WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 10, Issue 12, 84-94. Review Article ISSN 2277– 7105

KNOWLEDGE AND ATTITUDE ON ANEMIA AMONG THE WOMEN ATTENDING A GOVERNMENT TERTIARY LEVEL HOSPITAL AT COX'S BAZAR, BANGLADESH

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Article Received on
16 August 2021,

Revised on 06 Sept. 2021,
Accepted on 26 Sept. 2021

DOI: 10.20959/wjpr202112-21890

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ABSTRACT

Anemia is considered one of the major public health catastrophes globally especially in the developing countries. Most of the women suffer from anemia in a particular period of their life. Though many interventions have been undertaken to mitigate the problem but still many women suffer from anemia due to lack of enough knowledge and positive attitude towards prevention of anemia. Thus, this study was undertaken to assess the knowledge and attitude on anemia among the women attending a government tertiary level hospital. For the study purpose Cox's Bazar district of the southern region in Bangladesh was selected purposively. A descriptive type of cross-sectional study was conducted with 384 women aged 18 to 45 years who attended a selected hospital in Cox's Bazar district for seeking any kind of treatment. It was found that among the respondents, only 11.0% respondents' level of knowledge on anemia was excellent and 21.0% respondents' level of knowledge was good whereas half (50%) of the respondents' level of attitude was positive towards anemia. There is strong and significant relationship of knowledge and attitude on anemia with the socio-demographic status and level of education of the respondents. The study findings recommend the need of intensive nutrition and health education programme to disseminate appropriate knowledge on anemia among the women of reproductive age.

KEYWORDS: Knowledge, attitude, anemia, women, Cox's Bazar, Bangladesh.

INTRODUCTION

In present days, undernutrition as well micronutrient deficiencies are a common problem in the developing countries. (Abdu Oumer *et al.* 2019). Among different micronutrient deficiencies, Iron deficiency anemia (IDA) is the most common and serious health issue which affects many women worldwide (Abu-Baker *et al.* 2021). Anemia is considered the most common blood disorder which is affecting about one-third of the global population. Women require higher amount of iron than men and the requirement increase during pregnancy period as different physiological changes occur in the maternal red cell mass during that period. Also, the development of fetus needs proper iron supply (WHO, 2014). Not only during pregnancy but also during non-pregnancy, anemia may occur (Noronha JA *et al.* 2012). Globally 41.8% of women are suffering from Iron deficiency anemia which is the leading cause of maternal morbidity, mortality and poor birth outcome (Justina A Margwe *et al. 2018).* Bangladesh is a developing country in South East Asia, where women become pregnant with preexisting anemia. The anemia prevalence rate is 53% in Bangladesh. In Bangladesh, the National Micronutrient Survey and Bangladesh Demographic and Health Survey 2011 have reported relatively high rates of anemia among several demographic groups. Yet, the surveys also showed that only a third of the anemia could be associated with iron deficiency. These lower levels of iron deficiency could be due to several other factors, such as iron in groundwater, genetic red blood cell disorders, and other micronutrient deficiencies. (National Micronutrient Survey, 2011-12). Lack of knowledge, poor socio-economic condition, poor dietary practice and low consumption of iron supplements among women are major contributors to anemia burden in developing countries (Fahmida Sultana et al. 2019). Early identification and compelling administration of anemia can contribute generously to a decrease in maternal mortality. Proper knowledge of anemia among pregnant women is the basis for early detection and management of anemia. Thus, this study was conducted to assess the knowledge on anemia among women.

METHODOLOGY

A descriptive type of cross-sectional study was conducted in a tertiary level hospital in Cox's Bazar district. The study population was all the women of reproductive age in between 18 to 45 years who attended the selected hospital during the data collection period. The women who attended the hospital for any kind of treatment purpose were included in the study. The

women who were very sick were excluded. The sample size was 384 which was calculated by using the formula $n=z^2pq/d^2$. Here the value of p was 0.51 (WHO, 2015) and the sample size was calculated by considering 5% level of significance. Simple random sampling method was used to pick the samples from the population. Data was collected by conducting face-to-face interview. The questionnaire of this study was pre-tested before starting the data collection and modified as per requirement. Before starting the data collection, permission was obtained from the respondents and verbal informed consent was taken. After collection of data, all interviewed questionnaires were checked for completeness, correctness and internal consistency to exclude missing or inconsistent data. Corrected data were coded and entered into database by using Statistical Package for Social Sciences (SPSS) statistical software version 20. Analysis was targeted on the study objectives and considerations of the indicators. Participant's knowledge and attitude score was assessed by using Likert scale. Participants' answers to knowledge and attitude questions were given a score. One point was assigned for correct answers for all knowledge and attitude related questions, and then the sum of correct answers was obtained (the sum of total scores for these questions ranged from zero to 100% maximum score). In case of knowledge, the score range 80%-100% was considered as "Excellent", 60%-79% was considered as "Good", 40%-59% was considered as "Satisfactory" and the score <40% was considered as "Poor". For attitude, score range 70%-100% was considered as "Positive", 40%-69% was considered as "Neutral" and the score less than 40% was considered as "Negative". Chi-square test was conducted to identify the association between variables. Before commencing the study, the research proposal was submitted to the research ethics review committee of Faculty of Allied Health Sciences of Daffodil International University, Dhaka, Bangladesh. After getting the approval, the research was proceeded.

FINDINGS

The study findings show that majority of the respondents (39.3%) were aged in between 24 to 34 years. Nearly ninety percent (87.0%) of the total respondents were Muslim and among all the respondents, 71.0% were married whereas 18.0% respondents were unmarried. More than two-third (69.0%) of the respondents were from urban residence. About half of the respondents (45.4%) completed SSC/HSC level education. The distribution of the respondents' occupation shows that majority (41.5%) of the respondents were housewives whereas the others were involved in other professions such as government jobs, private jobs, small business and other sectors (Table 01).

Table 01: Socio-demographic information of the respondents (N=384).

Socio-demographic characteristics	Frequency (n)	Percentage (%)
Age group		
<23	113	29.5
24-34	151	39.3
35-45	90	23.5
>45	30	7.7
Religion		
Muslim	334	87.0
Hindu	42	11.0
Others	8	2.0
Marital status		
Married	273	71.0
Unmarried	69	18.0
Widowed	31	8.0
Separated	12	3.0
Residence		
Rural	119	31.0
Urban	265	69.0
Level of education		
No formal education	65	16.9
Below SSC	82	21.3
SSC-HSC	174	45.4
Bachelor and above	46	12.0
Others	17	4.4
Occupation		
Housewives	159	41.5
Govt. job	40	10.4
Private job	65	16.9
Small business	53	13.7
Daily laborer	48	12.6
Others	19	4.9

Data source: Field study

The respondents were asked eight knowledge related questions among which most of the questions needed multiple response (Table 02). After getting response, scoring was done to categorize the knowledge level of the respondents.

Table 02: Distribution of the respondents according to their knowledge regarding anemia.

Knowledge regarding anemia	Frequency (n)	Percentage (%)
Have you heard about anemia? (N=384)		
Yes	186	48.5
No	198	51.5
Is anemia a health problem? (N=186)		

Yes	155	83.3
No	31	16.7
What do you understand by anemia? (N=186)		
Decreased iron in blood	143	76.7
Increased iron in blood	6	3.3
Do not know	37	20.0
What are the reasons of anemia? (Multiple response) (N=186)		
Decreased dietary iron intake	118	63.3
Worm infestation	56	30.0
Increased blood loss during menstrual cycle	81	43.3
Increased needs not fulfilled in adolescence and pregnancy	25	13.3
Do not know	19	10.0
What are the symptoms of anemia? (Multiple response) (N=186)		
Decreased appetite	62	33.3
Fatigue	50	26.7
Irritability	65	35.0
Shortness of breath	58	31.0
Pale skin color	134	72.0
What are the effects of anemia? (Multiple response) (N=186)		
Decreases growth and development	93	49.8
Decreases learning abilities	55	29.8
Decreases working capacity	51	27.2
Do not know	19	10.0
How do you prevent anemia? (Multiple response) (N=186)		
Increasing dietary iron intake	145	77.8
Avoiding post meal tea and coffee	30	16.3
Consuming Vitamin C-rich fruits	51	27.4
Personal hygiene	67	35.8
How anemia can be treated? (Multiple response) (N=186)		
IFA supplementation	146	78.6
Consuming Vitamin C tablets	55	29.5
Deworming	46	24.7

Data source: Field study

After the scoring, the finding reveals that among all the 384 respondents, 11.0% (42) respondents' level of knowledge on anemia was excellent, 21.0% (81) respondents' level of knowledge was good, 24.0% (92) respondents had satisfactory level of knowledge whereas 44.0% (169) respondents had poor level of knowledge on anemia (Table 03).

Table 03: Distribution of the respondents according to their score on knowledge level.

Level of knowledge	Frequency (n)	Percentage (%)
Excellent (80%-100%)	42	11.0
Good (60%-79%)	81	21.0
Satisfactory (40%-59%)	92	24.0
Poor (<40%)	169	44.0

Data source: Software output

All the respondents were asked eleven questions to assess their attitude (Table 04). After doing the scoring, respondents' level of attitude towards anemia was identified. The findings disclose that among all the respondents, half (192) of the respondents' level of attitude was positive, 29.0% (111) respondents were neutral and the rest 21.0% (81) respondents possessed negative attitude towards anemia (Table 05).

Table 04: Distribution of the respondents according to their attitude towards anemia.

Statement	Agree		Neutral		Disagree	
	n	%	n	%	n	%
Decrease of HB % in the blood is known as anemia	145	37.7%	83	21.5%	157	40.8%
Tiredness and weakness are symptoms of anemia	128	33.3%	89	23.1%	167	43.6%
Severe anemia is life threatening	233	60.7%	66	17.3%	84	22.0%
Severe anemia if not treated on time, needs blood transfusion	250	65.0%	42	11.0%	92	24.0%
Pallor of face are sign of anemia	170	44.3%	127	33.1%	87	22.6%
Pallor of eyes is sign of anemia	143	37.2%	83	21.6%	158	41.2%
Pallor of tongue is sign of anemia	136	35.5%	69	17.9%	179	46.6%
Pallor of nails is sign of anemia	127	33.1%	73	18.9%	184	48.0%
Palpitation and breathing difficulty are sign of anemia	111	29.0%	86	22.4%	187	48.6%
Regular exercise prevent anemia	166	43.2%	103	26.8%	115	30.0%
Anemia can be treated by iron tablets	178	46.4%	109	28.3%	97	25.3%

Data source: Field study

Table 05: Distribution of respondent's level of attitude towards anemia measured by Likert scale.

Level of attitude	Frequency (n)	Percentage (%)
Positive	192	50.0%
Neutral	111	29.0%
Negative	81	21.0%

Data source: Software output

DISCUSSION

Anemia is one of the major public health issues in the whole world as well as in Bangladesh. Most of the women in Bangladesh have suffered from anemia in a certain period of their life time. This study was conducted with 384 women in Cox's Bazar to assess their knowledge and attitude towards anemia. The findings show that, most of the respondents (39.3%) were

aged in between 24 to 34 years. Among the respondents, 44.0% had poor knowledge on anemia. A similar type of study was conducted by Singh et al (2018) at Uttarakhand, India with antenatal women and the findings revealed that 64.8% respondents didn't have proper knowledge on anemia. Nivedita et al also found in their study that 47.5% respondents didn't have appropriate knowledge on anemia. The findings of this study show comparatively good outcome compared to both studies. This study also reveals that half of the respondents had positive attitude towards anemia which is quite similar to the study findings of Singh et al (2018). Keneni et al. (2018) found the same finding even if these results are comparable with other studies where the level of attitude were not satisfactory (Guedenon KM et al. 2016 and Maj SS et al. 2017)

The association of the level of knowledge and attitude shows significant association with the level of education Table 06 and Table 07). A study in Tanzania (2015) shows that the educated women had higher level of knowledge and attitude towards anemia which is very much similar to the findings of this study. Similar study was conducted by Oumer and Hussein (2019) at Ethiopia and they reported the similar findings. Singh et al (2018) also reported that the women who had higher education had good level of knowledge on anemia. The findings of this study also reveals that women living in the urban area possess good knowledge on anemia which indicates that the residence of the women had a good impact over their knowledge.

Table 06: Association among socio-demographic characteristics and level of knowledge.

Socio-demographic characteristics	Excellent (42)	Good (81)	Satisfactory (92)	Poor (169)	P value
Age group					
<23	13	26	24	50	0.121
24-34	17	37	39	58	
35-45	7	11	18	54	
>45	5	7	11	7	
Religion					
Muslim	36	72	84	142	0.213
Hindu	5	7	6	24	
Others	1	2	2	3	
Marital status					
Married	22	53	53	145	0.061
Unmarried	13	19	24	13	
Widowed	5	8	12	6	
Separated	2	2	3	5	
Residence					

Rural	16	26	31	46	0.013
Urban	26	55	61	123	
Level of education					
No formal education	12	28	21	21	0.002
Below SSC	15	17	23	27	
SSC-HSC	14	22	25	113	
Bachelor and above	1	14	23	8	
Occupation					
Housewives	21	31	43	64	0.076
Govt. job	6	12	16	6	
Private job	7	22	21	15	
Small business	3	7	7	36	
Daily laborer	3	5	3	37	
Others	2	5	2	10	

Data source: Software output

Attitude toward anemia is depend on many factors and this study also found that marital status has a significant relationship with the level of attitude (P<.05) (table 07). This result is similar to the findings of Justina A Margwe et al. (2018), where they also found a strong relationship between different socio-demographic characteristic with the knowledge and attitude towards anemia.

Table 07: Association among socio-demographic Characteristics and Level of attitude.

Socio-demographic characteristics	Positive (192)	Neutral (111)	Negative (81)	P value
Age group				
<23	71	31	11	0.231
24-34	58	53	40	
35-45	52	17	21	
>45	11	10	9	
Religion				
Muslim	176	95	63	0.122
Hindu	15	13	14	
Others	1	3	4	
Marital status				
Married	151	76	45	0.021
Unmarried	23	17	29	
Widowed	14	12	5	
Separated	4	6	2	
Residence				
Rural	92	21	6	0.231
Urban	100	90	75	
Level of education				
No formal education	39	23	20	0.011
Below SSC	40	31	11	

SSC-HSC	91	51	32	
Bachelor and above	22	6	18	
Occupation				
Housewives	98	46	15	0.321
Govt. job	21	11	8	
Private job	31	18	16	
Small business	26	21	6	
Daily laborer	11	11	26	
Others	5	4	10	

Data source: Software output

CONCLUSION

According to the study findings it can be concluded that though the women had good level of knowledge and attitude but it is not adequate to impact over the practice. However, to ensure adequate practice to fight with anemia, physiological social, demographic and cultural limitations must be addressed proficiently. Also, the findings from this study revealed the need of education to ensure appropriate knowledge and attitude towards anemia. It has been found that there is strong and significant relationship of knowledge and attitude on anemia with the socio-demographic status and level of education of the respondents. This association suggests the requirement of developing intensive education curriculum including the detailed information regarding anemia since the childhood so that pertinent knowledge can be disseminated to the women since the very beginning of their education and learning process that can impact positively to fight against anemia in their future.

Limitation of the study

The limitation of this study was the cross-sectional nature of data that may obscure the causal relationship of the various factors and would require qualitative data. The sample size is calculated as 384 and the study was conducted in one tertiary hospital of Cox's Bazar district. However, more samples from different hospitals could posturize the findings more accurately. So, more study among the similar population with larger sample size can be recommended to generalize the findings.

ACKNOWLEDGEMENT

All the authors have given their immense support and contributed to the study. We would like to acknowledge the hospital authority & the patients who happily supported us to conduct the study in the midst of their busy schedule and W A N Research & Consultancy to provide us consultancy support to design the study and data collection.

FUNDING

This study did not receive any funding from any financial institution.

CONFLICT OF INTEREST

The authors have declared that there is no conflict of interest in this study.

REFERENCES

1. Abu-Baker, N. N., Eyadat, A. M., & Khamaiseh, A. M. The impact of nutrition education on knowledge, attitude, and practice regarding iron deficiency anemia among female adolescent students in Jordan. *Heliyon*, 2021; *7*(2), e06348
2. Guedenon KM, Atakouma YD, Macamanzi E, Dossou FC, Gbadoe AD. Knowledge, attitude and practice of the mothers with anemia of children under five years old in the peadiatric department at Sylvanus Olympio teaching hospital in Lome. *Tunis Med*, 2016; 94(1): 46-53.
3. Keneni B, Jayanthigopal D, Bayissa DD. Assessment of knowledge and practice towards prevention of anemia among pregnant women attending antenatal care at government hospitals in West Shoa Zone. *Ethiop J Health Med Nurs*, 2018; 50: 31-40.
4. Maj SS, Laxmipriya P. Study to Assess the Knowledge and Practices Regarding Prevention of Anaemia among Antenatal Women Attending a Tertiary Level Hospital in Pune. *Int J Sci Res*, 2017.
5. Margwe, J. A., & Lupindu, A. M. Knowledge and attitude of pregnant women in rural Tanzania on prevention of Anaemia. *African Journal of Reproductive Health*, 2018; *22*(3): 71-79.
6. Margwae JA. Prevalence, knowledge and attitude of pregnant women on control measures of anaemia in mbulu district, Tanzania, 2015.
7. National Micronutrient Survey Final Report. Dhaka, Bangladesh: Institute of Public Health Nutrition, United Nation Children's Fund (UNICEF), icddr,b and Global Allaince for Improved Nutrition (GAIN), 2011; 12.
8. Noronha JA, Khasawneh EA, Raman S, Seshan V. Anemia in pregnancy and challenges. *J South Asian Federation Obs Gynaecol*, 2012; 4(1): 64-70.
9. Oumer, A., & Hussein, A. Knowledge, attitude and practice of pregnant mothers towards preventions of iron deficiency anemia in ethiopia: institutional based cross-sectional study. *Health Care Current Reviews*, 2019; *7*(1): 2381-7.

10. Singh M, Sinha R, Joshi C and Jain P A study on knowledge, attitude and practice regarding anemia in antenatal women in Government teaching hospital, Dehradun, *ejpmr*, 2018; 5(10): 202-205.
11. Sultana, F., Ara, G., Akbar, T., & Sultana, R. Knowledge about Anemia among pregnant women in tertiary hospital. *Medicine Today*, 2019; *31*(2): 105-110.
12. World Health organization. WHA Global Nutrition Targets 2025: Anaemia Policy Brief, 2014.