Original research article

A study on social profile of adolescent girls attending tertiary care hospital

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Abstract

Adolescence is characterized by an exceptionally rapid rate of growth and is marked by physical and sexual maturation, social and economic independence, development of identity, acquisition of skills needed to carry out adult relationships and roles, and the capacity for abstract reasoning. All adolescent girls between the age group of 10-17 years coming to OPD or getting admitted in hospital were included in the study after taking informed consent. Among 106 subjects, 51(48.1%) had 4 members in their family, 29(27.4%) had 5 members and 15(14.2%) had 6 members in the family. 103(97.2%) children love spending time with family, 2(1.9%) were not happy and 1(0.9%) were happy sometimes.

Keywords: Adolescence, social profile, physical activity

Introduction

The morphological, physiological and psychological changes occurring in the growing boys and girls as the gonads change from infantile to adult state is collectively called puberty and this is a period of profound physical and behavioural changes. This extends from 10-17 years and an immature child become an adult. A process or a series of varied, rapid and extensive changes as well as period of life is adolescence [1, 2].

The mechanism of the initiation of puberty is not entirely understood; however, it is known that the GnRH neurons are the primary role player in the initiation of puberty. The GnRH neurons develop in the olfactory placode and then migrate to the area of the hypothalamus during the gestational period. Puberty begins with the pulsatile secretion of GnRH from these neurons; other neurotransmitters, GABA and NMDA, are also linked with this process. Additionally, the genes KISS1 and neurokinin B have recently been shown to be involved in the regulation of GnRH release. The increased levels of GnRH increase the release of LH and FSH from the anterior pituitary. During puberty, the negative feedback mechanism is less sensitive, allowing for higher FSH and LH levels to circulate within the body [3, 4].

FSH increases oestrogen production by the ovaries in girls, and in boys triggers testicular growth and supports maturing spermatozoa. LH initiates ovulation and creates the corpus luteum in females, and in males acts on Leydig cells in the testes to increase testosterone production. The Increased production of adrenal androgens leading to the development of acne, axillary hair, body odour, and pubic hair is also taking place during the onset of puberty. The linear growth of puberty results from pulsatile increases in growth hormone (GH) secretion, which is secreted by the pituitary gland. Increases in insulin-like growth factor 1 are also present. Oestrogen increases the rates of GH secretion and is involved in growth plate acceleration and fusion. Testosterone increases insulin-like growth factor 1 levels and bursts of GH secretion [5, 6].

Methodology
Study Subjects
All adolescent girls between the age group of 10-17 years coming to OPD or getting admitted in Hospital.

Study Design
Cross-sectional study.

Sampling Procedure
All adolescent girls between the age group of 10-17 years coming to OPD or getting admitted in hospital were included in the study after taking informed consent.

Inclusion Criteria
- All school going children belonging to the age group of 10-17 yrs.
- Children belonging to the same area of distribution to avoid the variation in race, lifestyle and ethnicity

Exclusion Criteria
- Any handicapped or physically disabled children.
- Adolescents who have been married at an early age.
- Adolescents with any genetic or predisposing factors.
- Those whose parents are not willing to give consent.

Sample Size
Adding 10% non-responsive rate, the minimum sample size required for the study is 101. We collected 106 study samples for this study.

Results

Table 1: Total no: of family members

No: of family members	Frequency	Percentage
3	6	5.7
4	51	48.1
5	29	27.4
6	15	14.2
7	2	1.9
8	3	2.8
Total	106	100.0

Among 106 subjects, 51(48.1%) had 4 members in their family, 29(27.4%) had 5 members and 15(14.2%) had 6 members in the family.

Table 2: Total no: of siblings for the study subjects

No: of siblings	Frequency	Percentage
1	36	34.0
2	49	46.2
3	12	11.3
4	7	6.6
None	2	1.9
Total	106	100.0

49(46.2%) had 2 siblings, 36(34%) had 1 sibling and 12(11.3%) had 3 siblings.

Table 3: Love spending time with family

Love spending time with family	Frequency	Percent
No	2	1.9
Sometimes	1	.9
Yes	103	97.2
Total	106	100.0

103(97.2%) children love spending time with family, 2(1.9%) were not happy and 1(0.9%) were happy sometimes.

Table 4: Comfortableness in physical appearance

Physical appearance	Frequency	Percentage
Comfortable	77	72.6
Not comfortable	29	27.4
Total	106	100.0

77(72.6%) were comfortable in their physical appearance and 29(27.4%) were not comfortable.

Table 5: Frequency of hours spend with friends per day

Hours spend with friends per day	Frequency	Percent
<1 hour	69	65.1
2-3 hour	21	19.8
4-5 hour	9	8.5
>5 hour	7	6.6
Total	106	100.0

69(65.1%) spend<1 hour per day with friends, 21(19.8%) spend 203 hrs per day with friends, 9(8.5%) spend 4-5 hrs per day with friends, 7(6.6%) spend >5 hrs with friends.

Table 6: Frequency of difficulty in sleeping

Difficulty in sleeping	Frequency	Percent
No	77	72.6
Sometimes	15	14.2
Yes	14	13.2
Total	106	100.0

77(72.6%) have no difficulty in sleeping, 14(13.2%) have difficulty in sleeping always and 15(14.2%) sometimes have difficulty in sleeping.

Table 7: Reason for physical activity

Reason for physical activity	Frequency	Percentage
For leisure	26	24.5
I don't like Physical activities	4	3.8
To catch up with friends	12	11.3
To stay healthy and fit	64	60.4
Total	106	100.0

64(60.4%) do physical activity to stay healthy and fit, 26(24.5%) do physical activity for leisure and 12(11.3%) do physical activity to catch up with friends.

Discussion

Growing secular trends of 'fast food' and 'eating out' life style has become a new trend and these physiological and behavioural changes during adolescence warrant the attention of health practitioners to prevent the onset and continuation of unhealthy lifestyle among adolescents through proper monitoring and health education.22 One of the most commonly mentioned changes is the increased availability of highly energy-dense manufactured foods, especially those rich in saturated fat and simple carbohydrates, at the expense of plant-based foods, combined with few opportunities for physical activity.

Andrie et al. (2021) [7] did a study to identify psychosocial factors associated with excess body weight of 414 adolescents. Of the total sample of adolescents, 54.6% had normal body weight and 45.4% were overweight or obese. Psychological problems, maternal occupation, the absence of physical activity, and poor school performance were associated with adolescent overweight/obesity.

Bjertnaes et al. (2020) [8] did a study to explore if mental health indices covaried with body mass index (BMI) in adolescence and if there were gender-related disparities. BMI was positively associated with peer problems indicating that for every point increase in peer problems. The association between internalizing (i.e., peer and emotional) problems and BMI and conduct problems and BMI was different for boys and girls.

Veena Rajachar, Manoj Kumar Gupta (2017) [9] conducted a study among 800 adolescent girls in Karnataka with the objective to assess the psychosocial status and quality of life (QOL). Nearly 5% girls were at severe and very severe risk of developing psychosocial abnormalities in both rural and urban study area. The mean QOL score was highest for social relations (7102±21.6) and was minimum for physical domain (49.59±12.63).

O Neil et al. (2014) [10] systematically reviewed 12 epidemiological studies to determine whether an association exists between diet quality and patterns and mental health in children and adolescents; 9 explored the relationship using diet as the exposure, and 3 used mental health as the exposure. They found evidence of a significant, cross- sectional relationship between unhealthy dietary patterns and poorer mental health in children and adolescents and also identified a consistent trend for the relationship between good-quality diet and better mental health and some evidence.

Conclusion
- 77(72.6%) have no difficulty in sleeping, 14(13.2%) have difficulty in sleeping always and 15(14.2%) sometimes have difficulty in sleeping.
- 64(60.4%) do physical activity to stay healthy and fit, 26(24.5%) do physical activity for leisure and 12(11.3%) do physical activity to catch up with friends.

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