Assessing Knowledge And Practices Regarding Iron Deficiency Anemia Among Pregnant Women In A Tertiary Hospital In Dhaka.

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ABSTRACT:
Objective: To assess knowledge and practices regarding iron deficiency anemia (IDA) among pregnant women in a Tertiary Hospital in Dhaka.
Background: Anemia is a significant public health concern, particularly in developing countries like Bangladesh. Nutritional knowledge gaps contribute to these problems, leading to intergenerational impacts. Iron deficiency anemia is a prevalent global nutritional disorder, affecting over 30% of the world's population. (WHO Jan 7, 2022)
Methods: A descriptive cross-sectional study was conducted at a Tertiary Hospital in Dhaka, using a convenient purposive sampling technique. A semi-structured questionnaire was administered to mothers who recently delivered. Statistical analysis was performed using the chi-square test and SPSS software.
Results: Out of 369 pregnant women surveyed, maximum respondents ware 25 to 30 years old. Most of the respondent's had an undergraduate.54% were primigravida, and 46% were multigravida. 43.1%(Maximum) respondents were registered during 2nd trimester. While 59.6% had heard of anemia, 40.5% lacked awareness. Only 18.16% correctly identified iron deficiency anemia, and Hb% levels varied. Causes of IDA were poorly understood by respondents, with 51.5% having no knowledge. 35% were regular ANC visit, 91.3% respondents take Iron Supplement 1.4% respondents didn't take Iron Supplement & 7.3% respondent take Iron Supplement sometimes during pregnancy.
Conclusion: Iron deficiency anemia during pregnancy poses risks to maternal and prenatal health. Factors contributing to anemia include inadequate diet, poor iron absorption, nutritional knowledge gaps, hygiene practices, limited access to health services, and poverty. Addressing these factors is crucial for effective anemia prevention and management during pregnancy.

I. INTRODUCTION

The World Health Organization has recognized iron deficiency anemia (IDA) as the most common nutritional deficiency in the world, particularly affecting women at the childbearing age (WHO Jan 7, 2022). Iron deficiency anemia (IDA) is a disorder characterized by significant decrease of iron stores within the body. High-risk groups are pregnant and lactating women, significant blood loss, those with nutritionally inadequate diets. Specific demographic factors, such as higher parity, advanced maternal age, shorter birth spacing, lower body mass index, reduced antenatal care, infants, and those with low socioeconomic status and the presence of intestinal parasites, have been identified as positive contributors to the risk of anemia. Iron deficiency anemia during pregnancy is accompanied with features caused by lowered oxygen delivery to the tissues that includes pallor, fatigue, depression, fainting, breathlessness, emotional instability, palpitation, headaches and hair loss. Iron deficiency anemia has a major impact on the health of the woman and her fetus, it also affects cognitive and motor development.

II. LITERATURE REVIEW

Iron deficiency anemia (IDA) is a global health issue, affecting over 30% of the world's population. In both developed (4.3%-20%) and developing countries (30%-48%). Globally, 38% of pregnant women, 29% of non-pregnant women, and 29% of females of reproductive age are diagnosed with anemia (Pasricha et al., 2013; WHO, 2015; Shahzad et al., 2017). Varying prevalence among pregnant women is attributed to socioeconomic, lifestyle, and healthcare-seeking differences.

World Bank Data in 2019 indicates a worldwide prevalence of 36.5% anemia in pregnant women, with Bangladesh at 42%. Lower-income countries bear a higher burden (45%), especially in South Asia (48%) and Africa (46%), whereas higher-income countries like the United States (12%) and Australia/Canada (16%) report lower prevalence (World Bank Data, 2019).Anemia, often linked to poor dietary intake (95% of cases), is recognized as the most common nutritional deficiency worldwide (McLean et al., 2009). During pregnancy, approximately 90% of anemia cases are of the iron deficiency type (Perry, 2006; Zhang et al., 2009). Women in the reproductive age group are particularly vulnerable due to increased nutritional demands. Unhealthy dietary habits pose serious consequences for nutritional and overall health status.

III.   METHODOLOGY

Study Design
A hospital-based descriptive cross-sectional study was conducted.

Study Setting & Periods
The study was carried out at Ad-Din Women's Medical College Hospital, Dhaka from July 2019 to December 2019.

Sample & Sampling Technique
We interviewed 369 pregnant women using purposive sampling technique.

Data Collection
Data were collected by face-to-face interview technique using a close ended questionnaire. The questionnaire was pre-tested before starting of data collection. In addition, written & verbal consent was taken from the respondents before data collection

Data Analysis
Data were entered into Statistical Package for Social Science (SPSS)Varsion-20 for statistical analysis.

IV.   RESULTS

Among 369 pregnant women, maximum respondents ware 25 to 30 years old. Most of the respondent's had an undergraduate & while the minimum (8.9%) had primary education. The majority (81.4%) were Muslim & most respondents (38.2%) were part of a joint family. Approximately 32% of respondents had a family income between BDT- 20,000/ to 30,000/ and only 1.1% had a family income below BDT 10,000/.

43.1% respondents were registered during 2nd trimester (Maximum) 32.8%% 1st trimester & 24.2% were 3rd trimester. Prim gravida were (54%) & Multigravida (46%). Maximum respondent's menstrual history ware between (3-5) days. Majority of the respondents birth spacing 1st pregnancy & minimum respondents birth spacing ware grater then 5years .(52%) respondents have moderate vomiting (maximum)&(10.6%)of the Respondents have mild vomiting (minimum).

The examination of Hb% levels indicated a range across severity categories. The Hb% level of respondents 22% above (11 gm/dl),15% ware Mild degree (9.1- 11gm/dl),12% ware moderate (7.1-9.0gm/dl) & 1% ware severe (<7.0 gm/dl). Only 18.16 % respondent give correct answer about iron deficiency anemia (decrease Hb% level). 38% respondents said main sources of iron rich foods & 12% unknown. 93% unknown about vitamins that helps iron absorption.

Maximum respondents were unknown (66.4%) about causes & unknown about symptoms (70%) of IDA.91% (maximum) respondent's unknown hookworm infestation & Malaria also causes of IDA94.3% respondents ware unknown about iron & folic acid required daily in pregnancy. Most of the respondent ware unknown about complication of IDA. 74.2 respondents have unknown about the diagnosis to detect IDA. 52.8% respondents ware unknown about ANC visit according to WHO.35% were regular ANC visit, 13 % irregular & 2% ware no visit. They ware hospital admission for delivery.59.3% (maximum) respondents take iron foods, 36 % respondents take sometimes & only 4.6 % didn't take iron rich foods. Maximum respondents consume sometimes tea/coffee. Maximum respondents take rest 7- 8 hours per day during pregnancy,41.2% respondents maintain regularly meal schedule during pregnancy 46.6% respondents maintain sometimes & 12.2% didn't maintain meal schedule during pregnancy. maximum respondents hand wash regularly after defection. maximum respondents drinking water at least six to eight glass of water per day, 91.3% respondents take Iron Supplement 1.4% respondents didn't take Iron Supplement & 7.3% respondent take Iron Supplement sometimes during pregnancy.

Table 1: Socio-demographic Status of Participants

Variable	Frequency (n=369)	Percentage (%) or Mean, SD
Age		
15-19 yrs	62	16.8
20-24 yrs	105	28.5
25-30 yrs	106	28.7
31-35 yrs	79	21.4
36 yrs and above	17	4.6
Educational Status		
No formal education	38	10.3
Primary education	33	8.9
Secondary education	110	29.8
Undergraduate	131	35.5
Graduate & more	57	15.4
Religion		
Hindu	23	6.9
Muslim	297	81.4
Christian	23	6.9
Baddish	0	0
Women's Occupation		
Housewife	132	35.8
Labor	16	4.3
Professional	157	42.5
Students	64	17.3
Types of Family		
Nuclear family	91	24.7
Joint family	141	38.2
Extended family	104	28.2
Broken family	33	10
Family Income		
Below Rs.10000/month	73	19.8
Rs.10000-20000/month	118	32
Rs.20000-30000/month	96	26.6
Rs.30000-50000/month	78	21.1
Above 50000/month	0	0

Table 2: Registered for ANC Visit Among Respondents.

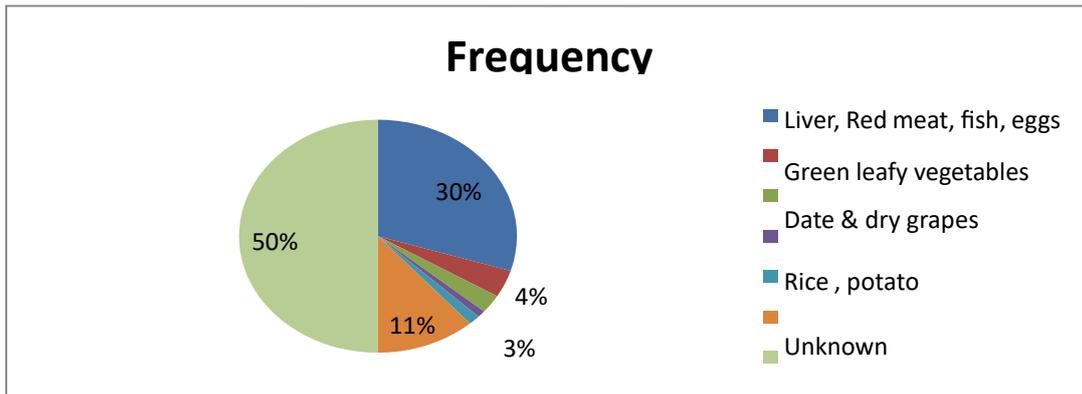| Variable	Frequency (n=369)	Percentage (%) or Mean, SD
1st trimester	121	32.8
2nd trimester	159	43.1
3rd trimester	89	24.2
Total	**369**	**100**

The table shows that the maximum respondents were registered during the 2nd trimester (43.1%), and the minimum were registered during the 3rd trimester (24.2%).

Table 3: Knowledge about IDA

Variable	Frequency (n=369)	Percentage (%) or Mean, SD
Nutritional disorder	37	10.03
Decrease level of platelet	104	28.18
Decrease Hb% level in blood	67	18.16
Unknown	161	43.63
Total	**369**	**100.0**

The table shows that maximum respondents were unknown. only18.16% Respondents give right answer.

Figure 4: Knowledge regarding Iron rich foods.

The figure shows that maximum respondents knows the sources of iron rich foods.

Table 5: Practice regarding ANC visit according to WHO

| Variable	Frequencyn=369	Percentage (%) or Mean, SD
2times	54	14.6
3times	68	18.4
4times	174	47.2
5times	28	7.6
6times	45	12.2
Total	369	100.0

The Table shows that maximum respondents ware unknown about ANC visit acrdg to WHO.

Figure 6: Practice regarding Take iron rich foods.
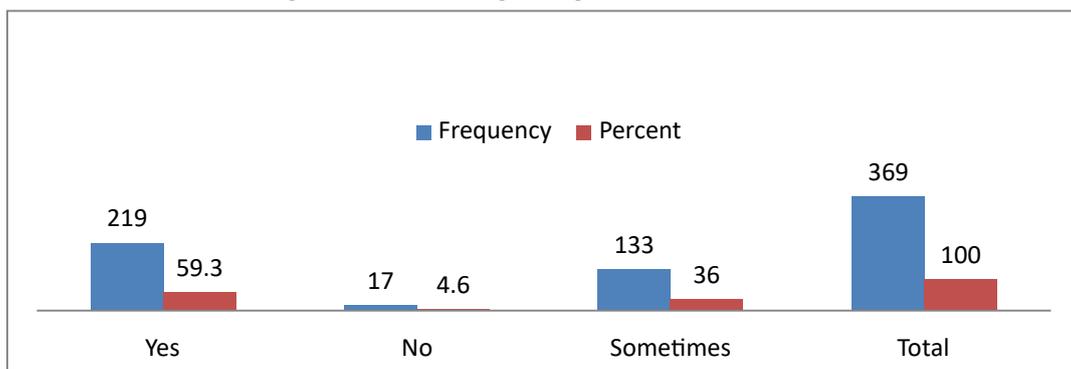
The figure shows that maximum respondents take iron foods, 36 %respondents take sometimes & only 4.6 % didn't take iron rich foods.

Figure 7: Practice regarding take Iron Supplement.
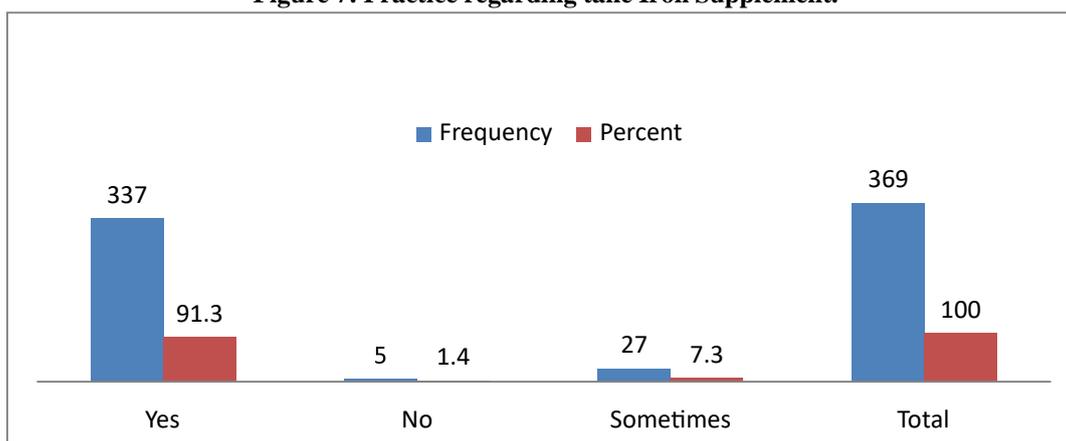
The Figure shows that maximum respondents take Iron Supplement. 1.4% respondents didn't take Iron Supplement & 7.3% respondent take Iron Supplement sometimes during pregnancy.

V. DISCUSSION

This study aimed to assess the knowledge and practices related to Iron Deficiency Anemia (IDA) among pregnant women. The extensive data collected from 369 participants offer valuable insights into the demographic characteristics, health behaviors, and awareness levels within this population. Our findings underscore. the importance of interventions to enhance awareness and practices related to IDA among pregnant women.

The examination of Hb% levels indicated a range across severity categories, emphasizing the need for interventions to address varying degrees of anemia. Alarmingly, a significant portion of participants lacked awareness of IDA, signifying an urgent requirement for targeted educational initiatives. Nutritional aspects, such as knowledge about iron-rich foods and vitamins aiding iron absorption. Importantly, a considerable number remained unaware of critical factors like causes, symptoms, and complications associated with IDA.

On the practices front, a substantial portion of participants exhibited positive behaviors, such as awareness of extra energy needs during pregnancy and regular hand washing. However, considerable gaps persisted in knowledge related to ANC visits. Notably, the majority reported regular iron supplement intake, while dietary practices and awareness of the impact of iron and folic acid on constipation.

Anemia in pregnant mothers needs to be tackled seriously by health care workers, especially at the primary care level because of possible health implications to the mothers and babies, though adequate iron medication were freely offered at all levels of health care facilities. Emphasis should focus on pregnant women since they are especially at risk and health care providers must emphasis on teaching of pregnant women good long-term dietary habits as a part of an approach to health promotion.

VI. CONCLUSION

In conclusion, our study provides a detailed examination of the knowledge and practices related to Iron Deficiency Anemia (IDA) among pregnant women. Targeted health education campaigns, coupled with improvements in antenatal care, can play a pivotal role in mitigating the risks associated with iron deficiency anemia. By addressing these gaps, we can contribute to the overall well-being of both mothers and infants, ensuring healthier pregnancies and reducing the burden of anemia-related complications. This study serves as a call to action for healthcare providers, policymakers, and communities to collaboratively work towards comprehensive maternal and child health initiatives.

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