



## A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF ADOLESCENCE GIRLS REGARDING PREVENTION OF IRON DEFICIENCY ANEMIA IN SELECTED RURAL COMMUNITIES IN BANGALORE

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### ABSTRACT

Anemia is a major health problem throughout the world with an annual prevalence of 4000 million. The prevalence rates are higher in developing countries like India, especially toddler, adolescents and women in the reproductive age. The study was aimed to assess the knowledge and attitude of adolescent girls regarding prevention of iron deficiency anemia in selected villages at Bangalore. Descriptive research design was adopted and non probability convenient sampling technique was used to select the sample. The study was conducted in rural communities of Bangalore where 60 samples who satisfied the inclusion criteria and gave voluntary consent for the study were selected. Structured interview schedule for assessing the knowledge and 5 point liker scale for assessing the attitude were used to collect data from the samples. The data obtained was analysed using descriptive and inferential statistical methods and interpreted in relation to the objectives of the study. The result of the study revealed that there was inadequate knowledge and neutral attitude among adolescent girls regarding prevention of iron deficiency anemia. There was a positive correlation between knowledge and attitude of adolescent girls with regarding to prevention of anemia. The study concluded that adolescent girls should be sensitized with the knowledge of prevention of anemia to enhance their understanding and to have a better attitude.

**KEY WORDS:** Adolescent girls, knowledge, attitude, iron deficiency anemia.



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Received on: 16-01-2017

Revised and Accepted on: 16-02-2017

DOI: <http://dx.doi.org/10.22376/ijpbs.2017.8.2.b179-182>

## INTRODUCTION

The healthy existence of children is essential to build up a challenging nation. Adolescence is a transition from dependent childhood to independent and responsible adulthood. It is a cross road in life when choices and decisions made become crucial for the future of an individual. Adolescents learn and adopt new knowledge and practices more easily and generally these are long lasting with impact on next generation. Adolescence has been defined by the world health organization as the period of life span between 10 to 19 years of age.<sup>1</sup> The world is home to 1.2 billion individuals aged 10-19 years and India has the largest national population of adolescents (243 million), followed by China (207 million), the United States (44 million), Indonesia, and Pakistan (both 41 million each).<sup>3</sup> Anemia is one of the most widespread nutritional deficiency disease and major public health concern all over the world affecting all the ages and both gender. It is a one of the most prevalent health issue among women within reproductive age group. WHO has estimated that prevalence of anemia among reproductive age women is 14% in developed and 51% in developing countries while it is 65-75% in India.<sup>4</sup> Anemia in India primarily occurs due to iron deficiency and is the most widespread nutritional deficiency disorder in the country today. According to National Family Health Survey (NFHS)-III data, over 55% of both adolescent boys and girls are anemic. Adolescent girls in particular are more vulnerable to anemia due to rapid growth of the body and loss of blood during menstruation. According to NFHS-III, almost 56% of adolescent girls aged 15-19 years suffer from some form of anemia. More than 39% adolescent girls (15-19 years) are mildly anemic, while 15% and 2% suffer from moderate and severe anemia, respectively.<sup>4</sup> In Karnataka NFHS-III, the prevalence of anemia among adolescent girls, 15-19 years, is 51.3% including 33.5% with mild anemia, 16.5% moderate anemia, and 1.3% with severe anemia.<sup>5</sup> Thus remaining as serious public health problem and has changed little over the last several decades in spite of National Anemia Control Programme for the prevention and control of anemia among pregnant women and children. To combat anemia during adolescence, with far reaching benefits in terms of safe motherhood and healthier future generations, an initiative called "12 by 12 initiatives" was launched on 23rd April 2007 at Delhi, by Federation of Obstetrics and Gynecological Society of India (FOGSI), in collaboration with Govt. Of India, WHO, and UNICEF.<sup>6</sup> After reviewing above facts the student researcher came a cross with many adolescent girls often do not get enough iron to keep up with menstrual losses, more likely to be a victim in a family with limited resources, the female child is more likely to be neglected and poor habitual dietary pattern. Therefore, lack of awareness among adolescent girls comes with nutritional anemia. The investigator during their clinical and community posting observed many adolescent girls with iron deficiency anemia and discovered that lack of appropriate knowledge about anemia and its prevention is one of the main cause for its high prevalence. Above all most of the adolescent girls from rural community did not have easy access to health facilities and they were ignorant about their health

status. So keeping this background in mind the researchers felt the need to conduct the present study assessing the the knowledge and attitude of adolescent girls regarding prevention of iron deficiency anemia in selected rural community in Bangalore.

## STATEMENT OF THE PROBLEM

A study to assess the knowledge and attitude of adolescent girls regarding prevention of iron deficiency anemia in selected rural communities, Bangalore district.

### Objectives

1. To assess the knowledge and attitude adolescence girls regarding prevention of iron deficiency anaemia.
2. To correlate the knowledge and attitude of adolescent girls regarding the prevention of anaemia.
3. To associate knowledge and attitude with that of selected demographic variables of adolescent girls regarding prevention of iron deficiency anemia.

## MATERIALS AND METHODS

Descriptive research design was adopted and non probability convenient sampling technique was used for the present study. Four villages were selected based on operational feasibility. Convenient sampling technique was used to select the sample and adolescent girls who were between 13-18 years of age and present on the day of data collection were included. Total of 60 samples from the selected rural villages who satisfied the sampling criteria were selected for the study. The data collection procedure was explained to each study participant. After establishing rapport, brief introduction was given about the study and its purpose, informed oral consent was obtained from the respondent after assuring confidentiality. The structured interview schedule consists of 25 questions was administered to assess the knowledge of adolescent girls on prevention of iron deficiency anemia. The 5 point likert scale used to assess the attitude of adolescent girls on prevention of iron deficiency anemia. It consisted of 25 positive and negative statement. The relative who came to visit them and locked houses were excluded from the study

## RESULT

It is observed from this study that majority of subjects 35% (58.33%) were in the age group of 15-16 years, 11(18.33%) were 13-14 years of age and 14 (23.33%) were in the age group of 17-18 years. Out of the 60 subjects, 42 (70%) were Hindus, 18 (30%) were Muslims. Majority 29(48.33%) belongs to nuclear family, and remaining 21(35%) belongs to joint family and 10(16.67%) belongs to extended family. 11(18.35%) were in II PUC, 20(33.35%) in I PUC, 11(18.33%) in 10<sup>th</sup> STD, 4(6.67%) in 9<sup>th</sup> STD, 11(18.35%) 3(5%) were not going to the school. 24(40%) mothers were house wives, 24(40%) were skilled workers and 12(20%) were unskilled workers. Majority of the subjects 33(55%) got

information from peer group, 15(25%) got information from News paper/Magazine and remaining from Radio/TV. Majority were 45(75%) were mixed and remaining 15(25%) were vegetarian. 15(25%) had Hb% between 7-9, 28(46.67%) had between 10-12, and

remaining 17(28.33%) had between 13-14. 10(16.67%) had monthly income  $\leq$ 2000, 34(56.67%) had between 2001-3000, 34(56.67%) had between 3001- 4000 and remaining 5(8.33%) had 4001 and above

**Table I**  
**Level of knowledge and attitude of adolescent girls on prevention of anemia.**

Level of knowledge	No. Of subjects	percentage	Level of attitude	No. Of subjects	percentage
<50% In adequate	33	55	<50% In adequate	23	38.33
50-75% Moderate	16	26.67	50-75% Moderate	35	58.33
>75% Adequate	11	18.33	>75% Adequate	2	3.33
Total	60	100	total	60	100

The table 1 depicts that majority 33 (55.0%) of adolescence girls have inadequate knowledge on prevention of iron deficiency anaemia. 16 (26.67%) have moderately adequate, and minority 11 (18.33%) have adequate knowledge on prevention of anaemia. Majority 35 (58.33%) of adolescence girls have neutral attitude on prevention of anaemia, and minority 2 (3.33%) have favourable attitude on prevention of iron deficiency anaemia.

**Table 2**  
**Mean, standard deviation and mean percentage of knowledge and attitude of adolescent girls.**  
**n=60**

Area wise analysis	Knowledge			
	Max.Score	Mean	SD	Mean %
General Information	3	0.92	0.77	30.56
Causes of anaemia	3	0.95	0.81	31.67
Signs and symptoms	3	1.32	0.95	43.89
Prevention of anaemia	16	9.87	2.94	61.67
Total	25	13.05	4.30	52.20
Area wise analysis	Attitude			
	Max.Score	Mean	SD	Mean %
General Information	10	6.33	1.49	63.33
Causes of anaemia	15	8.72	1.67	58.11
Signs and symptoms	10	5.32	1.28	53.17
Prevention of anaemia	90	47.83	8.55	53.15
Total	125	68.32	11.27	54.65

The table 2 revealed that the subjects had a maximum mean of 9.87 with a standard deviation of 2.94 and mean percentage of 61.67 for prevention of anaemia. The subjects had maximum mean of 47.83, with standard deviation of 8.55 and mean percentage of 53.15 in attitude regarding prevention of anaemia.

**Table 3**  
**Correlation between knowledge and attitude of adolescent girls.**

Area wise analysis	Knowledge score		Attitude score		Z-value*	P-value
	Mean	SD	Mean	SD		
General information	0.92	0.77	6.33	1.49	6.770	<0.001
Causes of Anaemia	0.95	0.81	8.72	1.67	6.766	<0.001
Signs and symptoms	1.32	0.95	5.32	1.28	6.735	<0.001
Prevention of Anaemia	9.87	2.94	47.83	8.55	6.739	<0.001
Total	13.05	4.30	68.32	11.27	6.740	<0.001

\* Z-value obtained using Wilcoxon signed test. The table III interprets that mean score of knowledge was 13.05 with standard deviation 4.30 and mean score of attitude 68.32 with standard deviation of 6.740. There is a correlation between knowledge and attitude.

#### **Association of demographic variables with the level of knowledge and attitude of adolescence girls on prevention of anaemia.**

The present study revealed that there is a significant association between religion and level of knowledge at 5% level ( $\chi^2 = 4.877$ ,  $P < 0.027$ ). The association between educational status and level of knowledge is statistically significant at 1% level ( $\chi^2 = 23.517$ ,  $P < 0.001$ ). The other demographic variables like age, type of family, dietary pattern, Hb%, family income, occupation, and source of information showed no statistical significant association with the level of

knowledge. There is a significant association between religion and level of attitude at 5% level ( $\chi^2 = 5.876$ ,  $P < 0.015$ ). The association between educational status and level of attitude is statistically significant at 2% level ( $\chi^2 = 15.348$ ,  $P < 0.001$ ). The association between occupation and level of attitude also shows a statistical significance at 5% level ( $\chi^2 = 8.109$ ,  $P < 0.017$ ).

#### **DISCUSSION**

Iron deficiency anemia is widely prevalent in young adolescent girls. With the onset of menarche, anaemia,

and malnutrition get increased. The present study findings indicated that majority of the adolescence had inadequate knowledge and neutral attitude regarding prevention of anemia. This finding is consistent with the findings of *Gies.S.Brabin B.J. Yassin M.A and Cuevas L.E (2003)* depicts that majority of subjects had poor knowledge regarding signs and symptoms of anaemia<sup>7</sup>. However a study conducted by *Navin kumar Angadi (2015)* highlighted good knowledge and poor attitude towards anemia among adolescent girls<sup>8</sup>. The correlation between the knowledge and attitude showed that there was a positive correlation between knowledge and attitude of adolescent girls with regard to prevention of anaemia. Z value obtained by using Wilcoxon Test is 6.740. Hence the hypothesis H1, which stated "There is significant correlation between knowledge and attitude among adolescent girls on prevention of anaemia" was accepted. This shows that effort can be undertaken by the community health nurse to educate the community regarding prevention of anaemia. This finding was in accordance with the study conducted by *shilpa jose etal (2016)* there was a highly significant positive correlation between knowledge and attitude scores regarding the anemia among women in the reproductive age.<sup>9</sup> There was a significant association between religion and level of knowledge at 5% level ( $\chi^2 = 4.877$ ,  $P < 0.027$ ). The association between educational status and level of knowledge is statistically significant at 1% level ( $\chi^2 = 23.517$ ,  $P < 0.001$ ). There was a significant association between religion and level of attitude at 5% level ( $\chi^2 =$

5.876,  $P < 0.015$ ). The association between educational status and level of attitude is statistically significant at 2% level ( $\chi^2 = 15.348$ ,  $P < 0.001$ ). The association between occupation and level of attitude also shows a statistical significance at 5% level ( $\chi^2 = 8.109$ ,  $P < 0.017$ ). Hence, the hypothesis H2 which stated that "there is significant association between knowledge and attitude with selected demographic variables of adolescent girls" was accepted. This study was in tune with a study conducted by *Mamta etal (2014)* found that age, education, and working status had a significant association with knowledge score related to anemia<sup>10</sup> and also present study is in accordance with study conducted by *Shweta Upadhyay (2011)*.<sup>11</sup>

## CONCLUSION

Adolescent girls exhibited inadequate knowledge and neutral attitude towards the prevention of iron deficiency anemia. Emphasizes is needed for corrective measures of anemia and iron deficiency in girls before they enter into adolescent age group. There is need for regular supply of iron and folic acid tablets at AWCs and to increase the compliance regarding consuming tablets among adolescent girls.

## CONFLICT OF INTEREST

Conflict of interest declared none.

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**We sincerely thank the above reviewers for peer reviewing the manuscript**