

The Prevalence of Anaemia among Reproductive Age Group (16-45 Yrs) of Women in the RMG Concentrated Area, Savar, Dhaka

Shamima Nasrin Shadia¹, Sadia Afrin², Rabiul Islam³ and Moazzem Hossain^{4*}

¹Lecturer, Department of Anatomy, GSVMC, Savar, Dhaka, Bangladesh

²Medical Officer, Thalassemia Hospital and Institute, Savar, Dhaka, Bangladesh

³Research Associate, Thalassemia Hospital and Institute, Savar, Dhaka, Bangladesh

⁴Chairman, Institute of Allergy and Clinical Immunology of Bangladesh

*Corresponding author

Dr. Moazzem Hossain, Chairman, Institute of Allergy and Clinical Immunology of Bangladesh, Zinzira, Savar, Dhaka, Bangladesh, Tel:880-1772544469; E-mail: moazzem.iacib@gmail.com

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Abstract

This was a retrospective study and record of hemoglobin level of reproductive age group (16-45 yrs) of women in the Ready Made Garment (RMG) concentrated area, Savar, Dhaka. Descriptive statistics were used. Results were expressed as percentages/proportions, means and average. The objective of this study is to determine prevalence of Anaemia among women of reproductive age group who are working in Garments. In this study hemoglobin level of one thousand one hundred and five women of reproductive age (16-45 years) were analyzed in lab. The prevalence rate of any anemia was 71.22%. The majority of anemic women were in the category of mild (53.48 %) to moderate (14.67%) and severe Anaemia was 3.07%. Though the most affected age group was 21-25 years but the difference noted was statistically significant. The study substantiates the existence of mild to moderate form of anemia among women of reproductive age and underlines the need for iron supplementation to all reproductive women especially during the antenatal period with more attention to the most affected regions of the country.

Keywords: Anaemia Among Reproductive Age; Ready Made Garment (RMG); Haemoglobin; Mild; Moderate; Severe.

Introduction

Anaemia is one of the most common nutritional disorders and it has public health importance in developing countries like Bangladesh where it is the most widespread nutritional problem and common cause of anaemia in adolescents and women of reproductive age. WHO has estimated that prevalence of anaemia in pregnant women is 14% in developed and 51% in developing countries [1, 2]. As a result, about one-third of the global population (over 2 billion) is anemic [3]. The economic and social consequences of anaemia, as yet un-quantified, are thought to be enormous including a significant drain on health care, education resources and labour productivity, and reduced physical and mental capacity of large segments of the population. Although the most important determinant factor of anaemia is poor bioavailability of dietary iron in most developing countries, intestinal parasites, especially hookworm infestation are reported to be a major cause [4, 5].

Many researches in different parts of developing countries have documented iron deficiency as the leading cause of anaemia in pregnancy [6, 7]. Anemia in pregnancy is considered one of the major risk factors contributing to maternal deaths in developing countries

[7]. Hemorrhage, eclampsia and infections being the three major causes of maternal deaths [8]. Since it reduces resistance to blood loss, death may occur from bleeding associated even with normal delivery. Association of anemia with adverse maternal outcome such as puerperal sepsis, ante-partum haemorrhage, postpartum haemorrhage and maternal mortality is no longer a debatable issue [9]. That is why early diagnosis and treatment of anemia is very important in women of reproductive age. In view of the discrepancies and non-conclusive results available in the country, we have examined the occurrence of anaemia among women of reproductive age in RMG concentrated areas -particularly Charabag, Ashulia, Savar, Dhaka.

What is Anaemia?

Anemia is a condition characterized by a decrease in the concentration of hemoglobin in the Blood [10]. Hemoglobin is necessary for transporting oxygen to tissues and organs in the body. The reduction in oxygen available to organs and tissues when hemoglobin levels are low is responsible for many of the symptoms experienced by anemic people. The consequences of anemia include general body weakness, frequent tiredness, and lowered resistance to disease, even may be an early sign of Thalassemia-a genetic disorder. Anaemia can lead to serious problem for pregnant women, leading to premature delivery and low birth weight. Overall, morbidity and mortality risks increase

for individuals suffering from anaemia. Hemoglobin testing is the primary method of anaemia diagnosis. Based on concentration of hemoglobin in the blood, anaemia is classified into three groups as mild, moderate or severe [11-13].

Mild anaemia

Mild anemia corresponds to a level of hemoglobin concentration of 9.0-10.9 gm/dl for pregnant women and 9.0-11.9 gm/dl for non-pregnant women. Women with mild anaemia in pregnancy have decreased working capacity. They may be unable to earn their livelihood if the work involves manual labour.

Moderate anaemia

Moderate anaemia corresponds to a level of 7.0-9 gm/dl; women with moderate anaemia have substantial reduction in working capacity and may find it difficult to cope with household chores and child care. They are more susceptible to infections and recovery from infections may be prolonged. Premature births are more common in women with moderate anaemia. They deliver infants with lower birth weight and perinatal mortality is higher in these babies.

Severe anaemia

For all of the tested groups, severe anaemia (<7.0 gm/dl) is more dangerous. Severe anaemia is important because it indicates that there may be one or more serious nutritional deficiencies or an underlying medical problem that requires thorough assessment and treatment.

Materials and Methods

This was a retrospective type study of the prevalence of anaemia in females of reproductive age of 16-45 years old. This study was conducted in the Out Patient Department (OPD) of “Thalassemia Hospital and Institute” for a period of 2 years (June.2016-June.2018) among registered women who are working in Garments Factories attending our hospital. The total sample was one thousand one hundred and five. After Hemoglobin estimation; nutritional advice was given and Iron tablets were distributed free of cost to the anemic patients. Descriptive statistics were used to compute percentages and averages. Results were presented in tables and charts and expressed as percentage, proportions, means and average.

Results

The measurements of hemoglobin concentration indicated that the prevalence of anemia among one thousand one hundred and five (1105) reproductive age women is 787 which is 71.22% and 318 which is 28.78% had normal hemoglobin level (Figures 1). As anaemia is classified into three degrees according to WHO into mild degree (9.0-10.9 gram %), moderate degree (7.0-8.9 gram %) and severe degree (less than 7 gram %). The prevalence of mild anaemia was 53.48%, moderate anaemia 14.67% and severe anaemia was only 3.07% (Figures 2). In cases of severe anaemia patients were admitted into our hospital and given blood transfusion.

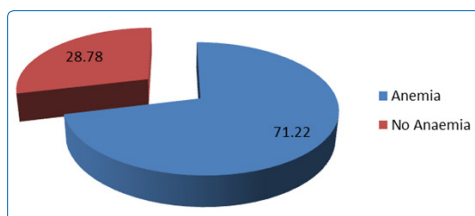


Figure 1: Distribution of Study Particular in Relation to Anaemia

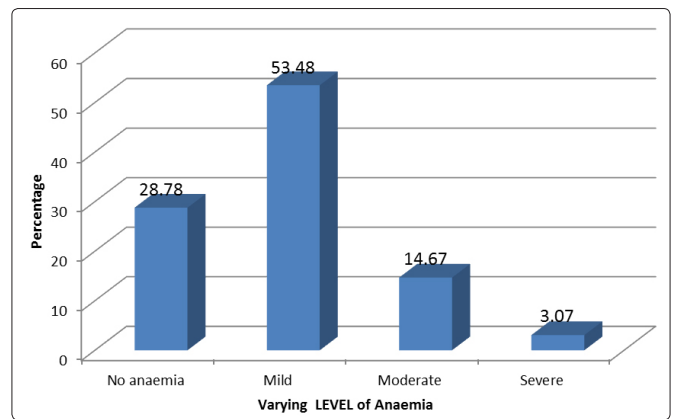


Figure 2: Distribution of Study Participants in Relation to the Severity of the Anaemia in Percentage

Among the population studied, women were in the age group of 21-25 years had the highest frequency 341(30.86%), followed by age 16-20 years 273 (24.7%), age 26-30 years 216 (19.55%), age 41-45 years 98 (8.87%), age 31-35 years 97 (8.79%) and age group 36-40 years had the least frequency 80 (7.23%) (Table 1 & 2) shows that association of anemia in relation to age groups of study participants where anemic cases 255(32.4%) highest in 21-25 years, followed by 201(25.54%) in 16-20 years, 151(19.18%) in 26-30 years, 73(9.27%) in 31-35 years, 54 (6.87%) in 41-45 years and 53 (6.74%) in 36-40 years

Table 1: Distribution of the Study Participants by Age Groups

Age group (in years)	Frequency	Percent
16-20	273	24.7
21-25	341	30.86
26-30	216	19.55
31-35	97	8.79
36-40	80	7.23
41-45	98	8.87
Total	1105	100

Table 2: Association of Anemia in Relation to Age Groups of Study Participants

Age group (in years)	Anaemia		No anaemia	
	Frequency	Percent	Frequency	Percent
16-20	201	25.54	72	22.65
21-25	255	32.4	86	27.04
26-30	151	19.18	65	20.44
31-35	73	9.27	24	7.54
36-40	53	6.74	27	8.49
41-45	54	6.87	44	13.84
Total	787	100	318	100

Table-3 shows Association of varying level of anemia in relation to age groups of study participants where severe anemic cases 13 highest in 21-25 years, while age group 36-40 years and 41-45 years had the least frequency 1. Among the population studied moderate anemic cases 61 highest in 21-25 years and age group 36-40 years

had the least frequency 1 (Table 3) also shows less than 30 years age group women have more chances to have moderate & severe anaemia (<9 gm/dl) comparisons to more than 30 years age group women.

Table 3: Association of Varing Level of Anaemia with Age Groups of Study Participants

Level of Anaemia	Age group in years						Total
	16-20	21-25	26-30	31-35	36-40	41-45	
Mild	147	181	113	61	45	44	591
Moderate	43	61	33	9	7	9	162
Severe	11	13	5	3	1	1	34
No anaemia	72	86	65	24	27	44	318
Total	273	341	216	97	80	98	1105

Discussion

It was a retrospective study in which we included female patients of reproductive age group. In the present study, it was found that out of one thousand one hundred and five women of reproductive age group, 787 (71.22%) were suffering from varying degree of anaemia and 318 (28.78%) were non-anemic. This indicated that it was a public health problem of high magnitude as per the WHO guidelines [14].

Anaemia is the common problem in female due to monthly menstrual blood loss. If we see Anaemia in non- pregnant female most common causes are due to excessive blood loss during menstruation, hookworm infestation, chronic nutritional deficiency and rarely malignancy. In pregnancy it is more severe because of increase demand and decrease intake due to nausea, decrease appetite, lack of knowledge, chronic diseases or poverty [15]. Iron deficiency Anaemia is the commonest cause of anaemia in developing countries. Hookworm infestation is another cause of Anaemia as WHO has emphasized the need of epidemiological studies [16, 17].

In this study, 71.22% patients were found to have anemia in varying degree where majority of the patients (32.4%) were aged 21-25 years. The results of study are similar to NFHS-3 (2005-2006) conducted in Tamil Nadu in terms of anemic women. However in the present study most of them had mild anaemia with prevalence rate of 53.48%, 14.67% percent with moderate anaemia and 3.07 percent with severe anaemia [18].

In a study conducted by DEY et al to determine the prevalence of anaemia in women of reproductive age in Meghalay had shown that prevalence of anaemia among women of reproductive age was 49.6% [19]. Similar findings were observed by a study conducted by Patavegar et al in rural areas of Maharashtra (51.92%) [20]. This was lower than study conducted by Pande et al in an urban slum of Indore city where prevalence was 61% [21]. Pattanshetty et al found that, out of 55.8% anemic women in a tribal area, 3.5% were severely anemic, 19.4% were moderately anemic, and 32.9% were mildly anemic [22]. This is in accordance with the study by Pande et al where 33.25%, 24.75% and 3% women in reproductive age groups had mild, moderate and severe anaemia respectively. Thus, it can be said that depending upon the study area and study population the prevalence of anaemia varies [21].

Anaemia was more common in younger age group (16-25 years) as compared to other age group. Similar findings were observed by Ahmad N et al among pregnant women where anaemia is more common in <20 years (88.7%) and 20-24 years (66.7%) age group as compared to 25-29 years (58.5%) and >30 years (57.1%) age group [22]. Similar findings were observed by Patavegar et al where the association between age group and gender was not statistically significant [23].

In the 16-45 years women have chances of having anemia, hence, the maximum of reproductive age group women between 16-30 years are under childbearing stage and they have given births, which is a major sensitive time to cause anaemia. Iron deficiency is the most common cause of anaemia worldwide.

Conclusion

Anemia continue to be a major public health problem especially in the reproductive age group and the findings also indicated that merely 71.22% of women were affected with some form of anemia in the RMG sector. Despite the efforts made to combat aneamia it continues to pose enormous burden on the health system of our country. The study also added that anaemia was more prevalent in child bearing age. It is concluded that the women who were under peak childbearing age as well as low income group have more chances to experience by anaemia because there is a definite role of nutritional deprivation in the development of anaemia and lack of balanced diet has much stronger association with this type of anaemia. Iron, folic acid supplementation in all reproductive women during the antenatal period regime dose will improve the hemoglobin status.

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