

General and Reproductive Health of Adolescent Girls in Rural South India

Geetha A. Joseph
Sara Bhattacharji
Abraham Joseph
P.S.S. Rao

Adolescents are generally considered healthier than the very young or the very old, and hence their health problems were not given much prominence(1,2). Among adolescents, girls constitute a more vulnerable group, particularly in developing countries, where they are traditionally married at an early age and exposed to greater risk of reproductive morbidity and mortality(3). Data on reproductive and general health concerns of this young population are scarce, without which, meaningful programmes cannot be implemented. In this paper, salient findings from a study on rural adolescent girls are presented and briefly discussed in the light of future programmes.

Subjects and Methods

The study was done in the Kaniyambadi Block of North Arcot District of Tamil Nadu. Both qualitative and quantitative methods were used to elicit information on adolescents. Three focus group

discussions with adolescents and one with the mothers of adolescents were held. In addition, five key informants were interviewed. For the quantitative survey, 4 villages were randomly chosen based on presence or absence of a high school and by population greater or less than 1000. From each village 50 adolescent girls were randomly chosen and interviewed at leisure at their homes. Data on each adolescent included demographic, social and economic status, anthropometry and blood pressures as well as a systematic clinical examination.

Results Qualitative

Studies

Focus group discussions with the adolescents revealed headaches, body pains, and fatigue as common physical problems. A few mentioned weight loss, domestic problems, alcoholism in fathers and family conflicts. Adolescents who were prevented by the family to study further, reported to various degrees of anxieties. Menstrual irregularities were most prominent while a few complained of white discharge. There was a general reluctance to discuss intimate personal, sexual and reproductive health issues in the group but they felt more free to talk about general health and nutrition related topics. Most adolescents expressed the need for a separate clinic run only by women doctors and were against combining such services with maternal and child health clinics. During focus group discussions the mothers revealed that they believed adolescents to be in good health but concurred with the common problems.

Opinions were however, divided on the need for special health services for them. Key informants perceived that adolescents were more concerned about general appearance and skin lesions, pimples, rashes or weight gain, although they do suffer from generalized weakness and anemia.

From the Departments of Community Health and Biostatistics, Christian Medical College, Vellore 632 002.

Reprint requests: Dr. P.S.S. Rao, Director, S.L.R and T.C., Karigiri 632 106, Tamil Nadu.

Manuscript received: June 14, 1996;

Initial review completed: July 27, 1996;

Revision accepted: September 4, 1996

Most key informants were of the opinion that television and films were a bad influence on the girls.

Quantitative Studies

A total of 190 adolescents were studied. The 5 leading general complaints were general fatigue, palpitations, frequent headaches, backaches and abdominal pain (not related to menstruation). Over 20% seemed to suffer from joint pains, weight loss, poor appetite and recurrent respiratory problems. Sleep disturbances, loss of weight, frequent headaches and dermatological problems were more common among those who had attained menarche. In general, adolescents with higher educational status had significantly less complaints.

The mean and 95% confidence intervals for blood pressure (mm Hg) and PCV (%) levels by age are displayed in *Table I*. The mean systolic BP varied from 108 to 121 and the mean diastolic BP from 70 to 79. The variability, as measured by the 95% CI shows wide fluctuations, indicating multiple factors such as weight, food intake and other morbidity implicated in high blood pressure. The PCV (%) fluctuated from 35 to 39, but there was no consistency by age. Overall 30% of adolescents were anemic using the cut off value of PCV as 36%.

Heights of adolescent girls varied from 140 to 151 cm and weights from 31 to 43 kgs. Pubertal spurts were seen between 13 to 14 years. The heights and weights were less than the 5th percentile of National center for Health statistics. The body mass index varied from 16 to 19 and generally depicts an undernourished population. One hundred and twenty four of the girls had attained menarche, the mean age being 13.9 years. While dysmenorrhea and premenstrual tensions were very common, other menstrual problems also seemed frequent. Nearly one-fifth (19.4%) of all adolescents complained of white discharge per vaginum. Except for irregular periods, in all other instances, those with higher educational status had lesser complaints.

The level of knowledge of the adolescents on various health issues was determined through their own perception as well through an objective checklist. The findings are displayed in *Table II*. Most adolescents perceived their knowledge to be quite poor, especially in relation to reproductive health and common communicable diseases. In fact, the objective tests revealed an even greater lack of knowledge on most issues. Nearly 90% preferred a female doctor for gynecological complaints. The figure was much lower for other complaints.

TABLE I—Blood Pressure Levels (mm Hg) and PCV(%) by Age.

Age (Yrs)	No.	Systolic BP		Diastolic BP		PCV (%)	
		Mean	95% CI	Mean	95% CI	Mean	95% CI
13	35	108.2	90.4-126.0	70.6	55.0-86.2	37.3	29.9-44.7
14	40	113.9	91.3-136.5	77.1	60.9-93.3	35.4	27.0-43.8
15	33	110.6	85.6-135.6	72.8	54.4-91.2	38.7	33.5-43.9
16-17	28	116.7	97.7-135.7	77.3	61.9-92.7	37.1	28.7-45.5
18-19	34	121.1	86.9-155.3	78.9	59.7-98.1	38.8	32.6-45.0

TABLE II—*Perceived Knowledge on Selected Health Issues*

Health Issue	Has adequate knowledge (%)	
	Perceived	Tested
Menstruation	25.3	8.9
Pregnancy	10.2	37.7
Contraception	24.2	19.8
Immunization	44.6	28.1
Breastfeeding	48.9	23.1
Infant Care	46.2	5.4
Child Care	47.8	2.4
Tuberculosis	18.3	21.0
Leprosy	7.5	1.8
AIDS	54.3	45.2
Nutrition	61.8	29.9

An overwhelming majority declared that specific health care facilities for adolescents do not exist and are badly needed.

Discussion

Adolescents are generally expected to enjoy good health, but this does not seem true in the rural areas of a developing country, where poverty, malnutrition and repeated infections are rampant. Collection of the relevant data on these sensitive subjects required focus group discussions and indepth interviews with key informants, before embarking on a quantitative survey. These qualitative methods were quite rewarding and provided unusual glimpses of the diversity or consensus of attitudes, knowledge and expectations on adolescent health. There was some inhibition displayed during discussion on personal topics, which emphasizes the need to develop more sensitive and sharper tools for ascertaining the true picture of adolescents' health. There is a great scope for such qualitative research which takes an interpretive

and naturalistic approach to its subject matter(4).

Most reports on adolescents' health focus, almost exclusively on reproductive health. While this may perhaps be the central issue, this study has shown the poor general health of rural adolescents. Having survived various hazards of infancy and childhood, these girls continue to suffer from the after-effects of poor nutrition and adverse socioeconomic conditions including unhygienic practices and insanitary facilities that still prevail in rural India(5). Anthropometry revealed stunting, possibly the result of chronic malnutrition(6).

This study has highlighted the extremely poor knowledge of the girls even in such topics as nutrition, menstruation, pregnancy and child care. Knowledge on common public health problems such as tuberculosis or leprosy was very poor and may contribute to our inability to eradicate these diseases. The fact that such poor knowledge bears little relationship to education or occupation implies rethinking of relevant strategies for school health education(7). Much more then needs to be done in terms of innovative strategies involving adolescents in all stages of programme development to ensure programme sustainability(2). This research has highlighted the strong support of adolescents for such programmes.

Acknowledgement

This study was supported by the Fluid Research Grant of Christian Medical College, Vellore.

REFERENCES

1. Ghosh S. It is time we thought of youth. *Indian Pediatr* 1992, 29; 821-823.
2. Friedman HL. Adolescent health care. *International Initiatives. Indian Pediatr* 1994, 31: 503-510.

3. Pregnancy and Abortion in Adolescence. Report of a WHO Meeting. WHO Technical Report Series No. 583. Geneva, World Health Organization, 1975.
 4. Jones R. Why do qualitative research? *BMJ (Indian Edn)* 1995,11: 802.
 5. Jain M. Child labor in Urban India. *Health for the Millions* 1995, 21: 2-11.
 6. Agarwal DK, Agarwal KN, Upadhyay SK, Mittal R, Prakash R, Rai S. Physical and sexual growth pattern of affluent Indian Children from 5 to 18 years of age. *Indian Pediatr* 1992, 29:1203-1282.
 7. Herz B, Subbarao K, Habib M, Raney L. Letting Girls Learn: Promising Approaches in Primary and Secondary Education. World Bank Discussion Paper 133, Washington DC, USA 1991.
-