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Knowledge, Attitude & Practice on Anaemia among Adolescents Girls: An Interventional Study

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Abstract

Background: Adolescent girls are particularly vulnerable to anemia. Anemia is very common worldwide among adolescent girls. The magnitude of anemia as a health problem is enormous among adolescent girls' worldwide especially developing countries.Anemia among adolescent girls develops due to accelerated increase in the requirements for iron, coupled with poor dietary intake, menstrual loss high rate of infection and worm infestation. It can be involved by increasing awareness and the advancement of adequate knowledge, attitudes and practices aboutanemia.

Aim: To assess the knowledge, attitude and practice and effectiveness of health education intervention program regarding anemia.

Assumptions:

- Anaemia remains a very common health problem among adolescents'girls and leads to high morbidity and mortality rates.
- Adolescents' girls may have inappropriate knowledge, varying attitude and practice.

HYPOTHESES

- **H_1:**There will be significant increase in posttest knowledge scores as compared to pre-test knowledge scores regarding anemia among Adolescents' girls.
- **H_2:** There will be a significant association between knowledge, attitude and practices of anemia with selected demographic variables

Materials and Methods: The evaluative, Quasi-experimental one group pre-test and post-test design was adopted. 106 subjects were recruited by non- probability convenience sampling technique.Adolescent girls with age group of 14 to 17 years were included.Pre-test was conducted by questionnaire based on the subsequent domains like knowledge, attitude and practices regarding anemia. Post test was conducted with the same questionnaire after health education program to assess the effectiveness of the program. The collected data was tabulated and analyzed by using descriptive statistics and inferential statistics.

Results: The study revealed that pretest score of the subjects, 68.2% of the subjects had poor knowledge, 58.3% of the subjects had unfavorable attitude and 56.5% of the subjects were not perform suitable practice to prevention of iron deficiency anemia. Post test scores of the subjects, Majority of the subjects, 94.2% of the subjects had adequate knowledge, 89% of the

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subjects had favorable attitude and 87.5% of the subjects were perform satisfactory practice to prevention of iron deficiency anemia.

Conclusion: The current study was an effort to assess the knowledge, attitude and practice regarding iron deficiency anaemia among adolescents' girls. Health education intervention is the attempt to enable the adolescent girls as they need special attention due to increase demand of their physiological growth.

Key words: Knowledge, Attitude, Practice, Adolescents girls, Anemia and Health education.

INTRODUCTION

Adolescence being a rapid transition phase with promptrequisite of additional nutrition[1].The adolescent girl is more likely to be neglected as she is deprived of good food and education and is utilized as an extra working hand to carry out the household responsibilities[2]. Anemia in adolescent girls in future features to high maternal mortality rate, high incidence of low birth weight babies, high perinatal mortality and fetal wastage.[3] Anemia is a silent but deteriorating health problem and Iron deficiency anemia being very common in developed countries. The prevalence is as high as 44 % in developing country. In developing countries it's not only poverty but social factors too play in poor nutrition, poor health management among adolescent girls[4].

The magnitude of anemia as a health problem isenormous among adolescent girls worldwide especially developing countries[1]. Adolescent girls (10–19years) are at a high risk of iron deficiency anemia dueto accelerated increase in requirement, poor dietaryintake, physiological losses like menstrual bloodlosses[2], high rate of infection and worm infestation aswell as the consequence of early marriage and adolescent pregnancy[3-4].

Previously,adolescents remain a largely unrestricted and hard toreach this population, in which the specific needs of adolescentgirls are frequently ignored[5, 6].

It can be involved by increasing awareness and theadvancement of adequate knowledge attitudes and practices aboutanemia. There is lack of appropriate knowledge andattitude regarding healthy eating among adolescentsand subsequent unhealthy eating practice [7, 8,9].Themajority of adolescents can be reached effectivelythrough schools, which is an appropriate place forhealth education.

With the above information, researcher personal interest and professional experience

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researcher felt that there is a need to improve the knowledge, attitude and practice on iron anemia among adolescents' girls. This study was carried out to assess the Knowledge, Attitude and Practice (KAP) on anemia among adolescent girls in selected Government high schools of Vadodara.

Aim: To assess the knowledge, attitude and practice and effectiveness of health education intervention program regarding anemia.

Assumptions:

- Anaemia remains a very common health problem among adolescents' girls and leads to high morbidity and mortality rates.
- Adolescents' girls may have inappropriate knowledge, varying attitude and practice.

HYPOTHESES

- **H_1:**There will be significant increase in posttest knowledge scores as compared to pre-test knowledge scores regarding anemia among Adolescents' girls.
- **H_2:** There will be a significant association between knowledge, attitude and practices of anemia with selected demographic variables.

MATERIALS AND METHODS

The evaluative, Quasi-experimental one group pre-test and post-test design was adopted. Out of 156 adolescent girls, 106 subjects were recruited by non- probability convenience sampling technique. The study was carried out in the Government high school of Vadodara. Adolescent girlswith age group of 14 to 17years, willing to participate instudy and available at the time of datacollectionwere included. Adolescent girlsnot feeling well during a period of data collection were excluded. Formal written permission was obtained from the concerned authority. Primarily, the investigators surveyed the selected schools to identify the adolescent girls. The participants and their parents/guardian and school teacher were approached during their free time. Each of them was informed about intention of the study and parental written consent and assent from children was obtained with their anonymity and confidentiality of data. Pre-test was conducted by questionnaire based on the subsequent domains knowledge, attitude and practices regarding anemia.Ahealth education program was conducted for 45 minutes regardingpreventive and curative aspects of anemia. Health education program included power pointpresentation, pamphlets and visual display of iron rich foods like greenleafy vegetables, sprouted pulses, citrus

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fruits and jaggery. Post test was conducted with the same questionnaire after health education program to assess the effectiveness of the program. About 30 to 45 minutes was spent by each subject for answering the questions.

The obtained data were analyzed using SPSS-16 software. More specifically, descriptive statistics (frequency and percentage, mean, standard deviation) were used to describe the subjects' characteristics and level of anemia. Paired't' test was used to evaluate the effectiveness of the health education program. Chi-square test used in order to find out the association between the knowledge, attitude and practice and selected socio-demographic variables. The level of significance was set at $p<0.05$.

RESULTS

One hundred (106) adolescent girls were participated in the study for final analysis. Where majority of the subjects82% of the subjects belongs to age group of 13-14 years, 79% of the subjects were belongs to 8^{th} standard of class, 71% of the subjects had attained menarche at age 14-15years, 82 % of the subjects belongs to nuclear family,94% of the subjects were belongs to mixed by diet, 52% of the subjects had family members less than 4. In relation to educational status, 85% of the subjects mothers were had primary education and 76% of the subjects fathers were had secondary education. 78% of the subjects' mothers were housewives and 84% of the subjects fathers were farmer. In relation to awareness about anemia, 49% of the subjects were aware. Based on source of information, 58% of the subjects' source of information was family members.

The study revealed that pretest score of the subjects, 68.2% of the subjects had poor knowledge, 58.3% of the subjects had unfavorable attitude and 56.5% of the subjects were not perform suitable practice to prevention of iron deficiency anemia. Post test scores of the subjects, Majority of the subjects, 94.2% of the subjects had adequate knowledge, 89% of the subjects had favorable attitude and 87.5% of the subjects were perform satisfactory practice to prevention of iron deficiency anemia.

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Table 1: Effectiveness of health education intervention on knowledge, attitude and practice regarding Iron deficiency anemia. n=106

SR NO	Knowledge Variables	Paired 't' value
1	General information on Anemia	14.218
2	Meaning and definition	9.080
3	Risk factors and causes	13.116
4	Sign and symptoms	7.992
5	Diagnostic evaluation	12.099
6	Management	11.038
7	Prevention and control	13.549
8	**Overall**	29.16

Table 1 shows that the area wise t = value, it was found that the overall't' value was 29.16. The calculated' value is more than the table value and found to be statically significant at $p<0.05$ level of confidence. It revealed that there is an enhancement of knowledge indicating the effectiveness of health education intervention regardingprevention of iron deficiency anaemia. Hence the research hypothesis H_1- stated that there is a significant difference between pretest scores and posttest scores on knowledge, attitude and practice regarding anaemia among adolescents' girls was accepted.

The computed chi-square values was less than the table value in terms of age, standard of class, type of family, family income, diet, educational status of father, occupation of mother and father and awareness and source of information. Hence there was no significant association was found to exist between level of knowledge, attitude and practice and selected socio demographic variables. Hence the research hypothesis H_2 -stated that there is a significant association between the level of knowledge,attitude and practice and selected socio demographic variables was rejected. But in relation to age of menarche attained, educational status of mother and number of members in the family there was a significant association.

DISCUSSION

The results of the study showed that there is anenhancement of knowledge indicating the effectiveness of health education intervention regarding iron deficiency anaemia. After

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intervention of health education, findings indicated that majority of the subject had adequate knowledge, favorable attitude and satisfactory practice about the prevention of iron deficiency anemia among adolescents girls. It was found that the main source of information for theadolescents girls were family members and school teachers.

In current study, knowledge being poor, attitude being unfavourable and practice being unsatisfactory were identified and health education given through various forms. Similar results regarding knowledge attitude and practice was comprehended in the study conducted by Angadi and Sanjitha in urban slum of avenge among adolescent girls[10].

In existing study71% of participants had attained menarche. Thestudy done by Gupta et al showed attaining menarchewas associated with anemia among adolescent[11]. This makes an important note on health educationwhich is very much important in buildingthe bridge in continuum of care. Study done byVermaet al also says that menstruating girls aremore prone to be anemi[12]. The findings in thecurrent study showed improvement in the knowledgeattitude and practice after health education.Similar results found in study conducted by Jalamboet al where positive results were obtained after health education using various approaches[13].Study done by Verma et al,revealed that knowledge among adolescent girls was significantlyincreased after the intervention[14]. Study conducted by Roopal Mittal et al,after teaching nutritional education through various methods the results were very good and responsive[15].Study conducted byBandopadya et al, revealed that post-interventional score improved showing that health education play an effectiverole in improving health of adolescents girls by increasingknowledge and changing their attitude[16].Study conducted by Marwan et al showed nutrition education intervention has an impact on improvingknowledge, attitude and practices of femaleadolescents compared with control [17].Study doneby Grover et al, showed a statisticallysignificant gain in KAP scores of adolescent girlsafter the intervention[18].

CONCLUSION

Most adolescents' girls are lack knowledge regarding anaemia, its causes, prevention and management in spite of many health education sessions in school. The current study was an effort to assess the knowledge, attitude and practice regarding iron deficiency anaemia among adolescents' girls. Health education intervention is the attempt to enable the adolescent girls as they need special attention due to increase demand of their physiological growth.The teachers

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and family members training will likely increase students' knowledge, influence their attitudes and motivate their practice. Majority of the reviews indicated that students with inappropriate beliefs and habits were more likely to have unfavorable attitude. School authorities, community leaders and parents must integrate in implementing and sustaining nutrition and health education program within the school which is very vital to promote healthy behaviors. The interdisciplinary approach will be beneficial to sensitize adolescent girls on related topics and also contribute to self-care and behavior change hence adolescents' girls improve their quality and value of life.

Conflict of interest

The author declares that they have no conflicts of interest

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