last decade compared to 11.72 % growth in male literacy rate (Census of India, 2001). Woman empowerment and girl child scheme have resulted into increase literacy growth rate among females.

The scout, guide, NSS and NCC activities contribute in building character, discipline, national integration, adventurism, and teamwork and leadership qualities. Many schools are not actively promoting these activities for their adolescents. It should be made compulsory, so that every adolescent can avail the benefit from these national and international agencies. Their activities are already designed for appropriate age group, so state government, school authorities and teachers can be motivated to introduce compulsory participation in such activities of personality development.

Chapter – 3 : Adolescence changes: Physical, Emotional, Social and Cognitive

Adolescence is generally considered to begin with onset of puberty, the process that leads to sexual maturity, or fertility or ability to reproduce. The term “Puberty” which is applied to period of physical changes for reproductive capability of boys as well as girls, derived from the Latin word, *Pubertas* meaning age of manhood. Puberty refers to first phase of adolescence during which reproduction apparatus matures. Adolescence starts from the age of about 11 or 12 years to late teens or early twenties. It goes through the interrelated development changes along with physical changes. Their emotions go up and down. The new social relationship builds up. The self-identity is searched. Adolescence is the social

construction. The physical, cognitive, social and emotional changes, which take place during adolescence age, are briefly described here.

Relatively small group are activist and participate in political issues, other majority of adolescents stay with mainstream. Adolescents pace of hectic modern life. They are leaning to live with uncertainty and ambiguity in many fields, but still they have neither activist nor dropouts. Adolescent strive for their independent identity in the society. The physical changes to make the human body capable of reproduction are the major ones affecting adolescence. The awareness on the physical development may help in their emotional and social behavior. The cumulative effect will be on their cognitive development result into career and personality development.

Chapter – 4 : Service marketing of adolescence education

Service marketing of adolescence education is the need of the hour. It is highly personalized and sensitive, so teacher or faculty trained in this may be required. The delivery system of this service will be a specialized one looking into the target groups: Adolescents, their parents and the teachers. The adolescence education also needs marketing channels suitable to Indian culture.

Physical product marketing is known well, but recent years have seen services importance too. The services are performances or activities, which cannot be seen or felt or tasted or touched like physical products. These intangible characteristics of services differentiate services from products. Services cannot be patented due to its heterogeneous nature, which is also the reason for its non-standardization. Services cannot be returned or resold; due to its

perishable nature; even its inventory is difficult. Mass production of services is not possible, but its production and consumption is simultaneously carried out.

Chapter- 5 : Research Methodology

Based on the literature survey for secondary data on adolescence education and services marketing, research methodology was designed. The objectives of the research were planned to materialize through research instruments like questionnaires for target groups: Adolescents, parents, teachers as well as interviews of doctors, school administrators, and education related authorities.

In Gujarat; there were about 11.13 millions adolescents between the age of 10 to 19 years (Census of India-2001). Considering the literacy rate in Gujarat at 70 %, around 7.79 million adolescents are going to school and college in the age group of 10 years to 19 years. In SSC examination, around 6.5 lacs students had appeared in the past (GSEB). There are around 22 lacs students in the VII, VIII and IX standards in Gujarat. As the real size of the target respondents is very large, only cluster sample is considered for the study. The total sample size about 0.25 % of total population was considered i.e. about 5000 nos. including adolescents, parents and teachers. It is observed that cluster sample comprising of 4000 nos. of students, 800 nos. of parents and 100 teachers will give us a quite a good representation for the explorative study

Majority of English medium schools were selected from Vadodara. Few schools were selected from other cities of Gujarat state. The schools were selected to arrive at proper representation

of different segments taking into consideration of their nature viz. co-educational schools, only Girls' school, only Boys' school and Residential school. Co-educational schools catering to middle class, upper middle class and rich class were considered. Government aided as well as non-aided (private management) schools were also considered. Gujarati medium schools were also considered. Interview was used to get the responses from the doctors consulting the adolescents in their respective professional field.

The researcher administered the questionnaire to students in the school classroom setting. The subject was introduced in the beginning and instructions were given for every question one after another, throughout the filling of the questionnaire. On an average it took 50 minutes to complete the filling of questionnaire by students. Researcher's wife accompanied to help student to explain the questions mainly to girl students. Although the subject of physical changes were sensitive and some giggling and whispering was observed initially.

The filled questionnaires of the students were collected immediately in the classroom after filling up. Parents' questionnaire was handed over to students, which were filled by their parents and returned to the class teacher in around a week's time. The researcher collected the parents' questionnaire subsequently. It was expected that response from parents might be poor in filling up and returning the questionnaire. Only around 25% of parents returned the filled questionnaire in spite of the reminders.

Few cities of Gujarat were also covered by the researcher namely Navsari, Surat, Amdavad, Rajkot. While in other cities of Gujarat, the class teacher was requested to administer the

questionnaire to the students due to time slot availability. Parents were not considered due to time constraints and administrative difficulty to gather them.

The subject was introduced in Gujarati language in Gujarati Medium schools. All the questions were explained in Gujarati language. The questionnaire for teachers and principals were administered directly by the researcher after introducing the subject. The time constraint was experienced at every school and also at least three to four visits could only get the filled questionnaires with great difficulty.

An interactive research and educational website teensnparents.com had been developed. A Window based data-entry software for multiple options as per the design of questionnaire was customized. The researcher had examined all the questionnaires for subsequent computer data entry. Few uncompleted questionnaires were rejected. Most of the data were legible enough for data entry operator. All the questionnaires were numbered and packed standardwise, schoolwise. During data entry also researcher remained present to help the data entry operator. The data were codified for the use of SPSS software for further analysis. It took more than two months for complete data entry, codification and validation. The administration of the questionnaires was the main time consuming process. Different statistical data analysis tools were used on the codified data entered in EXCEL as well as SPSS format.

Chapter – 6 : Data Analysis

Primary data from more than 4000 adolescents, 800 parents and 80 teachers were collected through structured questionnaires. The questionnaire were validated and codified to make compatible to run on the softwares. Different analysis tools as explained in earlier chapter were used to arrive at the analysis. The details are given as under. ‘Q-S’ is used for ‘Questionnaire for Students’, ‘Q-P’ is used for ‘Questionnaire for Parents and ‘Q-T’ is used for questionnaire for Teachers as abbreviation in the data analysis.

The selection of schools consisted of government schools; government aided private schools, non-aided private schools. Also high income, middle income and low-income group schools were considered to get wider representation. Six cities and one village of Gujarat were considered in the sample. Vadodara having the cosmopolitan culture a good distribution of students was obtained from schools based in Vadodara. 87.6 % of adolescents were from co-educational schools. The total sample of adolescents consisted of 56.2 % of boys and 43.8 % of girls. 20.2 % of adolescents were from Gujarati medium schools and 79.8 % of adolescents were from English medium. The total adolescents were mainly from standard VII- 14.7 %, standard VIII-37.2 % and standard IX – 45.2 %

Blood groups: Positive blood group had high percentage with O+ = 35.4 %, B+ = 32.3 % and A+ = 21.8 % totaling up to 89.5 %. The data on blood group is useful for emergency accidental cases among adolescents.

Body Mass Index : The body mass index suggested that 57.2 % of adolescents were underweight mainly in standard VII, VIII and IX. Overweight was 7.6 % and obesity was among 2.1 % of adolescents in the total sample. There is significant difference between mean weight of Boys and Girls. Boys are heavier by around 3 kilograms compared to girls of the same age.

Food products industry and experts in nutrition can focus their effort on these adolescents. Government schemes of providing Iron tablets every week to adolescents, mainly girls should sustain. Media help in promoting good health instead of slim and trim body image can drive the next generation for healthy body.

Knowledge of Teenage products : The knowledge of teenage products, which are used for the first time during adolescence age, was lacking.

Complete knowledge of Teenage products	
	%
Blade/Razor (Shaving)	15.4
Pimple Cream	15.0
Height Booster	24.3
Trimming Tiny Scissors	10.7
Girl: Brassiere/Bra	38.8
Girl: Washable Pad	40.5
Girl: Sanitary Napkin	44.6

Complete knowledge of teenage products as above suggests that scope of further awareness increase exists. Sanitary napkin awareness is the highest (44.6 %) among all the teenage products due to product promotion effort by the product manufacturers in the schools as

informed by girls and teachers during the discussion. Brassiere is not adequately promoted to the first time users.

Sources of information : The 'Mother' remains the prime source at number one for existing as well as future sources of information on adolescence education. For future sources other sources are listed as number two, which suggests that doctor, magazines, advertisement, other relation can play a crucial role in increasing the awareness on adolescence education. 'Friend' is at number two and number three position with respect to existing and future sources of information respectively.

Ranking for sources of information		
Sources	Existing Source Rank	Preferred Source Rank
Mother	1	1
Friend	2	3
Father	3	6
Book	4	4
Sister/Brother	5	9
Teacher	6	5
TV	7	7
Others	8	2
Internet	9	8

Assuming Others=Doctor+Magazine+Advertisement+Aunt+Counselor+Uncle and Sister/Brother=Cousin

This result show that educating the Mother as well as 'Peer Educator' will help in formulating marketing strategies on adolescence education. Television is the best media to educate and reach mothers through interactive talk shows. Study indicates current sources of information about physical changes are not in accordance with the preferred sources for same. The new sources of information are needed.

Sharing relationship : The study shows strong correlation between ranking of persons to share problem and that of person to share interests. Mother, friend and father are the nearest

relationship for sharing of adolescents' problems and interests. Parents and friends influence the emotional relationship.

Sharing relationship for interests and problems				
Sharing Relationship	Sharing % problems	Rank	Sharing % Interests	Rank
Mother	70.9	1	54.6	2
Friend	70.7	2	73.7	1
Father	34.1	3	41.5	3
Sister	31.6	4	32	4
Brother	21.5	5	30.3	5
Cousin	18.3	6	24.6	6
Grand Parents	10.9	7	10.7	7
Teacher	8.5	8	9.7	8
Other	7.1	9	8.9	9
Aunt	5.4	10	5.4	11
School Counselor	3.3	11	4	12
Uncle	3.1	12	5.9	10

Height increase : Cycling, Exercise, Pull ups, Diet and Jumping were the main five factors to increase the height of an individual in that order as per responses. Height is the one parameter, which can help in influencing the adolescents for exercise and diet. Proper communications connecting increase in height and exercise/diet can improve the health of adolescents.

Height increase		
Factors that Helps to Increase Height	Percentage	Rank
Cycling	57.2	1
Exercise	53.1	2
Pull-Ups	36.3	3
Diet	16.1	4
Jumping	11.3	5

Adolescents' interactions with father and mother : Test result suggests significant difference between Average Hour/Day Interacting with Mother and Father. May be due to difference in profession the time for interaction between father and mother have differed.

Important Factors in personality development :

Four extracted factors are as follow for importance in personality development:

1. Communication, presentation and self confidence Activity : Communication, presentation and self confidence activity involves Vocabulary, Communication Skills, Public Speaking, Competitive Attitude, Decision Making and Removal of stage fear.
2. Sport Activity : Sport Activity involves Morning Sunlight, Master A Sport and Regular Exercise.
3. Body Image Activity : Body Image Activity involves Good looks, Walking Style and Love your self.
4. Educational Activity : Educational Activity involves Education and Language.

Important factors in efforts made by adolescents for personality development:

1. Physical Health Improvement Activity : Physical Health Improvement Activity involves Doing Meditation \Yoga, Doing Regular Exercises and Expose to Morning Sunlight
2. Personality relationship Activity : Personality Activity involves Keeping positive attitude, Widening friend circle and Making own decision.
3. Participative team Activity : Participative team Activity involves Playing Sports Games.

These important factors in personality development suggest that if motivated properly life skills learning are possible. The teaching and learning module for the adolescents in formal or informal set up can be developed.

Feelings vs. Interaction of adolescents with father and mother :

Feelings vs. Interaction of adolescents with father and mother			
Feelings		Average Hour/Day Interacting	
		Mother	Father
Loneliness Among People	chi-square statistic	3.813	8.606
	p-value	0.923	0.474
I Am Not A Kid Anymore	chi-square statistic	8.753	10.326
	p-value	0.460	0.325
No One Understands Me	chi-square statistic	4.215	4.394
	p-value	0.897	0.884
Why, Always It Happens To Me?	chi-square statistic	14.547	10.288
	p-value	0.104	0.328
Urge To Talk To A Friend	chi-square statistic	20.173	9.254
	p-value	0.017	0.414
Discuss Personal Matters	chi-square statistic	16.878	8.371
	p-value	0.051	0.497
Irritated & Annoyed	chi-square statistic	6.673	5.863
	p-value	0.671	0.754
Need Privacy & Independence	chi-square statistic	6.336	8.466
	p-value	0.706	0.488

H10: Frequency of feeling of loneliness among people is independent to average time of interaction with mother

H11: Frequency of feeling of loneliness among people is not independent to average time of interaction with mother

H20: Frequency of feeling of loneliness among people is independent to average time of interaction with father

H21: Frequency of feeling of loneliness among people is not independent to average time of interaction with father

Conclusion:1 : Since, p-value is greater than the level of significance (0.05), there is no sufficient evidence against the null hypothesis to reject it. Thus, frequency of feeling of loneliness among people is independent to average time of interaction with mother. This means based on sample information one cannot assure frequency of feeling of loneliness among people is decreasing with increasing average time of interaction with mother or the other way around.

Conclusion:2 : Since, p-value is greater than the level of significance (0.05), there is no sufficient evidence against the null hypothesis to reject it. Thus, frequency of feeling of loneliness among people is independent to average time of interaction with father. This means based on sample information one cannot assure frequency of feeling of loneliness among people is decreasing with increasing average time of interaction with father or the other way around.

Overall conclusion similarly for other feelings are observed, since, p-value of chi-square test of independence between feelings and average interaction time with mother as well with father is greater than 0.05 (level of significance), except for feeling like Urge to talk to a friend and for discuss personal matter, shows the independence between the frequency of feelings and interaction time with mother and father.

Since, p-value of chi-square test of independence for frequency to discuss personal matter and average interaction time with mother is less than 0.05 (level of significance) indicates that these two events are not independent. Also, the same result is found in case of frequency to urge to talk to a friend and interaction time with mother.

The result shows that interaction of parents with adolescents and their feelings are independent. It is the age, which changes their feelings and emotions and result into change in behavior.

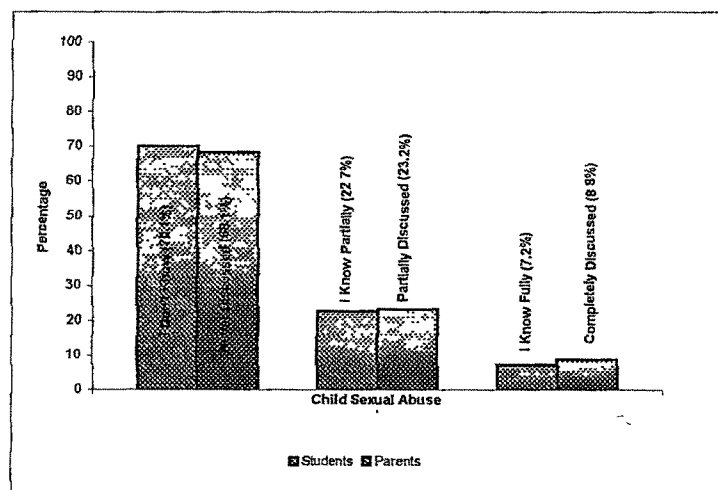
Awareness level on reproductive healthcare: The complete knowledge on various topics related to reproductive healthcare and related products seems inadequate as above and suggest that ample scope for the education. Inspite of various Government schemes on reproductive healthcare, and HIV/AIDS, the general awareness level is very poor. Also adolescent boys need education on their '*spermache*' similar to '*menarche*' for girls are promoted through various sources like NGOs, Product manufacturers.

Complete Awareness on reproductive healthcare	
Topics for Both Boys & Girls	I Know Fully %
Internal Anatomy Of Reproduction	9.0
Trimming & Shaving Of Pubic-Hair	8.4
Use Of Shaving Blade/Razor	13.0
Acne/Pimple Care & Treatment	10.3
Functions Of sperms And Ovary	13.4
Child Sexual Abuse	7.2

Topics for Boys	I Know Fully %
Wet-Dream Effect/Ejaculation	3.8
Testicles Development In Scrotum	6.6

Topics for Girls	I Know Fully %
Stages Of Menstruation Period	33.1
Purpose Of Menstruation In Your Life	22.2
Personal Hygiene Care During Period	30.4
Urinal Infections	9.2
Use Of Washable Pad/Cloth	28.6
Use Of Sanitary Napkin	31.2
Stages Of Breast Development	15.4
Selection Of Branian/Bras	16.4
Measuring Of Brassiere Size	11.5

Awareness on child sexual abuse : Child sexual abuse is a very sensitive subject and even parents have difficulty to discuss with their son/daughter. Daughters are at very high risk due to ignorance. Only 7.2 % of adolescent know this subject fully and only 8.8 % of parents have discussed the subject completely. The incidents of incest and molest are not generally reported due to fear or shame or ignorance.



Comfortable feelings and knowledge of teenage products: The strong association of knowledge about common teenage products and feeling of puberty changes observed by boys for shaving blade/razors, pimple cream, height booster and trimming scissors. While the girls feeling towards puberty changes and knowledge of teenage products like shaving blade/razor, pimple cream, height booster, trimming scissors and sanitary napkin observed independent relation. The knowledge of brassieres and washable cloth pad and comfortable feelings of puberty changes of girls observed strong association.

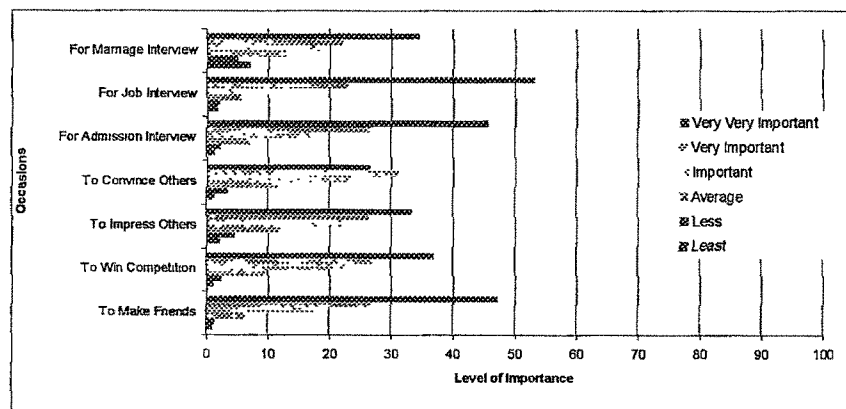
Common products knowledge comparison between boys and girls : Boys were having better knowledge on shaving blade and razors, height booster and trimming scissors. Girls were having better knowledge on pimple and acne cream. The standard wise comparison shows increase in awareness on teenage products, but remained far from complete knowledge. A gender bias prevails on pimple cream, mainly promoted for fairness and for females. Shaving similarly promoted for males and so girls are not much aware about shaving. Although for pubic hair as well as underarm hair even females do require the shaving razor and blades. Overall majority of adolescent boys and girls felt comfortable with puberty changes. Only 28.6 % were uncomfortable with all these puberty changes in their life

Extra curricular activities: The percentages of adolescents not participating in extra curricular activities are high except outdoor sports as seen above. School and tuition classes are taking much of the available time. Schools, for overall personality development; can plan adequate activities.

First notice of physical changes: The majority of physical changes occurred to adolescents are seen above as a cumulative percentage during standard VI and standard VII. Accordingly the knowledge may be imparted during VI and VII standard formally in the schools or informally by parents or through other sources.

First notice of physical changes		
First time notice of Physical Changes	Std. VII	Std. VI
Under Arm Hair	46.8	14.7
Pubic Hair	47.0	16.0
Pimple/Acne	40.1	15.0
Voice Change	48.8	20.7
Hair Growth On Legs & Arms	59.0	29.7
Body Odour/Sweat Change	46.2	20.7
Period/Menarche/Menstruation	17.3	4.2
Breast Bud Development	19.8	4.5
Body Curves/Buttocks Development	13.8	2.7
Mustache Hair Appearance	28.1	6.8
Beard Hair Appearance	19.7	5.2

Importance of personality development: The adolescent observed that personality development is very very important for job, admission and to make friends. A good career option play a important motivating factor and can be related with life skills learning.



Age period for personality development : The adolescents believed that personality development should take place in the age group of 11-14 years. 67.3 % responded in favor of 11-14 years of age group and 22.3 % favored 15-18 years of age group for personality development. The adolescent can learn life skills during their adolescent period through proper motivational communications and activities.

Parents on adolescents' personality development : Three extracted factors as per parents for adolescents' personality development are as follow:

- 1 Sports and arts activity : Sports and arts activity involves expertise in one art, regular exercise and expertise in one sport.
- 2 Public and group communications : Public and group communications involves public speaking and group discussion.
- 3 Self Attitude : Self-Attitude involves positive attitude and self-confidence.

Parents are also keen to develop the personality of their adolescent son/daughter. Motivation and awareness programme can help in increasing the awareness level.

Interaction by parents with adolescents : Test Result shows that since, p-value is less than 0.05 (in fact very near to 0), there is strong evidence against null hypothesis H_0 to reject it at 5% level of significance. Thus, there is significant difference between Average Hour/Day Interacting with Mother and Father. Mother interacts more than the father and can be more influential in adolescence education to son and daughter.

Age period or life skills learning : 54.3 % of parents responded that 11 to 14 years of age period is the best for adolescents to learn life skills to develop their personality, while 35.1 % suggested for 15 to 18 years of age. Parents will come forward to support activities related to life skills learning during adolescence.

Preferred sources of information on puberty changes : Books and magazines are the most preferred source for additional information on all the pubertal changes of adolescent as responded by parents. Second source is teacher except for physical changes doctors got the second rank. The test result shows that there is significant correlation between ranking of preferred sources of information for Emotional Changes and Intellectual Changes with ranking of preferred sources of all other Changes. That is, priority of sources of information for Emotional Changes and Intellectual Changes are similar with that of other changes. While there is no significant correlation between ranking of preferred sources of information for Physical Changes and that for Social Changes, which indicates there is significant difference between priority of sources of information between Physical Changes and Social Changes that is, they are not in same accordance.

First discussion on reproductive healthcare: 64.2 % of parents responded that mother should take first initiative to start the discussion on reproductive healthcare. Then after 16.5 % of parents suggested that the teacher should initiate such discussion. Mother has to be educated to impart the knowledge on reproductive healthcare.

Important factors in personality development as per teachers : H0: There is no significant correlation between students' responses and teachers' responses.

H1: There is significant correlation between students' responses and teachers' responses.

Correlations Coefficient (Spearman's rho) = 0.595 p-value = 0.120

Important factors in personality development as per teachers			
	Mean Rank		
Students' Response	Students	Teacher	Teachers' Response
Public Speaking	4.66	4.88	Public Speaking
Mastery In An Art	4.23	4.13	Expertise In An Art
Vocabulary	4.93	4.73	Vocabulary
Communication Skills	4.90	4.66	Elocution/Debate
Master A Sport	4.63	4.34	Expertise In A Sport
Regular Exercise	4.86	4.77	Daily Exercise
Removal Of Stage Fear	4.92	4.38	Stage Events
Positive Attitude	5.07	5.39	Positive Attitude

Conclusion: Since, p-value is greater than 0.05(level of significance), there is no sufficient evidence against null hypothesis to reject it. This indicates that mean rank of students' responses and that of teachers' responses have significant correlation. Also, positive rank correlation shows that students' responses and teachers' responses are in same accordance. Teacher as well as students gives similar importance to personality development attributes.

Three extracted factors are as follow:

- Competitive stage events
- Outdoor adventurous activities
- Self attitude

Competitive stage events involves stag events, elocution and debate and essay writing

Outdoors adventurous activities involve: outdoors sports, scout/guide training, outdoors camp

and trekking, expertise in an art and sport. Self-attitude and personal development involves vocabulary, self-confidence, positive attitude, public speaking and daily exercise. Majority of teachers (80.5)% responded that the participation in extra curricular activities have proportionate relationship with respect to intellectual and academic performances of the adolescents in the school.

Literature on parenting of teenagers : 18.6 % teachers responded that books on parenting of teenagers in Indian culture are adequate in English language by foreign authors. Overall response was mixed. Comparatively better literature and books available in English language. Books are needed on the subject for mass awareness, if possible in regional language.

Literature on parenting of teenagers										
Literature/Books For Parenting of Teenagers	English						Hindi		Gujarati	
	Foreign Authors		Indian Authors		Total					
	Count	%	Count	%	Count	%	Count	%	Count	%
Not At All	12	17.1	10	14.3	22	15.7	15	24.2	17	28.3
Very Less	16	22.9	24	34.3	40	28.6	24	38.7	24	40.0
Average	29	41.4	28	40.0	57	40.7	17	27.4	12	20.0
Adequate	13	18.6	8	11.4	21	15.0	6	9.7	7	11.7
Total	70	100.0	70	100.0	140	100.0	62	100.0	60	100.0

First initiation of discussion on reproductive healthcare: Teachers (68.8 %) strongly perceived that parents should initiate first, the discussion on reproductive healthcare with their adolescent son/daughter. Then after teachers (16.9 %) and Doctors (10.4 %) were considered for initiating discussion on this sensitive issue. The similar response on ranking is seen by

parents also. Parents have to be made comfortable on the subject as well learn techniques to initiate discussion.

First initiation of discussion on reproductive healthcare						
First Source of Information	Parents' Response			Teachers' Response		
	Frequency	Percent	Rank	Frequency	Percent	Rank
Parents	514	71.3	1	53	68.8	1
Teacher	119	16.5	2	13	16.9	2
Doctor	61	8.5	3	8	10.4	3
Media	14	1.9	4	3	3.9	4
Others	13	1.8	5	0	0	5
Total	721	100		77	100	

Based on above findings and inferences drawn, the marketing strategies are recommended for promotion and execution of adolescence education in Gujarat (Western India).

Chapter –7 : Synthesis, conclusions and recommendations for marketing strategies

The adolescence education is to be delivered with combination of tangible products as well as intangible life skills. The social service marketer will have to initiate activities that motivate the adolescents to act now, rather than late. The task here is learning life skills and understands puberty changes and inducing adolescents to perceive its values as a solution and satisfy of a need or want that was overlooked or avoided in the past. They represent new ideology or mindset, the assimilation of which can prepare the ground for widespread and more effective social change. The positioning of solution and designing as well as promoting tangible products like blade and razor, brassieres, camisole, washable pads, sanitary napkin and height booster are essential. Personal presentation and demonstration of tangible products through audio-visual equipments at informal schools or non-school settings can be arranged using the concept of “Closing the Sale”. The trainer, the presentation material and administering process play an important role in the success of adoption of new product and process. The adolescents are to be satisfied and motivated to accept the teenage product and advertise it to peers.

Designing the delivery system for life skills learning, where tangible products are not existing like communication skills, self-confidence, postures, public speaking etc. The communication media and physical environment of delivery place have significant role. The judicious use of manpower, machine, money and materials will optimize the complete model. Internet based information delivery system have following advantages.

- The distance between consumer and provider has become zero despite considerable geographic distance.
- The activity has become 24 hours 365 days of year.
- Interaction possible and even remains confidential.
- Access is easy quick and economic
- Financial transactions security available.

Use of superior technology for service delivery can enhance the reach. The audiovisual presentation with the help of computer and multimedia projector and portable sound system is the effective communication module. The presentation through overhead projector (OHP) using transparencies has become past. The pictures, graphics and video clips are extensively used. The compact Discs (CDs), CD Writer technology have completely over taken the presentation and education delivery system. The cost and time factor have reduced tremendously if one compare with the output it delivers. The new technology is very useful in social marketing delivery system and considered as under for adolescence education. The model is developed keeping following points in mind:

The Idea:

To learn life skills for personality development and make aware about puberty changes to adolescents.

Belief

- Life skills can be learned during adolescence. Nutrition can support growth during puberty.

Attitude:

- Informing adolescents on puberty changes will help in their body and mind development.
- Knowledge of reproductive sexual health will protect adolescents from child sexual abuse.

Value:

- Abstinence is the best to avoid HIV/AIDS and unwanted pregnancies.
- Puberty period is the best for body development.

Tangible Products:

- Shaving blade/razor for pubic and underarms hair for boys and girls.
- Shaving blade/razor for beard/ mustache for boys
- Camisole/Bra/Brassieres for girls
- Sanitary Napkins/Washable Pads for girls
- Books
- Exerciser
- Training institute
- Website

The marketing strategies for adolescence education are given as under:

A report for education department, Gujarat government : The school textbooks review as well as teachers and school authorities responses are considered to recommend that the

textbooks can be further reviewed to introduce reproductive health care and life skills learning in standard VI, VII, VIII and IX. The proper age for content can be decided as the initialization of different physical changes happening among them (Q-S-K). GCERT is preparing a pilot project to introduce similar educational module in the schools and this study can complement their efforts.

The school textbooks in Gujarat lack sensitization and education on gender violence and other forms of abuse and violence that exists in society, how they can protect themselves, right to legal redress and related rights with respect to medical examination. This needs to be woven into educational curriculum. Girls and boys need to get opportunities to discuss the prevalence of domestic violence in society, the health impact of violence and the importance of acknowledging the right to freedom from violence and all forms of abuse. This is closely linked to education on responsible sexuality and gender equality.

Due recognition of the importance of physical activities can be given, games, adventure sports and other recreational activities; in the overall health and development of adolescents. Enhancing the self-esteem of adolescents geared towards overall personality development - through fairs, competitions and other community based / school based activities. The participative activities of sports, art can be given due weightage in the evaluation system. The Scouts and Guide activities can be introduced in the schools and made compulsory.

A very important but often neglected area is that of Health Education. The formal school curriculum never looks at health in a holistic manner - relating the human body, its normal

functioning, disease and prevention, to causes of malnourishment, social deprivation, and even social beliefs and indigenous knowledge about health and disease. 'Learning situated in activity' shows that knowledge is not always formally taught, but is gained through practice. Lessons in school textbooks curriculum have to be taught in a participative way of teaching or as group project for better effect.

Efforts are required to generate awareness among policy makers, school authorities, etc. regarding the career guidance needs of adolescents. The high school must also be able to provide career and vocational guidance to students, through various means, such as career 'melas', booklets, discussions etc. as requested by students and parents in their discussion.

Investing in meaningful education of the youth and giving them a reason for hope and opportunities to develop, as responsible members of the community will pay rich dividends for society as a whole. The experience of several organizations that focus on innovative vocational education through short-term professional courses that promote serious 'hands-on' learning for youth is worth emulating. Learning in adolescence has a lot to do with motivation, interests, personal inclination and identity. Even in the context of formal schooling, adolescents show sharp preferences for those subjects or activities that seem to match their own identity, while many tend to dislike mathematics or sciences, which are viewed as 'distant' from life and human action. If adolescents find a subject uninteresting to begin with, they cannot muster enough motivation to personally relate to its content, and consequently their mind refuses to try to make sense of it

Books for parents, adolescents, and educators : Books are one of the sources of information for adolescents as well as parents. (Q-S-E, Q-S-N, Q-P-L, Q-T-I). Parents, teachers and peer educators can become a moving channel for the spread of adolescence education. “I am your customer, satisfying my wants – add personal attention and a friendly touch and I will become a walking advertisement of your services”. Viral marketing strategies through these three segments can generate the awareness faster and accepted better. The books planned, for increasing awareness with these three-target audiences.

Books for adolescents : Adolescents response on their awareness on teenage products (Q-S-F) and about reproductive health (Q-S-L) need support through appropriate books. Series of books on life skills learning and puberty changes under the main title name “Teens N Parents” can be recommended for publishers. Affordability, availability and readability will be kept in mind to arrive at the specifications of the books. The specification of the books will be as under:

Pages : 100 Nos. Maximum

Font Size : 12

Font Style : Arial Plain

Page Size : A/5

Contents : Text , Graphics and Pictures.

Price : Rs.50/- each

Language : English, Translation in 2nd Phase

Author/s : Social Scientist on adolescence and co-authored by Doctors from Medicine.

Distribution : General Book Shops

Online Selling from website www.teensnparents.com

School Libraries

Sale during educational workshops and seminars

Promotion : National launch by Teenage Celebrity, Book Review, Web Search and during

Competition Events

Translation of these books in Gujarati, Bengali, Marathi, Hindi, Tamil in 2nd Phase.

The subtitles of books can be as under:

Teenage products guide

Puberty changes

Unwanted Hair-care during puberty

Celebration for menstruation

Breast Development and Brassiere

Improving body image during puberty

Unspoken truth about masturbation and wet-dream

Postures for Personality Development

Listening and Communication Skills

Bone Development and Height

Build Self Confidence through Public Speaking

Pimple and skincare for teenagers

Friends, Romance and Marriage

Child Sexual abuse

Dad, Mom, Please listen to me! (Teens' real expressions)

Books for parents : Similar specifications for these books also under same main title of “Teens N Parents” with subtitle as under (Q-P-K, Q-P-L):

Understanding puberty development

Friends of teenagers

Child Sexual abuse

Dad, Mom, Please listen to me! (Teens real expressions

Books for adolescence educators : Books for educators will be more as a training guide based on their responses from the questionnaires (Q-T-A to G). It will also include participative games and role model paying techniques, so that the subject become interesting and adolescents learn through participation. Listening is difficult, but it is an art to listen to adolescents. Listen not only with ears, but with eyes too. The gestures and the body language speak many things, if eyes are trained to listen, which remain unspoken. Ask questions to continue the dialogue and show that the interested as well as to convey what you do not understand. When you don't see while listening, you are communicating that you are not interested. Trainers and educators of adolescents will have to sharpen the listening skill.

Talk-show/workshop for mothers : Mother is the closest and most sought after relationship and source of information to adolescens (Q-S-E, Q-E-N, Q-P-M, Q-T-II-B) The mothers of teenagers can come together for a “ Share & Care” meeting.

- A monthly meet of mothers on sharing and caring of teenagers will be adopted
- An informative audiovisual presentation followed by sharing of experience session and concluding by open house discussion.
- Total participants up to 50 Nos.

- Venue may be in the Community Hall, Schools
- Annual fees to meet the cost of event.

The Share & Care meet can be recorded in the form of “Talk show” and broadcasted on TV or Local Cable Channel with further live interaction over telephone with viewers in the afternoon. Mothers can read the books published on various topics.

Radio interactive talk show on adolescence education : Radio channels have very wide reach. *Vividh Bharti* and FM channels are popular. A weekly interactive talk show of half-hour duration on adolescence education can be produced centrally and promoted through various channels.

Mass media campaign through Slogans competition : Slogans competition targeted to adolescents in the schools can be arranged. It can be joint efforts with concerned teenage tangible products suppliers. One liner catchy slogans can be remembered easily and relate to the topic. The strategy is to initiate activities that motivate the adolescents to act now, rather than later (Q-S-A, Q-S-R).

“ Later is too Late, Act Now”

“ Menstruation is a Celebration”

“Shave, Do not hate pubic hair”

“Do not smoke your life”

“Domestic work is not child’s play”

Use of Internet and video conferencing : The modern telecommunication and information technology can be used for promotion of adolescence education. An educational website exclusively for teenagers to surf authentic information on body and mind development can be promoted. Video conferencing using broadband technology or satellite technology can reach difficult and distant rural areas also.

National launching of website www.teensNparents.com : The computer addict new generation can be reached through internet for such sensitive and personalized issues (Q-S-A, Q-S-I). A teenage celebrity can come forward for the national launching of educative and research website for teenagers and their parents. The website links can be provided through all the educational websites in India. The website can be adopted by any corporate house under their Corporate Social Responsibility budget for financial support.

Virtual class room using video conferencing : The adolescence education has sensitive and personalized issues. The expert teachers to teach such subject with confidence are not easily available. The exclusive subject teacher for adolescence education is not available at present. Video conferencing with adolescence educator at centralized station and virtual classroom facilities at different locations can solve the shortage of educators as well penetrate in rural and distant schools. Distant learning modules will serve the purpose well.

Product development and promotion : As explained earlier, tangible teenage products need proper positioning in the adolescents' market place to increase awareness (Q-S-F, Q-S-L). Few research and development work can be carried out on these products to make them

suitable for the huge market waiting for them. This study can help them in development and promotional activities.

Trimming and Shaving products for hair care : The body hair development is one of the major issues with adolescents. The fantasy of having the best body image gains momentum. The growth of hair on different parts of body needs adequate awareness through tangible products. The tiny scissors are available as a product, but it is not marketed to this adolescent for the use with pubic and auxiliary hair care. Brand name can be created and marketed to adolescents as additional shaving related products. Many adolescent boys and girls were unaware about trimming of their hairs in early adolescent age. "*Puberteens*" exclusive shaving razor with blades specially developed for shaving coarser and curly pubic hair and auxiliary hairs of teenagers. Its design does not get clog with long hair and can be easily cleaned under running tap water. Special colour to identify with teenagers, and priced very reasonably to suit teenagers pocket. The shaving razors are not targeted towards adolescents. Now only some colorful and trendy handles are being introduced in 2005. But still focused marketing to the early adolescent and for the application of pubic hair is absence in major suppliers.

Brassieres : The Brassieres is the worst attended product. The queries through email on website teensnpaents.com suggest that lot of research is needed to understand the changing body requirement of girls from 12 years onwards. The promotional activities to such a large group are absent. Communications are to be focused and educative to meet these first timers. Camisole or Braniyan can be branded and marketed through school education channel. Many

girls during focused group interviews and through email wanted additional information to experience the feeling of wearing this new product on their body. The awareness on measuring of size for brassiere was quite low among adolescent girls. The selection of fabrics and design also require focused marketing strategies to these young adolescent girls. The wearing procedure can be mentioned step by step with graphics for better understanding. “*Teenaaz*” brassieres specially developed and designed for teenage girls to take care breast development stage. It takes care of the variations in left and right breast development as well as the continuous enlargement during four stages of breast development. It takes care of sensitivity of early teenage with especially smooth cotton fabric to make them comfortable. Breast care and cancer related educational issues can be promoted with the teenage bra for greater awareness. The films and media are highlighting the importance of big breast and enhancement through proper brassieres/blouse. But real education remains away from these adolescent girls. Branded brassieres are also either not targeting these group or their communications are not focused.

Washable Menses Pads for teenage girls : In India, still old cloth of used clothes is used as washable menses pad. The product is not yet developed. It will be a totally new branded product for Indian adolescent girls. The colour and print can match in such a way that it avoids the embarrassment during of the pad in the house. It will be cheaper alternative for a mass market.

Sanitary Napkins for teenage girls: Sanitary napkins are available as a product by many national and international companies in India. The promotional activities are also targeted and

focused through school channel. The scope improvement prevails in their advertisement communications, which are still not direct and educative. Still use of sanitary napkin is kept secret in households and even retailer packs it in black bag before delivery. Such taboo can be removed fast by marketing attitudinal changes on menstruation. It should not be labeled as dirty and talked in whispers. The packs are not to be kept hidden in corner of the cupboard. This study can help in preparing right type of communication targeted for adolescent girls.

Height Booster Exerciser for teenage boys and girls : Height is the most important attribute for which the adolescents are concerned. The cycling, pull-ups and exercise are the most preferred way to increase the height as per the adolescents. The products can be targeted to the adolescents with height increase messages. An exerciser already available in the market, and based on acupressure philosophy, can be marketed to the adolescent group. This study can help in marketing their products appropriately.

Health checkup camps by Doctors/PHC/CHC : The body mass index as analyzed that around 57 % of the adolescent were underweight, that Half Yearly health check-up and creation of database on complete demography of students can be accomplished. The doctors from Primary Health Center and Community Health Center can arrange such camps in the schools (P-T-M). Alternatively schools can arranged such camps by availing services of medical professional from private sector. The database will be helpful in longitudinal study on the subject through study of the adolescent twice in a year on different parameters till he completes the school in late adolescent age. The healthy body mass index has to be achieved for healthy students. Nutrition supplement in required cases can be provided The data sheet is

placed at (Appendix-7.2.7) to reproductive health care and physical changes among adolescents in school.

The reproductive health awareness was poor among adolescents (Q-S-L). Educational service delivery and counselling programmes need to focus on anaemia, poor nutrition, general health issues, teenage pregnancies, recognising symptoms of violence and abuse, modes of transmission of reproductive tract infections, transmission of HIV virus and ways and means to protect oneself from exposure to sexually transmitted diseases. While separate programmes would have to be designed for girls and boys, it is necessary to educate boys on responsible sexuality and respect for the opposite sex. Official recognition of the need of married and unmarried adolescent boys and girls to receive reproductive health education and access to counselling and services is the first step towards planning appropriate strategies and programmes. This recognition stems from the fact that the health, nutrition and reproductive health information and services need to be separately designed for married and unmarried adolescent girls and boys. Doctors/PHC/CHC can take up five points action plan at school level as under:

- (1) Develop a national growth reference chart for adolescents
- (2) campaign on the importance of good nutrition in puberty phase of growth
- (3) Special campaign on the impact of poor nutrition on the health of young mothers and the impact on future generation of children;
- (4) Systematic campaign on iodine intake and minerals for growth;
- (5) preventive measures to reduce anaemia among adolescent girls;

Competitive events for awareness : Competitive event can be organized with focus on the adolescents and the life skills learning (Q-S-A, Q-S-B, Q-S-J). Teenage Club can be created within schools or community. VI standard to XII standard will be admitted in ‘Teenage club’. The age group will be further divided in to two groups. Young Teens with students studying in Std VI, VII, VII, IX and Big Teens with student studying in Std X, XI, XII. (Standard XI, XII are considered junior college in few states.) The club will run by the teenagers with guidelines specified by the teens N parents. Every ‘Teenage-club’ will have minimum 30 members and maximum 40 members. Young teens will get promoted to Big teens group as one enters in Standard X.

The meeting place can be School Premises, Terrace Venues, Garden Venues. The activities include Participative Games, Informative talks, Dance and Music, Rotational Library for magazine, books, CDs. Activities can be designed in such a way that teenagers are motivated to participate. Entertainment first and information later will be the principle. Competition Events (Debate, Group Discussion, Article Writing) on the topic related to personality development, body image and pubertal changes finalized in consultation with target adopters.

Peer education programmes of a number of non-governmental organisations have demonstrated the value of reaching out to adolescents through their own peer group. Exploring opportunities for integrating peer education on health and nutrition could be a valuable addition to existing programmes for adolescents. One strategy found very effective in the case of adolescents is extensive Group-work and Discussion, through which their collective learning reaches significantly higher levels than what each one would have

individually achieved. Indeed, many educationists now view learning not as an individual struggle, but rather as a collective endeavor, through shared experiences and cooperative peer interaction. Moreover, adolescents need more opportunities for collaborative learning, contrary to the present competitive environment.

NCC/ NSS/ Scout& Guide : As explained earlier, the national and international agencies working on Scout, Guide, NSS and NCC can become part of school curriculum (Q-T-II-A). The principal and school authorities also expressed to incorporate such group activities. If possible it may be made compulsory to reach to every adolescent. The adventure, friendship, leadership, teamwork and discipline can be cultivated through such activities. National Integration Camps - There is already a rich experience of large camps for youth, with a component of living together, working together and learning together. Enduring relationships are said to have formed in these camps and young persons are known to have overcome the differences of caste and religion. Such camps need to be better funded and extended to adolescents. Promote activities to help adolescents acquire trans-cultural experience during vacation stay at other schools in other states.

Wide ranges of activities, which can be described as adventure, also need emphasis. Adventure involves love for nature, exploration, physical endurance, risk taking and an attitude to engage in these activities for the sheer joy of it. Unfortunately, the obsessive preoccupation with examinations and the confinement caused by TV has taken away the inclination for adventure among the bulk of youth and adolescents. Few opportunities for adventure activities are available to rural people. What we need are organised adventure

programmes, preferably planned and organised by adolescents themselves. All that an official agency might do is to provide discreet funding. Organisations and individuals engaged in promoting adventure among adolescents should also be recognised and provided necessary funds. Relief in natural calamities: Earthquakes, floods, cyclone and droughts have caused vast devastation in different parts of our country. Adolescents' groups should be enabled to play an appropriate role in disaster management and relief.

Skills for Adolescence: SFA/Interact: Researcher has experienced the difficulty in implementing the SFA programme in few schools as well as at non- formal set up. Skills For Adolescence (SFA) programme need support of corporate and government to reach to every adolescent. Even Interact activity similar to 'Teenage Club' explained above can be supported. Lions Club and Rotary Club financially support these two programmes, so further promotion can be easily made.

School counselor or external counseling : The parents and teachers responded that adolescence and more so the puberty period need special care. They are as such not equipped with the information and communication skills as observed during their discussion and responses (Q-P-K, Q-P-M, Q-T-B). Counselling from "the cradle to the grave" became more important during the process of development and growth of adolescents when they are usually either in school or college or out of school as 'drop-outs' and 'left-outs'. As described in review of literature and NGOs work, counseling needed for:

- (i) Physical development and health on food & nutrition, psychosomatic ailments, general health, physical exercises, body image etc.

- (ii) Academic related on concentration, time-management, examination phobia, memory, study habits, etc.
- (iii) Family related on understanding, sharing and security within the family. Time, love and attention given for decision making
- (iv) Psychological related on stress, nervousness, lack of confidence, anxiety, etc.
- (v) Social related on friendship, sharing relationship, and coping with sexual drives
- (vi) Emotions related on anger, depression, loneliness, insecurity and feeling of guilt etc,
- (vii) Finance related on cost of education, health, recreation, entertainment etc.

Counseling helps to deal with the developmental process as per age, culture and environment. It changes the disruptive deviations by alleviating normal anxieties and fears. It helps in removing confusion and improves understanding of the cause and effect relationships more clearly. Counseling must provide appropriate information in a non-judgmental way, ensuring confidentiality and privacy. If the psychological needs of an adolescent are not met, it could have emotional consequences affecting his/her mental, social and emotional behaviour. An adolescent goes through an identity crisis, resulting in multiple maladjustments. Counseling can be through individual counseling, group counseling, parental counseling and/or community counseling. Adolescents face the world of even more rapid and complex changes today, so remain flexible and open-minded. Counselor can design the module according to the need of adolescents, parents and teachers as under:

- i) Psychological counseling for adolescents, their parents and teachers through seminars, workshops and talk shows
- ii) Organizing group counseling in schools and other educational institutions.
- iii) Counseling centers in schools for both school going and out of school adolescents.
- iv) Online counseling services, during examinations and its results.

v) Introduction of adventure sports at school/college levels to generate confidence and coping skills amongst adolescents.

Partnership and managerial implications with corporate houses : Corporate Social

Responsibility (CSR) can consider adolescence education as one area to develop the body and mind of adolescents in India. Many of their services and products are targeted towards the adolescents. If their promotional activities incorporate this education aspect and support financially, the result can be achieved. Virtual classroom through interactive communications of audiovisual technology can easily reach the difficult geographical terrain with minimum faculty. Telecommunication giants can install facilities to promote their products with reproductive healthcare issues. The competitive events on life skills learning can be sponsored by corporate on regular basis.

An innovative experiment aimed at leveraging IT training for youth to create awareness about HIV/ AIDS issues through joint initiative of United Nations development programme (UNDP) and National Institute of Information Technology (NIIT) has been scaled up to 36 centers of NIIT in the National Capital Region and is expected to benefit over 0.6m students annually when implemented across NIIT centers in the country. Shakti Krrupa Charitable Trust have developed a residential cum day school model through private funding in rural areas at Mota Fofalia in Vadodara district, Gujarat. It is having English as well as Gujarati medium or level of instruction. It has NRI students as well as students from Vadodara city and district. Corporate sector can replicate such one school model in every district.

Food products industry and experts in nutrition can focus their effort on the adolescents with low Body Mass Index. Government schemes of providing Iron tablets every week to adolescents, mainly girls should sustain. Media help in promoting good health instead of slim and trim body image can drive the next generation for healthy body.

Partnership with Government for direction on further research: Future scope for further research on the subject can be achieved through partnership with state governments and corporate sector. Children may be studied for 10 years for longitudinal research study. The same child is observed during school years on all the parameters of pubertal changes. Height, weight, eyesight, body hair, facial hair, pimple, menstruation, breast development, emotional changes are studied over a decade to find relationship and development theory (Q-S-K).

The statistics they contain on adolescents is very limited. Very scanty data exists where the adolescents could be disaggregated on the basis of age, such as in education, organized labour, marital status, age at marriage etc. Even this limited information is available mainly for the adolescent girls, as a result of the focus of women's studies scholars. Information in respect of adolescent boys is however grossly lacking.

There is, thus, a crying need for immediate collection of all primary data by the Central and State governments as well as research and academic institutions in the public and private sectors. At the Central Government level 'Adolescent' is allocated to Ministry of Youth Affairs & Sports, which already deals with a substantial section of adolescents (the younger youth), has the capability to mobilize youth and programme for it, and it should be able to play a coordination role to ensure that various sectoral Ministries/Departments pay due

attention to this subject. Management capability may be built up in the Ministry to deal with adolescents, with linkages to academic institutions, NGOs with experience and interest in development of adolescents. NGOs, in several parts of the country could play a valuable role.

Privacy and confidentiality are essential prerequisites to address adolescent issues especially with regard to reproductive and sexual health, relationships and emotions. Therefore, educational, nutrition, health, livelihood and recreational programmes need to be designed keeping in view these gender differences. It is therefore important to avoid gender stereotypes. Unfortunately, most policy documents of the government tend to look at girls primarily as future wives or mothers and policy documents link early marriage, teenage pregnancy and child survival to girls' education.

It is important to acknowledge that the needs and aspirations of poor children (rural and urban) are different from those of the middle class adolescents (urban and semi-urban). It is important to specially address the situation of girls and boys from disadvantaged communities – in both urban and rural areas. It would be important to prioritize in favour of the most disadvantaged of the urban and rural poor. The programmes, which will attract the adolescents and sustain their motivation, are needed. Implementation of development programmes with full involvement of adolescents and young adults would have long-term impact on critical areas of national concern.

The references and bibliography are placed in the thesis. The Appendices contain the following detail.

Appendix-1 Five perspectives on Human Development
 Appendix-1.1.1 Development Stages: Various Human Development Theories
 Appendix 1.2.3A List of publications and materials developed by UNFPA
 Appendix-1.2.3B UNFPA-supported projects in India for Adolescents
 Appendix-1.2.7 WAGGGS World projects
 Appendix-1.2.8. Skills For Adolescence books/topics
 Appendix-1.3.1.2.A NCERT: ERIC funded Projects
 Appendix-1.3.1.2.B NCERT:Regional Resource Centres
 Appendix-1.3.1.3 NCERT funded research proposals on value education
 Appendix 1.3.1.4 NCERT school textbooks review for adolescence education
 Appendix-1.3.5 GBSTB school text books review for adolescence education
 Appendix 2.6 AIDS information of India
 Appendix-3.4.2 The Child Marriage Restraint Act, 1929
 Appendix-3.5 List of books on reproductive healthcare education
 Appendix-4.10 Services Marketing Characteristics
 Appendix-5.5 Feedback of questionnaires testing
 Appendix 5.9A Questionnaire for adolescent students
 Appendix-5.9B Questionnaire for parents of adolescents
 Appendix-5.9C Questionnaire for teachers of adolescents
 Appendix 5.9D Request letter to Principals for permission
 Appendix 5.9E Request letter to parents and adolescents
 Appendix-6.3.14 Views of Principal/School authorities and Doctors
 Appendix-6.5.2 Key phrases surfed for www.teensnparents.com
 Appendix-6.5.3 Email queries on www.teensnparents.com
 Appendix 7.2.7 Data sheet for school children body development
 Appendix- 7.2.13 Recommendations by Working group on adolescents
 Appendix-7.2.14 Consolidated tables of analysis:
 Table 1 : Importance of attributes for Personality Development
 Table 2 : Importance of attributes for Personality Development
 Table 3 Effort for Body & Mind Development
 Table 4 Level of Knowledge about the Teenage Products
 Table 5. To Share Personal Problems and Interest
 Table 6. Level of Competence/Use With Average Hours Spent During A Day
 Table 7. level of competence in extra curricular activities
 Table 8 Factors That Helps To Increase Height
 Table 9. First Notice Time of Physical Changes
 Table 10A First Notice Time of Physical Changes
 Table 10B First notice of physical changes
 Table 10C First notice of physical changes
 Table 11A Knowledge of common changes of puberty and teenage products
 Table 11B. Knowledge of changes of puberty and teenage products for boys only
 Table 11C. Knowledge of changes of puberty and teenage products for girls only
 Table 13 Behaviors Change During Adolescence Age
 Table 14. Change in Feelings during Adolescence Age
 Table 15. Preferred Sources for Further Information
 Table 16 Rating of Importance of Good Personality
 Table 17. Importance of attributes for personality development
 Table 18. Sources for additional information for parents
 Table 19 Teachers response on importance of personality development