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Parents' attitudes and knowledge about adolescent physical and physiological changes

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ABSTRACT

Background and aims*: Puberty-related health maintenance and promotion is one of the most crucial educational issues and requires adequate knowledge. Adolescence experiences physical, psychological, and social changes during puberty. At the same time, parents' understanding of this issue and related attitudes in early adolescents require information about bodily changes to prevent problems such as guilt and confusion. Thus, the current study investigated mothers' awareness of the health risks associated with puberty in their daughters.* ***Methods****: In this descriptive exploratory research design, 100 parents of adolescents (12-18 years) admitted to different wards and attending OPDs at 151 Base Hospital were selected using a random sampling method and surveyed using a researcher-developed questionnaire. The questionnaire's reliability was calculated using Cronbach's alpha, with tool II at 0.80 and tool III at 0.88.* ***Results****: Most parents (64%) had adequate knowledge, and a significant majority (87%) had a positive attitude towards adolescent physical and physiological changes. Knowledge and attitude showed a moderate positive correlation (r = 0.013) with a mean score of 3.33, indicating that better knowledge is associated with a more positive attitude.* ***Conclusion****: The findings suggest that parents have a major influence on their adolescents' understanding and experiences during this critical phase. By understanding parents' perspectives, healthcare providers and educators can develop targeted interventions to support parents in guiding their adolescents through these changes, ultimately promoting healthy development and well-being.*

Keywords*: Parents; attitudes; knowledge; adolescents; physical and physiological changes.*

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INTRODUCTION

Adolescence is one of the most charming and convoluted periods in the life span, a bridge between childhood and adulthood.[1] According to the World Health Organisation definition, adolescence covers the time between 10 and 19 years of age.[2] Adolescent population constitutes about 1.2 billion, and 85% of them live in developing countries.[3] According to the report of the population and housing census (2011), 16.4% of Iran's population is within the 10–19 age group.[4] People's future and fate are linked to making sensible choices and adjusting to the changes that occur during this stage of life.[5,6] Physiological, biochemical, social, and psychological changes occur during puberty.[7]

This time frame serves as the foundation for adult life's infrastructure, and if it is not given the attention it needs, it can lead to several psychological issues, infectious diseases, unsuccessful marriages, and unsafe and early pregnancies.[8]

The study aims to assess the knowledge and attitude of parents regarding physical and physiological changes during adolescence in 151 Base Hospital, Basistha, Assam.

MATERIAL AND METHODS

A descriptive exploratory research design was conducted among the adolescent age group (12-18 years) admitted to different wards and attending OPDs at 151 Base Hospital, using a random sampling method. Participants were included if they were available at the time of data collection and willing to participate. The data collection tools were structured questionnaires aligned with the study's objective. The tool was divided into three parts: Part I: Demographic data; Part II: Knowledge regarding physical and physiological changes during the adolescent period (semistructured questionnaires consisting of 11 items); and Part III: Attitude toward physical and physiological changes during the adolescent period (3-point Likert scale). These questionnaires were developed by thoroughly reviewing the relevant literature and were validated before the study. Reliability of the tool has been established, and the results show tool II at -0.80 and tool III at -0.88. The study adopted a sample size of 100 parents. The study was conducted only after approval from the IEC at the Army Institute of Nursing, Basistha. Formal permission was also obtained from 151 Base Hospital, Basistha, where the study was to be conducted. Confidentiality was maintained by securing all information provided by the respondents and ensuring that their information was not disclosed to anyone outside the research team. The anonymity of the respondents was maintained by using code numbers in the questionnaire and by excluding identifying data, such as names, that could link responses to specific individuals. The data collected were collected, coded, classified, and tabulated. The data was entered into SPSS 20 for analysis. The data analysis used descriptive and inferential statistics.

RESULTS

Section A: Participants' demographics

In this study, 100 parents of adolescents, of whom 49 (49%) are aged 45 years or more, have two children (58%), and physiological changes were observed at 14-15 years of age (35%). The majority, 45 (45%), belongs to a nuclear family having parents' educational status higher secondary, which includes 35(35%), occupation of either parent regular govt employee 61 (61%) with family income in Rs 31507 and above, i.e., 38 (38%) and residing in an urban area 60 (60%).

Section B: Distribution of samples according to the knowledge level of parents regarding physical and physiological changes during adolescence

Table 1 Frequency distribution of the sample according to their level of knowledge of parents, N=100

Categories of knowledge score	Number of subjects	Percentage
Inadequate knowledge (1-4 score)	3	3%
Average knowledge (5-7 score)	33	33%
Adequate knowledge (8-10 score)	64	64%

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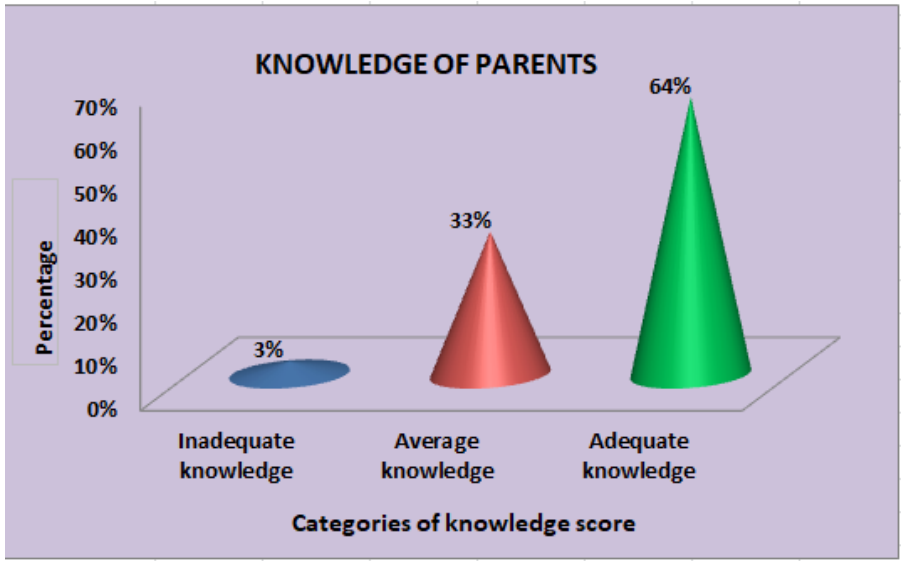

Figure 1 Conical diagram showing the percentage of knowledge of parents of adolescents

The above **Table 1** and **Figure 1** show that 64% of parents have adequate knowledge of physical and physiological changes, 33% have average knowledge, and only 3% have inadequate knowledge.

Section-C: Distribution of sample according to the attitude level of parents regarding physical and physiological changes during adolescence

Table 2 Frequency distribution of the sample according to their level of attitude of parents regarding physical and physiological changes during Adolescence, N=100

Categories of attitude score	Number of subjects	Percentage
Positive attitude (30-33)	87	87%
Neutral attitude (26-29)	12	12%
Negative attitude (< 25)	1	1%

N=100

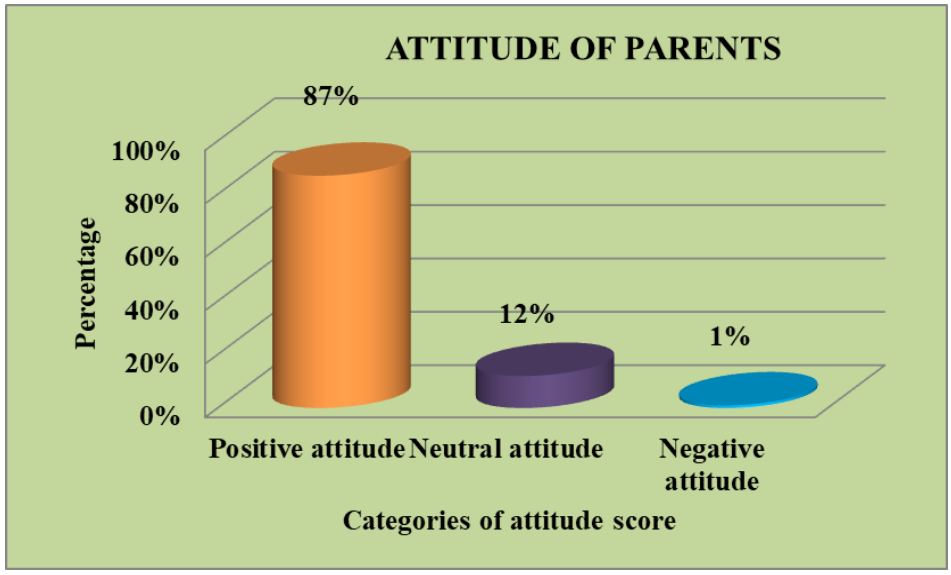

Figure 2 Cylindrical diagram showing the percentage of attitude of parents of adolescents

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The above **Table 2** and **Figure 2** show that 87% of parents have a positive attitude toward physical and physiological changes, 12% have a neutral attitude, and only 1% have a negative attitude.

Section D: Correlation between knowledge and attitude of parents regarding physical and physiological changes during adolescence

Table 3 Finding correlation between knowledge and attitude of parents regarding physical and physiological changes during Adolescence, N=100

Variables	Mean score	'r' value
Knowledge	3.33	0.013
Attitude	3.33	

The data presented in the table shows that there is a moderately positive correlation between knowledge and attitude among parents, with a mean score of 3.33, as evidenced by the r value of 0.013. Therefore, findings reveal that increased knowledge among parents about physical and physiological changes in adolescents is associated with a positive attitude towards adolescents, and vice versa.

DISCUSSION

Part I: Distribution of samples based on demographic data

The survey revealed that 49% of parents are over 45 years old, and 58% have two children. Notably, 35% of parents reported significant physical and physiological changes in their children at ages 14-15. Most parents (35%) were educated up to the higher secondary level, and their average family income was Rs 31,507 and above.

Part II: Parents' knowledge regarding physical and physiological changes during adolescence

The present study indicates that the majority (64%) of parents have adequate knowledge regarding physical and physiological changes, whereas 33% have average knowledge and only 3% have inadequate knowledge.

A similar study conducted in Tamil Nadu by JL Prasad found that 33% of adolescent girls had moderately adequate knowledge, while 6% had inadequate knowledge. Only 11% of the girls possessed adequate knowledge, highlighting a significant gap in awareness among most adolescent girls.[9] A descriptive study conducted in Ludhiana, Punjab, by M Kaur found that 82% of adolescent girls had average knowledge about pubertal changes, while 13% had good knowledge. A small percentage (5%) had below-average knowledge, indicating a need for targeted education and awareness programs.[10] Similarly, a study conducted in Arunachal Pradesh by Mathew L and Rani B found that most adolescent girls (55%) had average knowledge about pubertal changes. Additionally, 26.6% had good knowledge, 16.7% had poor knowledge, and only a small percentage (1.7%) had excellent knowledge, highlighting varying levels of awareness among the participants.[11]

Part III: Parents' attitudes regarding physical and psychological changes during adolescence

The present study reveals that most parents (87%) exhibit a positive attitude towards physical and physiological changes in their children. Meanwhile, 12% of parents display a neutral attitude, and a small minority (1%) hold a negative attitude, indicating an overall favourable outlook among parents.

Similar studies have reported varying results on attitudes towards pubertal changes. A study by Krishma, Sagar, and Mamta (2023)[12] in Ludhiana, Punjab, found that 93.5% of early-adolescent girls had a favourable attitude, while 6.5% had an unfavourable attitude. In contrast, a study by Prajapati et al. (2023)[13] in Eastern

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Nepal found that 60.3% of respondents had a favourable attitude and 39.7% a moderately favourable attitude. These findings suggest that while many adolescents have a positive attitude towards pubertal changes, there is still room for improvement. Conducting educational classes and programs on menstruation and pubertal changes, and encouraging student involvement, could further enhance their attitudes and understanding.

Part IV: **Correlation between knowledge and attitude of parents regarding physical and physiological changes during adolescence**

The present study indicates a moderate positive correlation between parents' knowledge and attitude, with an 'r' value of 0.01, suggesting that as parents' knowledge of adolescents' physical and physiological changes increases, their attitude towards them becomes more positive, and vice versa. A study by Krishma et al. (2023) investigated the correlation between knowledge and attitude, revealing a non-significant relationship ($p = 0.09$) with a correlation coefficient of $r = 0.11$. This suggests that there is no statistically significant correlation between knowledge and attitude, indicating that an increase in knowledge may not necessarily influence attitude in this context.[12] A study conducted by Rani M et al., in two government schools of Ambala district found that the correlation coefficient (r) for pre-adolescent girls and boys was -0.178 and -0.025, respectively. The results indicated no significant correlation at the 0.05 level, suggesting that the variables under study were not significantly related to this population.[14]

Limitation: The sample consisted of parents who arrived at the hospital in the morning. The only days of the week when OPD was open were the alternate days. The findings may not apply to all parents, especially those from diverse cultural or socioeconomic backgrounds. The study may be constrained by a small sample size or insufficient representation from diverse socioeconomic, cultural, or geographical backgrounds.

CONCLUSION

This study highlights the crucial role parents play in adolescents' development. While many parents have basic knowledge of physical changes, there's a significant gap in understanding psychological and emotional aspects. This knowledge gap can strain parent-child relationships. Parents' attitudes directly impact their engagement, with supportive attitudes fostering open communication and healthier development. Targeted educational programs can enhance parental knowledge and promote positive attitudes, ultimately supporting adolescents' navigation of this critical phase.

Conflict of interest: The authors have none.

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