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Original Research Article

Awareness of physical changes occurring in adolescent period: an interventional study among girls 13-17 years of age in rural field practice area Government Medical College, Amritsar

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ABSTRACT

Background: Adolescence is a crucial period of life having stress and storms. It is the important period of development that follows the onset of puberty during which a young person develops from a child into an adult. During this transitional stage that extends from 10-19 years, there occurs physical and psychological development that follows the period of puberty leading to adulthood. This study aimed to assess the awareness of physical changes among adolescent girls to assess the awareness of physical changes among adolescent girls.
Methods: This interventional study was carried out in the rural area of Amritsar, two government senior secondary schools were selected by simple random technique. In these schools adolescent girls of the age group 13 to 17 years were included and out of school adolescent girls of the same age group who were residents of these two villages were also included in the study. The study was carried out in three phase pre intervention, intervention and post intervention phase.
Results: Before intervention 45.21% of the respondents did not know and after intervention 68.26% came to know that 10-19 is the age group under adolescence periods. Before intervention respondents 32.17% had no knowledge and after intervention 53.34% had good knowledge.
Conclusions: Information education and communication sessions significantly increases the knowledge of adolescent girls about physical changes occurring in this period.

Keywords: Adolescent girls, Physical changes, Rural area

INTRODUCTION

Adolescence is a crucial period of life having stress and storms. It is the important period of development that follows the onset of puberty during which a young person develops from a child into an adult.[1] During this transitional stage that extends from 10-19 years, there occurs physical and psychological development that follows the period of puberty leading to adulthood.[2]

Different types of changes occur at this distinct phase of life and every change has its own importance, so this period of 10-19 years can be divided into three phases, early adolescence: 10 to 13 years; characterized by growth spurt and Secondary sexual development. Mid adolescence: 14 to 16 years; during which there occurs desire for experimentation and formation of new relations with opposite sex. Late adolescence: 17 to 19 years; during this phase there is well formed opinions and ideas.[3]

It can be a stressful period for adolescent girls as there are many physical changes like increase in height and weight, breast development, growth of pubic and axillary hair, appearance of acne, as well as physiological changes during menstruation.[4] Many a times adolescents have misbeliefs and wrong information about all these changes, this affects their personality as well as social and reproductive life.

Knowledge about these changes helps them to cope with it better and adjust to the new phase in life more efficiently and effectively. The knowledge regarding physical changes during adolescent was poor especially among rural adolescent girls and very few interventional studies was conducted in rural areas to assess the impact of health education on adolescent girls. That's why this interventional study was conducted among the rural adolescent girls.

This study aimed to assess the awareness of physical changes among adolescent girls and to assess the impact of health education on awareness of physical changes.

METHODS

The study was carried out in the rural field practice area of Department of Community Medicine, Government Medical College, Amritsar for a period of one year from 1st January 2018 to 31st December 2018. After taking permission from institute ethical committee and from District Education Officer, list of Government senior secondary schools in the block was obtained from the office of District Education Officer. By using simple random technique two schools were selected from the enlisted government senior secondary schools.

In the selected schools adolescent girls of the age group 13 to 17 years were included and out of school adolescent girls of the same age group who were residents of these two villages were also included in the study. The age limit of 13 years was fixed because the average age of menarche is 12.5 years.[5] The upper age 17 years was fixed as nearly 17% of all the girls are married by the age of 18 years in India.[6] The heads of these institutions and class in-charges were explained about the importance and the purpose of study. A list of eligible adolescent girls was obtained from the teacher in charges. Schedule of the visits were made so as not to disturb their classes and also taking consideration of the holidays and examination. List of out of school adolescent girls was obtained with the help of female health workers of these areas.

The study was conducted in three phases. In pre-intervention phase, on the day of visit, the purpose of study was informed to the students. Those who were willing to participate were enrolled in the study and informed assent was taken from the class in-charge. Similarly, with the help of ASHAs, eligible out of school adolescent girls were enrolled by giving prior information regarding date and time of the visit and were asked to assemble at anganwadi center and sub center near their homes for participation and informed assent was taken from elderly female in the family. The study tool used was pre designed semi-structured questionnaire prepared in vernacular language, which was explained to them and were asked to fill it. Privacy and confidentiality was maintained and it was also conveyed that information collected will be used for study purpose only.

During intervention phase information, education and communication sessions was conducted in each batch of 25 girls for about 20-25 minutes in vernacular language about physical changes during adolescent period, normal menstrual pattern. Queries related to the topic were also explained.

After 3 months in post intervention phase, re-evaluation was done by administering them same questionnaire to assess the impact of Information, education and communication.

There were 250 eligible adolescent girls in the pre intervention test (214) were in both the schools and 36 were out of school adolescent girls in both the villages but subsequently 14 in school girls and 6 out of school adolescent girls were absent in either intervention sessions or in post intervention test, so they were not included in the study sample. The sample therefore consisted of 230 adolescent girls. Information obtained from participants in pre and post intervention phase was compiled in MS word excel, analyzed and by using appropriate statistical method (chi-square test) valid conclusions were drawn.

RESULTS

Out of total 230 respondents more than half of the adolescents 141 (61.30%) were in mid adolescence period. Before intervention 2/3rd (66.08%) respondents had partial knowledge and 74 (32.17%) had no knowledge and after intervention more than half of the respondents (53.34%) had good knowledge and only 5 (2.17%) had no knowledge. Out of total 230 respondents, 187(81.13%) attained menarche whereas 43 (18.69%) have not attained menarche. Out of total 187 respondents, according to 3/4th of the respondents (74.33%) menstruation is a normal process and after intervention 162 (86.63%) had knowledge that menstruation is a normal process.

Table 1: Distribution of respondents according to their age group (n=230).

Age group	Number of respondent	Percentage
Early adolescence	54	23.47
Mid adolescence	141	61.30
Late adolescence	35	15.21
Total	230	100

Table 2: Distribution of respondents according to their knowledge regarding the age group under adolescent period (n=230).

Knowledge	Number of respondents (pre-intervention)	Percentage (pre-intervention)	Number of respondents (post-intervention)	Percentage (post-intervention)
Correct	40	17.39	157	68.26
Incorrect	104	45.21	50	21.73
Don't know/NR	86	37.39	23	10
Total	230	100	230	100

Table 3: Distribution of respondents according to their knowledge regarding physical changes occurring in adolescent period (N=230).

Knowledge	Number of respondents (pre intervention)	Percentage (pre intervention)	Number of respondents (post intervention)	Percentage (post intervention)
Good	4	1.73	123	53.34
Partial	152	66.08	102	44.34
No knowledge	74	32.17	5	2.17
Total	230	100	230	100

Table 4: Distribution of respondents who attained menarche (n=230).

Menarche attained	Number of respondents	Percentage
Yes	187	81.13
No	43	18.69
Total	230	100

Table 5: Distribution of respondent according to their awareness about menstruation before menarche (n=187).

Awareness	Number of participants	Percentage
Yes	55	29.41
No	132	70.58
Total	187	100

Table 6: Distribution of respondents according to source of information about menstruation before menarche (n=55).

Source	Number of participants	Percentage
Sister	25	45.45
Mother	13	23.63
Friend	11	20
Teacher	6	10.9
Total	55	100

Table 7: Distribution of respondents according to their perception about menstruation after attaining menarche (n=187).

Perception	Number of respondent (Pre intervention)	Percentage (pre intervention)	Number of respondent (post intervention)	Percentage (post intervention)
Normal process	139	74.33	162	86.63
Disease	38	20.32	18	9.62
Curse	10	5.34	7	3.74
Total	187	100	187	100

DISCUSSION

Out of total 230 respondents more than half of the adolescents 141 (61.30%) were in mid adolescence period, followed by 54 (23.47%) in early and 35(15.21%) were in late adolescence period. Before intervention out of total 230 respondents, almost half 104 (45.21%) of the respondents did not know and after intervention two third of the respondents 157 (68.26%) came to know that 10-19 is the age group under adolescence period. A study conducted by Manjula et al (2012) among adolescent girls of Davangere showed that in pre intervention phase 89.2% of the respondents knew the age group under adolescent period and after intervention 96.4% had knowledge.[7] Before intervention out of total 230, 2/3rd (66.08%) respondents had partial knowledge and 74 (32.17%) had no knowledge and after intervention more than half of the respondents (53.34%) had good knowledge and only 5 (2.17%) had no knowledge.[8] A study conducted by Gupta et al among school going adolescent girls of Gorakhpur (Uttar Pradesh) showing almost similar results. Study in the rural area of Haryana by Jain et al showed that 63.77% and 61.5% respectively, had partial knowledge regarding physical changes. Out of total 230 respondents, 187 (81.13%) attained menarche whereas 43 (18.69%) have not attained menarche. A study conducted by Bachloo et al among adolescent girls of Ambala district Haryana showed that 92.5% of adolescents attained menarche at the time of interview.[9] Out of total 187 respondents only 55 (29.41%) were aware about the menstruation before menarche. A study conducted by Kansal et al among rural adolescent girls in Varanasi showed that 29.4% were aware about menstruation before menarche, which is in concordance with present study.[10] Out of total 55 respondents, sister was the main source of information in almost half 25 (45.45%) of the respondents. A study conducted by Kansal et al among rural adolescent girls in Varanasi sisters were the main source, which is in accordance with present study.[10] Out of total 187 respondents, according to 3/4th of the respondents (74.33%) menstruation is a normal process and after intervention 162 (86.63%) had knowledge that menstruation is a normal process. A study conducted by Chadalawada et al among adolescent girls of Vijayawada (Andhra Pradesh) stated that only 9.3% of respondents had perception that menstruation is a curse, the findings are almost similar with present study in which according to 5.34% of the respondents had similar perception.[11]

This study has few limitations. The study was conducted in the government schools of rural area only and information education and communication session was done only one time.

CONCLUSION

After information, education and communication sessions more number of adolescent girls gain knowledge about the physical changes occurring in this age group. So these kind of health education sessions should be held regularly to provide right information.

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Ethical approval: The study was approved by the Institutional Ethics Committee (BFHUS/2K18p-TH/134 dated 4/1/19)

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