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Educating Adolescents About Puberty: What Are We Missing?

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Abstract: Adolescents undergo significant physical and cognitive changes during their pubertal development. These changes contribute to and impact their future development. Educating adolescents at an early age about their expected development decreases the possible anxiety associated with this period of life and also helps adolescents make better choices in regards to their sexuality. In order to assess the degree of education regarding pubertal development and sexuality, we conducted a survey of late adolescents (Median age 19 years) and parents of adolescents. A total of 409 adolescents (237 females, 172 males) and 124 parents completed the survey. 14.4% of teens (36.6% of males and 2% of females) reported that no one spoke to them prior or during puberty about pubertal development or sexuality issues. Teens receiving some form of puberty/sexuality education did so at a median age of 13 for girls and 15 for boys. More than one source of information was the most common (49%) followed by mother only (20%). 85% of parents reported talking to their teens about pubertal development and sexuality. There were several differences between areas reported covered by parents but not by teens, for example 72% of parents reported talking to their teens about gender differences in growth but only 31% of teens reported being spoken to about that. Areas that are very poorly covered are breast development in boys and sexual assault/date rape in girls at 5% and 26% respectively. In summary, it appears that we continue to do a relatively poor job in educating our kids about their development and sexuality and we do it late. Boys are even less likely than girls to be talked to about many areas of pubertal development and sexuality and when that is done, it is done at a later age.

Keywords: Puberty, adolescence, adolescent sexuality, sex education, United States

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INTRODUCTION

The medical literature is consistent on the importance of educating adolescents about sex and pubertal development (1-7). By the twelfth grade, greater than 60% of adolescents have had sex, with 45.6% of high school age students reporting having ever been sexually active (8). Nationally, 6.8% of teens report initiation of sexual intercourse prior to 13 years of age (8). Medical literature also supports the finding that we need to improve our com-

munication to teens about puberty and sexuality (6,9-11).

During puberty, adolescents undergo many physical and psychosocial changes in a relatively short period of time. They double their weight and gain approximately 25% in height, a growth spurt only exceeded in infancy (12). Most teens develop the ability for sequential logical thinking, the final adult stage of cognitive development, by age 16 years (13). They can reproduce and cause injury to self and others. They

struggle to establish independence from their parents, to establish relationships with peers and significant others, to establish sexual identity, to finish school, and to prepare for a job or career. It is a time of intense idealism and extreme self-centeredness (12). It is a time when the peer group is valued over all others and a critical attitude is adopted towards established social norms. Being armed with appropriate information about expected changes in their body during puberty and about sexual topics could help to ease their transition through this period. In this study, we investigated the extent of pubertal development and sexuality education as seen by adolescents and parents.

METHODS

We conducted a survey of young college students (late adolescents) between the ages of 18 and 22 years. Students were asked to fill in a written questionnaire that asked about education regarding pubertal development and sexuality with help available for those who found any question unclear. Subjects were also asked about their demographic data, but they were kept anonymous to allow privacy. A total of 600 surveys were distributed equally between male (M) and female (F) subjects and 409 (172 M and 237 F) were returned for a response rate of 68.2%.

Median age for both M and F was 19 years. 65% of M and 61% of F respondents lived with both parents at the start of their pubertal development and the rest lived with a single parent. 30% of M and 24% of F respondents had one or more older siblings. We also surveyed parents of adolescents who were patients in our clinic. A total of 200 surveys were distributed to parents and they were asked about their demographic data and then the same questions that the adolescents were asked. A total of 124 parents (56% F and 44% M) completed the survey for a response rate of

62%. The median age for parents was 39 years. Percentages were calculated from both surveys in regards to most aspects of pubertal development and sexuality.

RESULTS

85% of parents reported talking to their adolescents about puberty and sexuality and that the age at which that was done was a median of 13 years for F and 15 years for M. In contrast, 83% of teens said that someone had spoken to them about these issues. Strikingly only 63% of males said they were educated on puberty and sexuality while 98% of females said they were. Adolescents agreed with parents that the median age at which they were educated on puberty was 15 years for boys and 13 years for girls. According to the adolescents the most common way of obtaining information on puberty/sexuality was from multiple sources (49%) followed by mother 20% (see Table 1).

Male adolescents

A very poorly covered area in male adolescents was that of breast development (gynecomastia) where no parents reported mentioning that and only 5% of male adolescents said that someone had

Table 1. *Who spoke to teen about puberty?*

	% Teens	% Males	% Females
Father	3	10	0
Mother	20	2	29
Sibling	9	14	7
Teacher	6	12	3
Doctor	2	1	3
Friends	5	10	3
Other	5	7	4
More than one	49	43	51

Table 2. *The % of parents reporting talking to their male adolescents about puberty and sexuality and % of male adolescents who say they were educated on the same subject*

	<i>% Parents reporting talking to male teen</i>	<i>% Male teens reporting being talked to by parent</i>
Breast Development	0	5
Testicular size/growth	28	26
Body odor	69	38
Pubic hair	48	28
Auxiliary hair	46	15
Acne	74	15
Increase in penis size	24	9
Spontaneous erection	28	27
Growth spurt	65	31
Gender difference in growth	63	28
Pregnancy protection	22	20
Sex in general	59	48
Wet dreams	33	22
STIs	22	32
Same sex attraction	15	16
HIV/AIDS	70	58

mentioned it to them (see Table 2). Many areas were also poorly covered such as penile growth, sexually transmitted infections (STI's), pregnancy protection and same sex attraction. In other areas such as body odor, gender differences and growth spurt, more parents said that they spoke to their adolescents about these subjects, while adolescents reported a much smaller percentage (see Table 2).

Female adolescents

Overall, there was more education provided to female adolescents than to their male counterparts and more agreement between what parents and adolescents reported (see Table 3). Same sex attraction and sexual abuse/date rape were among the least covered areas while breast development and menstrual periods were the most commonly covered (see Table 3).

DISCUSSION

This study addresses an area of adolescent development that has the potential of improving or worsening the future of our adolescents. Pubertal development and sexuality are major parts of adolescent development and main determinants of adulthood success. For example an early teen pregnancy or a major sexually transmitted disease can have a profound negative effect on early adulthood or the entire life span of a person. Many of the negative outcomes can be improved by providing timely and comprehensive education regarding puberty and sexuality.

There are however several limitations of this study. The subjective nature of the survey, the potential for misunderstanding of the questionnaire and the anonymity of the respondents impairs our ability to match parents and adolescents. Also the study was

Table 3. *The % of parents reporting talking to their female adolescents about puberty and sexuality and % of female adolescents who say they were educated on the same subject*

	<i>% Parents reporting talking to female teen</i>	<i>% Female teens reporting being talked to by parent</i>
Breast Development	91	85
Menstrual Periods	93	96
Body odor	83	43
Pubic hair	81	62
Axillary hair	78	29
Acne	86	65
Growth spurt	83	46
Wet dreams	14	14
Gender difference in growth	81	35
Pregnancy protection	59	58
Sex in general	67	50
Rape/Sexual abuse	29	26
Vaginal discharge	45	45
STIs	14	42
Same sex attraction	9	20
HIV/AIDS	70	75

conducted in one state rather than on a national scale, which limits the potential for generalizing the results. That being said, the results are nevertheless useful in shedding some light on the extent of pubertal development/sexuality education our adolescents receive.

The results of this study showed significant deficiencies in the education our adolescents receive prior to and during puberty on several important issues. There is almost complete absence of education in regard to male gynecomastia despite the fact that more than 50% of males have it (14). This is important because many of these adolescents are confused and sometimes depressed by gynecomastia. We had several male adolescents that had to be treated for depression and two attempted suicide because of fear that they were

“turning into girls” when they noticed they were developing breasts (unpublished observations).

Very little education seems to be provided in such areas as sexual abuse and date rape, gender differences in growth, pregnancy protection, same sex attraction and STI's (except for HIV, see Table 3). At a time when teen pregnancy, STI's and acquaintance rape are very common it is no wonder that many of our adolescents are not aware of these problems because of lack of or inadequate knowledge. Overall boys generally receive less attention than girls on all aspects of sexuality (Table 2, 3). Although physicians may be part of the “more than one” source of education, it is still surprising that only 2% of teens said that doctors were their source of information. Pediatricians should be in the

forefront of providing accurate and timely education to their patients during routine visits.

CONCLUSION

Based on this study, we conclude that a relatively small proportion of our adolescents are armed with adequate information about most areas of pubertal development and sexual issues. Furthermore, the age at which most adolescents receive such information, if addressed at all, is past the age of onset of puberty for many teens. More thorough and timely education on pubertal development is needed to allow our teens to make well-informed choices in regards to their sexual life and to help prevent many problems related to poor choices resulting from inadequate and late sexuality educations.

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