

INDEX

Declaration	Page No. I
Preface	II
Acknowledgements	IV
Contents	VI
List of Tables	XVIII
List of charts	XXIV
Glossary	XXVI
Appendices	397–476
Bibliography	477–482

Contents

Part- I

1. Relevance of adolescence education in human development.	1- 49
1.1 Theoretical perspectives of human development	2
1.1.1 Psychoanalytic approach to human development	4
1.1.2 Behaviorism and learning perspective of human development	6
1.1.3 Cognitive development of human being	8
1.1.4 Evolutionary perspective of human development	12
1.1.5 Socio-cultural theory of human development	13
1.1.6 Education as seen by Ravindranath Tagore	15
1.2 International concern on adolescence education	16
1.2.1 International Conference on Population and Development (ICPD)	17
1.2.2 Life-Skills Education Modules for Adolescents by UN IAWG-P&D	17
1.2.3 UNFPA- United Nations Population fund	18
1.2.4 Adolescence, the picture in India by UNICEF	18
1.2.5 United Nations Programme on HIV/AIDS (UNAIDS)	20
1.2.6 Boys Scouting Movement	21
1.2.6.1 Woodcraft Indians by Seton	22
1.2.7 World Association of Girl Guides and Girl Scouts (WAGGGS)	23
1.2.7.1 Health of Adolescent Refugees Project (HARP) in the world	24
1.2.8 Skills For Adolescence (SFA) by Lions- Quest international	26
1.2.9 INTERACT, Rotary International's service club program	26
1.2.10 Reproductive Health Education Projects by BBC World	27
1.2.10.1 Radio and TV programmes for adolescents	28
1.2.11 Sexual and Reproductive Health (SRH) programs by (ICOMP)	29
1.2.12 Joint GOI-UN System Education Programme (<i>Janshala</i>)	31
1.3 The review of education curriculum in the state and central schools board	32
1.3.1 National Council of Educational Research and Training (NCERT)	34
1.3.1.1 Value education a recent initiative at NCERT	34
1.3.1.2 National Resource Centers on Value Education (NRCVE)	35
1.3.1.3 Programmes modules for values education	36
1.3.1.4 Gyandarshan educational TV channel	36

1.3.1.5	Puberty education in school textbooks by NCERT	37
1.3.2	National Cadet Corps (NCC) for character building	39
1.3.3	Educational Satellite (EDUSAT) for interactive distant education	41
1.3.4	Gujarat Council of Educational Research and Training (GCERT)	43
1.3.4.1	Population Education Cell (PEC)	43
1.3.5	Gujarat State Board of School Textbooks (GSBST)	44
2	Initiatives by The Government of India for adolescence education	50 - 93
2.1	Integrated Population and Development Projects	52
2.2	Partnership for progress of population programmes	53
2.3	Integrated Child Development Scheme (ICDS)	54
2.4	National Youth Policy 2000	56
2.4.1	Nehru Yuva Kendras as youth centers	56
2.5	Reproductive and Child Health (RCH) programme	57
2.6	National AIDS Policy 2000	58
2.7	Support to Gender Issue (SGI)	59
2.8	National Policy on Education (1986 modified in 1992)	60
2.9	Draft Health Policy (1999)	60
2.10	National Nutrition Policy (1983)	61
2.11	Population and Development Education by UGC	62
2.12	An overview of the Indian Government policies	63
2.13	NGOs in India on adolescent healthcare	64
2.13.1	MAMTA Health Institute for Mother and Child, New Delhi/Haryana	65
2.13.2	A counseling centre at the Community Health Centre (CHC), Bawal	66
2.13.3	Doosra Dashak, Foundation for Education and Development, Rajasthan	66
2.13.4	Education and Development of Adolescents by Sandhan, Rajasthan	68
2.13.5	Integrated Women's Empowerment and Development Project- Haryana	69
2.13.5.1	<i>Lok Jumbish</i>	69
2.13.6	Improved Health Care for Adolescent Girls in Urban Slums, Jabalpur	70
2.13.7	Gender Issue Programme on AIR (West Bengal)	70
2.14	Pilot Projects Initiatives under CP5 of UNFPA	72
2.14.1	Life Line Education for the Adolescent (Lupin, Rajasthan)	72
2.14.2	Adolescent Boys and Girls – Gender Issues by DCT	73
2.14.3	AIDS Warrants Adolescent Reproductive Health Education (AWARE)	74
2.15	Peer Educator (PE) perspective	75
2.16	Bharat Scouts and Guides	76
2.16.1	Healthy Adolescent Project in India (HAPI)	78
2.16.2	The Badge Curriculum	79
2.17	National Service Scheme (NSS)	80
2.18	Patha Bhavana at Visva-Bharati, Shani Niketan – West Bengal	81
2.19	Sri Aurobindo International center of education	82
2.20	Outlook–Synovate survey	83
2.21	Adolescent Education in Gujarat	84
2.21.1	'Sex Education for Better Reproductive Health' project at Baroda	84

2.21.2	Health awareness and need assessment at the Medical College, Baroda	85
2.21.3	Peer Education Strategy to Build Life Skills by WOHTRAC, Vadodara	86
2.21.4	Schemes from United trust of India (UTI)	87
2.21.5	Skills For Adolescence (SFA) : Lions-Quest programme	87
2.21.6	Anemia control project by UNICEF	88
2.21.7	Art Excel by Art of Living Foundation	90
2.21.8	Life Programme by Swami Sukhabodhananda	91
2.21.9	ARSH pilot project in schools	91
2.22	An overview	92
3	Adolescence changes: Physical, Emotional, Social and Cognitive	94 - 112
3.1	Physical changes	94
3.1.1	Bone development	95
3.1.2	Menarche in girls	96
3.1.3	Breast development in girls	97
3.1.4	Nocturnal emission in boys	97
3.1.5	Body image	98
3.1.6	Sexuality in human being	99
3.2	Emotional changes	100
3.2.1	Peer relationship	100
3.2.2	Onset of sexual infatuations	101
3.2.3	Body image perspective	102
3.2.3.1	Anorexia nervosa : an eating disorder	103
3.2.3.2	Suicidal symptoms	103
3.3	Cognitive changes	104
3.3.1	Development of moral reasoning	104
3.3.2	Characteristics of thought process in adolescence	105
3.3.3	Moral values and reality	106
3.3.4	Effect of sleep on development.	106
3.4	Social changes	107
3.4.1	Heterosexual friendship and relationship	107
3.4.2	Sex and sexuality in social relationship	109
3.4.3	Independence from parents	110
3.4.4	Selection of vocation under social pressure	110
3.5	An overview	111
4	Service marketing of adolescence education	113 - 145
4.1	Services marketing defined	115
4.2	Need recognition of adolescence education	117
4.3	Social marketing perspective	120
4.4	Imparting adolescence education as CSR	121
4.5	Double Income Syndrome effect on adolescence education	122
4.6	Storm and stress of adolescence	123
4.7	Population of India	124

4.8	Education: a priority sector for Indian Government	127
4.9	Services sector in India	131
4.10	Marketing mix for services	133
4.11	Product marketing vs. services marketing	133
4.11.1	Intangibility of adolescence education	135
4.11.2	Adolescence education as a Pure Service	135
4.11.3	Heterogeneity due to high content people based service	136
4.11.4	Training and development for adolescence	137
4.11.5	Accessibility of adolescence education	137
4.11.6	Pricing of Adolescence Education	138
4.11.7	Branding of adolescence education	138
4.11.8	Perishability of adolescence education	139
4.11.9	Production and consumption of adolescence education	139
4.11.10	Ownership of adolescence education	140
4.11.11	Role of media communications for adolescence education	140
4.11.12	Concern for special group adolescents	142
4.12	An overview	143

Part - II

5 Research Methodology 146 - 172

5.1	Data Sources	147
5.2	Data types	147
5.3	Data instruments and communication approach	148
5.4	Design of Structured Questionnaires	149
5.4.1	Questionnaire for Students (Q-S)	149
5.4.2	Questionnaire for Parents (Q-P)	151
5.4.3	Questionnaire for Teachers (Q-T)	153
5.5	Pre-Testing of Questionnaires	154
5.6	Sample testing of questionnaires	155
5.7	Target groups determination	156
5.8	Sample size determination	157
5.8.1	The sample	158
5.9	Field administering of final questionnaires	159
5.9.1	Few experiences during administering the questionnaires	161
5.10	Web Site development: www.teensnparents.com	163
5.11	Data validation and data entry	164
5.11.1	Customized Software for Data-entry	164
5.11.2	Data validation and codification	164
5.12	Data analysis tools	165
5.12.1	Factor Analysis	165
5.12.2	Rank Correlations (Spearman's rho)	165
5.12.3	Chi-square Statistic	166
5.12.4	t-test for independent samples	167
5.12.4.1	The t-Statistic: Equal Variances	167

5.12.4.2 The t-Statistic: Unequal Variances	167
5.12.5 SPSS software	168
5.12.6 Mann-Whitney U Test: two independent samples	169
5.12.7 ANOVA: ONE-WAY Classification	170
6 Data Analysis	173 - 350
6.1 Demographic data through Frequency Analysis: Adolescents' questionnaires	173
6.1.1 City wise distribution	173
6.1.2 School wise distribution	174
6.1.2.1 Types of schools	175
6.1.2.2 Standard wise distribution	176
6.1.3 Braces for uneven teeth	177
6.1.4 Age wise distribution of adolescents	177
6.1.5 Blood group distribution	178
6.1.6 t-test for Equality of Means: Power in eyes	178
6.1.7 Body Mass Index (BMI)	179
6.1.7.1 Skewness on height and weight data	180
6.1.7.2 Non-Parametric test Mann-Whitney Test	181
6.1.7.3 Body Mass Index between boys and girls	184
6.1.7.4 Body Mass Index between standards VII to XI	185
(Q-S-A: Questionnaire-Students- Question A)	
6.1.8 Q-S-A : Importance of attributes in personality development	186
How important is:	
6.1.8.1 Public Speaking for personality development?	186
6.1.8.2 Event Participation in personality development?	187
6.1.8.3 Mastery in an art?	187
6.1.8.4 Vocabulary?	188
6.1.8.5 Decision making?	188
6.1.8.6 Good postures?	189
6.1.8.7 Communication skill?	189
6.1.8.8 Mastery in a sport?	190
6.1.8.9 Morning sunlight?	190
6.1.8.10 Regular exercise?	191
6.1.8.11 Competitive attitude?	191
6.1.8.12 Removal of stage fear?	192
6.1.8.13 Friendliness?	193
6.1.8.14 Formal education?	193
6.1.8.15 Language?	194
6.1.8.16 Balanced diet?	194
6.1.8.17 Good looks?	195
6.1.8.18 Positive attitude?	195
6.1.8.19 To Love your self?	196
6.1.8.20 To learn computer operation?	196
6.1.8.21 Walking style?	197
6.1.8.22 Reading habit?	197

6.1.8.23 Factor analysis for personality development attributes	198
6.1.9 Q-S-B : Efforts for body and mind development during adolescence	203
Are you	
6.1.9.1 Participating in events?	203
6.1.9.2 Playing sports games?	204
6.1.9.3 Doing regular exercises?	204
6.1.9.4 Eating balanced diets?	205
6.1.9.5 Keeping Positive attitude?	205
6.1.9.6 Doing meditation/yoga?	206
6.1.9.7 Making your own decisions?	207
6.1.9.8 Exposing your body to morning sunlight?	207
6.1.9.9 Are you widening your friend circle?	208
6.1.9.10 Factor analysis for efforts made for personality development	208
6.1.10 Q-S-C/D : Interaction in average hours/day with parents	211
6.1.11 Q-S-E : Sources of information on reproductive healthcare	212
6.1.11.1 Underarm hair growth	213
6.1.11.2 Pubic hair growth	213
6.1.11.3 Pimple and acne care	214
6.1.11.4 Face and body hair care	214
6.1.11.5 Voice change	215
6.1.11.6 Beard and mustache growth in boys	215
6.1.11.7 Menstruation in girls	216
6.1.11.8 Breast development in girls	216
6.1.11.9 Ranking of existing sources of information	217
6.1.12 Q-S-N : Preferred sources for further information	219
6.1.12.1 Existing and future preferred sources of information	220
6.1.13 Q-S-F : The current knowledge of teenage products	221
Current level of knowledge about:	
6.1.13.1 Shaving blade/razor	221
6.1.13.2 Pimple cream	222
6.1.13.3 Height booster	224
6.1.13.4 Trimming tiny scissors	225
6.1.13.5 Brassiere/Bra	226
6.1.13.6 Washable pad	227
6.1.13.7 Sanitary napkin	227
6.1.13.8 Standard wise teenage product awareness	228
6.1.13.8.1 Standard wise shaving razor/blade awareness	228
6.1.13.8.2 Standard wise pimple cream awareness	229
6.1.13.8.3 Standard wise height booster awareness	230
6.1.13.8.4 Standard wise trimming scissors awareness	230
6.1.14 Q-S-G/H : Sharing relationships for problems and interests	231
6.1.15 Q-S-I : Competence in extra curricular activities	233
Level of competence in:	
6.1.15.1 Outdoor sports activities.	233
6.1.15.2 Indoor sports activities.	233
6.1.15.3 Dance/music	234

6.1.15.4 Reading novels	234
6.1.15.5 Internet surfing	234
6.1.15.6 Average hours spent on extra curricular activities	235
6.1.16 Q-S-J : Factors that helps to increase height	235
6.1.17 Q-S-K : First notice of physical changes	237
First Notice Time of:	
6.1.17.1 Under arm hair	237
6.1.17.2 Pubic hair	239
6.1.17.3 Pimple/acne	241
6.1.17.4 Voice change	243
6.1.17.5 Hair growth on legs/arms	244
6.1.17.6 Body odour/sweat change	245
6.1.17.7 Period/menarche/menstruation	246
6.1.17.8 Breast bud development	247
6.1.17.9 Body curves/buttocks development	248
6.1.17.10 Mustache hair appearance	249
6.1.17.11 Beard hair appearance	250
6.1.18 Q-S-L : Adolescents' knowledge on changes and products	251
Level of knowledge on:	
6.1.18.1 Internal anatomy of reproduction	252
6.1.18.2 Trimming and shaving of Pubic-Hair	253
6.1.18.3 Use of shaving blade/razor	253
6.1.18.4 Acne/pimple care and treatment	254
6.1.18.5 Functions of sperms and ovary	255
6.1.18.6 Child sexual abuse	256
6.1.18.7 Wet-dream effect/ejaculation	257
6.1.18.8 Testicles development in scrotum	258
6.1.18.9 Stages of menstruation period	259
6.1.18.10 Purpose of menstruation in your life	260
6.1.18.11 Personal hygiene care during period	261
6.1.18.12 Urinal infections	262
6.1.18.13 Use of washable pad/cloth	264
6.1.18.14 Use of sanitary napkin	265
6.1.18.15 Stages of breast development	266
6.1.18.16 Selection of Bra / Bras	267
6.1.18.17 Measuring of brassiere size	268
6.1.18.18 Child sexual abuse	270
6.1.19 Q-S-M : Behavior changes with near relationship	272
6.1.20 Q-S-O : Change in feelings and emotions with near relationship	280
Did you get feeling like:	
6.1.20.1 'Loneliness among people?'	280
6.1.20.2 'No one understands me' ?	280

6.1.20.3 'I am not a kid anymore'?	281
6.1.20.4 'Why, always it happens to me'?	281
6.1.20.5 'Urge to talk to a friend'?	282
6.1.20.6 'Discuss personal matters'?	282
6.1.20.7 'Irritated and annoyed'?	283
6.1.20.8 'Need privacy and independence'?	283
6.1.21 Feelings Vs. interaction of father and mother	284
6.1.21.1 Loneliness among people	286
6.1.21.2 I am not a kid anymore	287
6.1.21.3 No one understands me	288
6.1.21.4 Why, always it happens to me?	289
6.1.21.5 Urge to talk to a friend	290
6.1.21.6 Discuss personal matters	291
6.1.21.7 Irritated and annoyed	292
6.1.21.8 Need privacy and independence	293
6.1.22 Q-S-P : Importance of personality development	295
How much important is personality development:	
6.1.22.1 To make friends?	295
6.1.22.2 To win competition?	295
6.1.22.3 To impress others?	296
6.1.22.4 To convince others?	296
6.1.22.5 For admission interview?	297
6.1.22.6 For job interview?	297
6.1.22.7 For marriage interview?	298
6.1.23 Q-S-Q : Comfort level with puberty changes	299
6.1.23.1 Boys on puberty changes and knowledge of products	300
Boys' Feeling with Puberty Changes:	
6.1.23.1.1 * Blade/Razor(Shaving)	300
6.1.23.1.2 * Pimple bream	302
6.1.23.1.3 * Height booster	303
6.1.23.1.4 * Trimming scissors	304
6.1.23.2 Girls on puberty changes and knowledge of products	305
Girls' Feeling With Puberty Changes:	
6.1.23.2.1 * Blade/Razor(Shaving)	305
6.1.23.2.2 * Pimple Cream	306
6.1.23.2.3 * Height booster	307
6.1.23.2.4 * Trimming scissors	308
6.1.23.2.5 * Brassiere/Bra	309
6.1.23.2.6 * Washable pad	310
6.1.23.2.7 * Sanitary napkin	311
6.1.24 Q-S-R : Most suitable age period for personality development	312

7.2.6.1.1	Pubic Hair trimming scissors for teenage boys and girls	384
7.2.6.1.2	Pubic hair shaving razor	384
7.2.6.2	Brassieres	385
7.2.6.2.1	Camisole / Branian for teenage girls	385
7.2.6.2.2	Training brassieres	385
7.2.6.2.3	Brassieres for teenage girls	385
7.2.6.3	Washable Menses Pads for teenage girls	386
7.2.6.4	Sanitary Napkins for teenage girls	386
7.2.6.5	Height Booster Exerciser for teenage boys and girls	387
7.2.7	Health checkup camps by Doctors/PHC/CHC	387
7.2.8	Competitive events for awareness	388
7.2.9	NCC/ NSS/ Scout& Guide	390
7.2.10	Skills for Adolescence: SFA/Interact	391
7.2.11	School counselor or external counseling	391
7.2.12	Partnership and implications with corporate houses	393
7.2.13	Partnership with Government for direction on further research	394

Appendices	Page No.
Appendix-1 Five perspectives on Human Development	397
Appendix-1.1.1 Development Stages: Various Human Development Theories	398
Appendix 1.2.3A List of publications and materials developed by UNFPA	399
Appendix-1.2.3B UNFPA-supported projects in India for Adolescents	399
Appendix-1.2.7 WAGGGS World projects	402
Appendix-1.2.8. Skills For Adolescence books/topics	403
Appendix-1.3.1.2.A NCERT: ERIC funded Projects	404
Appendix-1.3.1.2.B NCERT: Regional Resource Centres	404
Appendix-1.3.1.3 NCERT funded research proposals on value education	404
Appendix 1.3.1.4 NCERT school textbooks review for adolescence education	406
Appendix-1.3.5 GBSTB school text books review for adolescence education	421
Appendix 2.6 AIDS information of India	430
Appendix-3.4.2 The Child Marriage Restraint Act, 1929	431
Appendix-3.5 List of books on reproductive healthcare education	432
Appendix-4.10 Services Marketing Characteristics	433
Appendix-5.5 Feedback of questionnaires testing	434
Appendix 5.9A Questionnaire for adolescent students	436
Appendix-5.9B Questionnaire for parents of adolescents	440
Appendix-5.9C Questionnaire for teachers of adolescents	442
Appendix 5.9D Request letter to Principals for permission	444
Appendix 5.9E Request letter to parents and adolescents	445
Appendix-6.3.14 Views of Principal/School authorities and Doctors	446
Appendix-6.5.2 Key phrases surfed for www.teensnparents.com	449
Appendix-6.5.3 Email queries on www.teensnparents.com	452
Appendix 7.2.7 Data sheet for school children body development	456
Appendix- 7.2.13 Recommendations by Working group on adolescents	458

Appendix-7.2.14 Consolidated tables of analysis:	459
Table 1 : Importance of attributes for Personality Development	459
Table 2 : Importance of attributes for Personality Development	460
Table 3 Effort for Body & Mind Development	461
Table 4. Level of Knowledge about the Teenage Products	462
Table 5. To Share Personal Problems and Interest	462
Table 6 Level of Competence/Use With Average Hours Spent During A Day	463
Table 7. level of competence in extra curricular activities	463
Table 8 Factors That Helps To Increase Height	463
Table 9. First Notice Time of Physical Changes	464
Table 10A First Notice Time of Physical Changes	465
Table 10B First notice of physical changes	466
Table 10C First notice of physical changes	467
Table 11A Knowledge of common changes of puberty and teenage products	468
Table 11B. Knowledge of changes of puberty and teenage products for boys only	468
Table 11C. Knowledge of changes of puberty and teenage products for girls only	469
Table 13 Behaviors Change During Adolescence Age	470
Table 14. Change in Feelings during Adolescence Age	471
Table 15. Preferred Sources for Further Information	472
Table 16 Rating of Importance of Good Personality	473
Table 17. Importance of attributes for personality development	474
Table 18. Sources for additional information for parents	475
Table 19 Teachers response on importance of personality development	476