



# A Study on Perceptions Regarding Pubertal Changes Among Adolescents of Jabalpur District

**\*Dr.Shubhangi Nayak**

Resident, Dept. Of Community Medicine, N.S.C.B. Medical College, Jabalpur. \* Corresponding author

**Dr.Neelam Toppo**

Associate Professor, Dept. Of Community Medicine, N.S.C.B. Medical College, Jabalpur,

**Dr.Shashi Prabha Tomar**

Assistant Professor, Dept. Of Community Medicine, N.S.C.B. Medical College, Jabalpur

**Dr.P.K. Kasar**

Professor and Head, Dept. Of Community Medicine, N.S.C.B. Medical College, Jabalpur

**ABSTRACT**

Adolescence is the period of life from 10 to 19 years. It marks an individual's transition from childhood to adulthood. Aim – To assess perception among adolescents regarding pubertal changes in Jabalpur district. Methods - 800 adolescents were selected, 400 from rural and 400 from urban areas of Jabalpur district. Both quantitative and qualitative methods were used to assess pubertal changes and their source of information regarding these issues. Results - In urban areas a higher proportion of adolescents were aware of the pubertal changes than in rural areas. Among boys, acne and increment in height while among girls menarche, change in body contours and acne were the common issues of concern. Adolescents discussed their problems with their families (42.6%) and friends (40.1%) . Conclusion- This study reveals poor level of awareness regarding pubertal changes. Adolescent are hesitant to share their problems which keeps them ill informed on such issues.

**KEYWORDS**

adolescents, perception, pubertal changes.

**INTRODUCTION**

Adolescence is defined by United Nations as the period of life from age 10 to 19 years. It is a critical period in an individual's transition from childhood to adulthood.<sup>[1]</sup> Today, 1.2 billion adolescents stand at crossroads between childhood and adult world. Around 243 million in India, accounting for nearly one quarter of the country's total population.<sup>[2]</sup>

Adolescence is defined as a continuum of physical, cognitive, behavioral and psychosocial change that is characterized by increasing levels of individual autonomy, a growing sense of identity and self-esteem and progressive independence from adults. This period results in sexual, psychological and behavioural maturation.<sup>[1]</sup>

During adolescence, hormonal changes lead to onset of puberty, sudden and rapid physical growth and development of secondary sexual characteristics. Psychological and emotional changes like assertion of self identity and independence, sex drive, and attraction towards opposite sex take place simultaneously. They feel an inclination for distancing themselves from parents and expanding their social circle to carve an important place amongst peers. If young people are not well informed or guided, they are likely to make decisions that could harm them.<sup>[1]</sup>

The present study is an effort to assess the perceptions among adolescents regarding pubertal changes and their source of information about these issues.

**MATERIALS AND METHODS**

The study was a Cross Sectional study. Ethical clearance was taken from college ethical clearance committee.

**Study period:** From 1<sup>st</sup> November 2013 to 31<sup>st</sup> October 2014.

**Sampling technique** - Multi stage random sampling technique was used.

**Study subjects** - 800 adolescents (10-19 years) were selected as study subjects out of which 400 (200 boys & 200 girls) were selected each from rural and urban areas. Adolescents were selected randomly from anganwadis and schools. Informed consent was taken from all respondents who volunteered for study.

**Study tools -**

For obtaining Quantitative data, a pre- designed questionnaire was used.

For obtaining Qualitative data, 4 FGDs (Focus Group Discussions) were conducted. Frequency distribution tables were prepared and statistical analysis was done using SPSS for windows version 20.0.

**RESULTS AND DISCUSSION-**

**TABLE-1 DISTRIBUTION OF ADOLESCENTS ACCORDING TO PUBERTAL CHANGES**

PUBERTAL CHANGES	RURAL				URBAN				TOTAL	
	BOYS		GIRLS		BOYS		GIRLS		No	%
	No	%	No	%	No	%	No	%		
Gain in height	157	78.5%	194	97%	176	88%	179	89.5%	706	88.2%
Gain in weight	132	66%	128	64%	145	72.5%	133	66.5%	538	67.2%
Acne	89	44.5%	94	47%	111	55.5%	128	64%	422	52.7%
Growth of axillary and pubic hair	77	38.5%	100	50%	158	79%	108	54%	443	55.4%
Facial maturity	91	45.5%	123	61.5%	131	65.5%	112	56%	457	57.1%
Development of body contours	112	56%	117	58.5%	130	65%	111	55.5%	470	58.8%
Eritable-low moods	60	30%	101	50.5%	90	45%	139	69.5%	390	48.8%

(For rural boys Vs urban boys,  $\chi^2=16.910;P=0.010;df=6$ )

(For rural girls Vs urban girls,  $\chi^2=11.324;P=0.079;df=6$ )

In urban areas a higher proportion of adolescents were aware of the pubertal changes than in rural areas. The difference in perception was found to be statistically significant among rural and urban boys.

Many adolescents perceived gain in height (88.2%) and weight (67.2%) as the most common pubertal changes followed by development of body contours (58.8%), facial maturity (57.1%), growth of axillary and pubic hair (55.4%), acne (52.7%) and low moods (48.8%).

Similar findings were reported in a study by ICMR, where the pubertal changes perceived by adolescents included gain in height (69.6%), gain in weight (66.8%), acne (55.8%), axillary and pubic hair (64.2%), facial maturity (17.6%), development of body contours (52.4%) and irritable moods (6.4%).<sup>[3]</sup>

During FGDs, it was observed that the adolescents were less aware in rural areas than urban areas about the various physical changes they are undergoing during their phase of puberty. Some were really worried about those changes. Among boys, acne, increment in height and change in voice while among girls attainment of menarche, change in body contours and acne were the most common issues of worry and concern. In rural areas adolescents were more hesitant to share their problems faced during their phase of puberty as compared to urban areas. This shows that even today social norms discourage discussion on issues related to reproductive health.

**TABLE-2 DISTRIBUTION OF ADOLESCENTS ACCORDING TO PERCEPTIONS REGARDING PUBERTAL CHANGES**

PERCEPTIONS REGARDING PUBERTAL CHANGES	RURAL				URBAN				TOTAL	
	BOYS		GIRLS		BOYS		GIRLS		No.	%
	No.	%	No.	%	No.	%	No.	%		
Comfortable	186	93%	127	63.5%	168	84%	143	71.5%	624	78%
Worried	14	7%	73	36.5%	32	16%	57	28.5%	176	22%
Total	200	100%	200	100%	200	100%	200	100%	800	100%

{For rural boys Vs urban boys,  $\chi^2=7.959$ ;P=0.005;df=1 OR=0.395 (95%CI=0.204-0.766)}

{For rural girls Vs urban girls,  $\chi^2=2.917$ ;P=0.088;df=1 OR=1.442 (95%CI=0.947-2.197)}

78% adolescents were comfortable during pubertal changes while 22% adolescents were worried about those changes. The observed difference was found to be statistically significant among rural and urban boys.

While in a study by ICMR, some adolescents were anxious (53.2%), depressed (8.6%), while others considered these pubertal changes normal (38.2%).<sup>[3]</sup>

During FGDs it was observed that some participants mainly adolescent girls did not have positive feelings about their bodily changes. Increasing breast size, acne, appearance of pubic hair, back pain and dysmenorrhea as well as irregular menstrual cycles at menarche were all concerns for adolescent girls, the majority of whom had not previously received any education on these issues.

**TABLE-3 DISTRIBUTION OF ADOLESCENTS ACCORDING TO SOURCE OF INFORMATION REGARDING PUBERTAL CHANGES**

SOURCE OF INFORMATION REGARDING PUBERTAL CHANGES	RURAL				URBAN				TOTAL	
	BOYS		GIRLS		BOYS		GIRLS		No.	%
	No.	%	No.	%	No.	%	No.	%		
Family	71	35.5%	110	55%	37	18.5%	123	66.5%	341	42.6%
Friends	86	43%	70	35%	109	54.5%	56	28%	321	40.1%
Teachers	8	4%	18	9%	7	3.5%	10	5%	43	5.4%
Others	35	17.5%	2	1%	51	25.5%	31	15.5%	119	14.8%

Majority of adolescents (42.6%) discussed their problems related to pubertal changes with their families followed by friends (40.1%) in. But interestingly maximum boys in both urban (54.5%) and rural (43%) areas discussed with friends but maximum girls were more comfortable talking with family members in both urban (66.5%) and rural (55%) areas. Very few adolescents told that they learned with teachers.

In all FGDs, adolescents agreed that family members were the first contact person for most of their health problems. Girls generally preferred advice from their mother. Few girls indicated that they could discuss any matter with their friend and teachers.

Boys agreed that they did not discuss these problems with parents or teachers. They described that, for minor problems they consulted their friends. Television, internet and magazines were the most preferred source to solve their queries on such issues.

According to the adolescents, bullying among peer groups was common, which was the reason why they did not want to be come out with such problems.

Anjum Shahid et al also found in their study that teacher was the foremost source of information to adolescent boys (58%) and girls (36%).<sup>[4]</sup>

In another study on child communication on sexual and reproductive matters in Africa it was observed that parents (40%) provided sex education to their own children as they approached puberty.<sup>[5]</sup>

**TABLE-4 DISTRIBUTION OF ADOLESCENTS ACCORDING TO BEST SOURCE OF INFORMATION REGARDING PUBERTAL CHANGES**

BEST SOURCE OF INFORMATION REGARDING PUBERTAL CHANGES	RURAL				URBAN				TOTAL	
	BOYS		GIRLS		BOYS		GIRLS		No.	%
	No.	%	No.	%	No.	%	No.	%		
Family	46	23%	101	50.5%	31	15.5%	129	64.5%	307	38.4%
Friends	52	26%	39	19.5%	106	53%	27	13.5%	224	28%
Teachers	83	41.5%	50	25%	14	7%	28	14%	175	21.9%
Others	19	9.5%	10	5%	49	24.5%	16	8%	94	11.7%
Total	200	100%	200	100%	200	100%	200	100%	800	100%

38.4% adolescents agreed that family members were the best source of information followed by friends (28%) and teachers (21.9%).

Girls mainly preferred family members while boys preferred friends and social media like T.V., internet, books, magazines etc as the best source of information. This gender difference reflect girls tendency to discuss intimate matters with their mothers, while boys look outside their families for information.

These findings were quite similar with another study conducted by Qazi Y.S. on Adolescent Reproductive Health where about half (51%) of the girls stated that information about

sex could be most effectively provided by parents or guardians. In contrast, only 30% of boys considered parents to be amongst the most informative sources.<sup>[6]</sup>

FGDs also suggested that both male and female adolescents often lack knowledge about puberty and are unprepared for the physical and emotional changes that take place during this period of life. Information on issues related to growing up remains inadequate and irrelevant to young people's needs. The most popular sources of information for adolescents in urban areas were friends, Internet, magazines and books. They did not feel comfortable enough to raise these issues at home or with their parents. The adolescents suggested that a school subject on sexual issues and puberty could broaden their insights and teachers should solve their queries related to this issue.

Results from a survey of adolescents in Burkina Faso, Ghana, Malawi and Uganda showed that a substantial proportion of sexually active adolescents do not know of any source to obtain RH information and services.<sup>[7]</sup>

In another study conducted by Bhuiya et al in Bangladesh, few adolescents less than (3%) reported ever-discussing reproductive health issues with their parents. Almost all the boys (96%) and half of the girls (45%) reported receiving RH information from other sources apart from parents.<sup>[8]</sup>

P. V. Kotecha et al found that two third of adolescents wanted more information on the same and the preferred sources for them were mothers (33%), doctors (25%) and teachers (15%).<sup>[9]</sup>

In a study of 500 adolescent boys and girls in rural Maharashtra, results showed that for adolescent males, married or otherwise, the prime source of information on sexual intercourse, menstruation, and pregnancy has been the peer group.<sup>[10]</sup>

## CONCLUSION

This study has described poor perceptions among adolescents regarding reproductive health.

As the social norms still discourage discussion on such issues, adolescents are hesitant to share their problems. Lack of communication with parents and trusted adults keep young people ill informed on issues related to pubertal changes.

## REFERENCES

1. UNFPA, Adolescent Reproductive and Sexual Health Toolkit for Humanitarian Settings. September 2009. Available at <http://www.unfpa.org> | 2. UNICEF, The state of the Worlds Children Report, by, 2011 | 3. Paul D, Knowledge and Practice of adolescent girls regarding reproductive health with special emphasis on hygiene during menstruation, NIPCCD. | 4. Anjum Shahid, Abdul Ghaffar Pirzada, Ashfaqe Ahmed Memon. Perception regarding reproductive health among adolescents of rural Sindh, Pakistan. South East Asia Journal of Public Health. 2012;2(1):223. | 5. Venkatraman Chandra-Mouli, Donna R McCarraher, Sharon J Phillips, Nancy E Williamson, Gwyn Hainsworth. Contraception for adolescents in low and middle income countries: needs, barriers, and access. *Reprod Health*. 2014;11:1. | 6. Pakistan by Qazi Y.S. on Adolescent Reproductive Health in Pakistan. In Bott S, Jejeebhoy S, Shah I, Puri C. (eds). *Towards adulthood: exploring the sexual and reproductive health of adolescents in South Asia*. Geneva: World Health Organization, 2003; pp:78-80. | 7. Richard Kibombo, Stella Neema, Ann M. Moore and F. Humera Ahmed Adults' Perceptions of Adolescents' Sexual and Reproductive Health: Qualitative Evidence from Uganda. 35 February 2008 | 8. Ismat Bhuiya, Ubaidur Rob Asiful H. Chowdhury, Laila Rahman, Nazmul Haque. Improving adolescent reproductive health in Bangladesh. Population Council, Dhaka Susan Adamchak, Rick Homan Family Health International. No.v 2004. Pg. 85-88. | 9. P. V. Kotecha, Sangita V. Patel, V. S. Mazumdar, R. K. Baxi, Shobha Misra, Mansi Diwanji, Harsh Bakshi, Ekta Modi, Sandeep Shah, and Kalpita Shringarpure. Reproductive health awareness among urban school going adolescents in Vadodara city. *Indian J Psychiatry*. 2012 Oct-Dec; 54(4): 344-348. | 10. Das PK. The reproductive health of married adolescents in rural Maharashtra: A report of a state level workshop on building evidence from program and research which was held at Pune; 4-5 January 2008. |