FREQUENCY OF ANEMIA IN PREGNANT WOMEN RECEIVING ANTENATAL CARE AT PEOPLES MEDICAL UNIVERSITY HOSPITAL NAWABSHAH.

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ABSTRACT

OBJECTIVES: To evaluate anemia in pregnant women visiting people's medical university Hospital Nawabshah AND To evaluate awareness of anemia in pregnant women visiting Peoples Medical University Hospital. Nawabshah. **STUDY DESIGN AND STUDY SETTING**: It was a cross sectional study conducted at Gynecological and Obstetric Department and outpatient department (OPD) of Peoples Medical university Hospital Nawabshah. **METHODS:** A Hospital based cross sectional study was conducted in gynecological and obstetric department and OPD at peoples medical university hospital Nawabshah from April to September 2021, the sample size for this study was 377 pregnant women and sampling technique was convenient sampling technique, data was collected using structured questionnaire ,the hemoglobin level of pregnant women was checked on the basis of already available reports at the time of antenatal checkup, Data was entered and analyzed by using SPSS software. **RESULTS:** In our study the overall calculated prevalence in pregnant women is 87%, from which 11.4% had severe anemia,31.8% had moderate anemia and 44.0% had mild anemia and only 12% women were founded non anemic having hemoglobin level 11 or >11g/dl. **CONCLUSION:** Our study results conclude that anemia is highly prevalent among pregnant women visiting people's medical university hospital Nawabshah. Factors such as low socioeconomic status, family type and awareness of anemia were found to be contributory factors in high prevalence rates of anemia. **KEYWORDS:** Prevalence, anemia, iron deficiency anemia, awareness.

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INTRODUCTION

In the early 19th century, the word anemia originates from the Greek word anaimia meaning "lack of blood"(an- 'without' + haima 'blood').[1] Anemia is defined as a state of illness in which the hemoglobin concentration and the number of red blood cells are below normal and are not capable of proper physiological functioning. This condition may lead to partially or absolute reduction in Hb level. It is revealed that the larger increase in plasma volume relative to red cell mass in almost all pregnancies is account as "physiologic anemia. The two conflicting medical concepts, covering this problem in accordance with the first can be prevent from developing too low concept the pregnant women hemoglobin concentration but according to the other concept for the normal fetal growth "physiologic anemia" is very important and should be passively observed. Furthermore suggested by WHO that

Hb level less than 11g/dl in pregnant women will be consider as anemic and diets must be supplemented with iron supplementations.[2] Globally Anemia is recognized as a crucial public health problem that mostly affects the health of women and children.[3] According to WHO 12 million girls between the age of 15 and 18 years and about 777,000 girls less than 15 years of age give birth on annual basis with pregnancy complications at the time of delivery.[3] Although the superiority of anemia is expected at 9% in international countries with excessive improvement, in nations with low improvement the superiority is 41%-44%. South-east Asia such as India, Pakistan, Cambodia, Nepal, Maldives, and Bangladesh carry

a high burden of anemia among WRA (41.9%), followed closely by the African and Eastern Mediterranean regions.[4] In Pakistan, more than 50% of women are facing iron deficiency anemia (IRA) of which 52% of women are pregnant and 32% are of childbearing age.[5] In Pakistan, the prevalence of anemia among ever-married women aged 15 to 44 is reported to be 26% in urban areas and 47% in rural areas.[6] A study conducted in Pakistan in National Nutrition survey 2018 announced that about 41.7% of women of reproductive age are anemic. (40.2%) in the urban settings and with slightly higher proportion in rural (43.3%). The iron deficiency anemia has high prevalence in province of Sindh (23.8%) as Baluchistan (19.0%) in Punjab (18.7%).[5] In Pakistan, the superiority of anemia amongst pregnant women dwelling in city regions turned into stated from 29% to 50%. Some research has proven that the frequency of Iron deficiency anemia in pregnant women within the cities varies such as Karachi (64%) and Lahore (73%) prevalence mentioned.[6] according to this survey iron deficiency anemia is most frequently occurring condition among Pakistani women with 18.2% in women of reproductive age and with higher prevalence in rural community as compared to urban population which is (18.7%) and (17.4%) respectively. Despite several intervention-based programs working still the prevalence of anemia is high in most developing countries.[7] Various studies conducted in developing countries inform high prevalence of anemia in expecting women belonging to low and middle income nations (LMIC) anemia is classified according to causes and grouped as dietary deficiencies ,infectious disease and genetic hemoglobin disorders .the adverse consequences observed in anemic mothers are such as higher risk of miscarriage, still birth, Premature and low birth weight.[8] Anemia is responsible for round about 20% maternal deaths and it is considered additional risk factor for 50% of all maternal deaths. For prevention of anemia several methods at population and individual level have been implemented for WRA, pregnant women and young children. For example, micronutrient supplementation among adolescent girls and pregnant women, food fortification, provision of nutrition education, counseling, and iron-rich food-based diet regime to at-risk populations are strategies used to enhance dietary variety and quality.[4]

RATIONALE OF THE STUDY.

The purpose of this study was to evaluate the prevalence of anemia in pregnant women visiting Peoples Medical University Hospital Nawabshah, and to evaluate awareness of women about the preventable complication which is anemia resulting in a high number of maternal mortality and morbidity.

MATERIAL AND METHODS STUDY

This hospital-based research conducted in the Gynecological and Obstetric department of peoples medical university Nawabshah (SBA).Nawabshah is the middle of Sindh province and located at area of 4,239 km/square. it has one civil hospital, one MCH center and many different health care facilities. This tertiary care hospital provides comprehensive health care for the mother and baby, including antnatal , postnatal care, family planning, and under-five immunization and growth- monitoring about health and the nutritional education. STUDY POPULATION:This study was conducted to assess the Hemoglobin concentration and to observe the awareness of anemia in pregnant women of (15-49 years age group) coming to receive antenatal care at Gynecological and Obstetric Department Peoples medical university hospital Nawabshah (SBA).

RESULTS

This study included 377 pregnant women who are receiving antenatal care at gynecological and Obstetrics department of peoples medical university hospital Nawabshah. The overall prevalence found in this study was 87% included all mild, moderate and severe cases. According to this study 11.4% had severe anemia with hemoglobin concentration from 6-7g/dl (43 out of 377), 31.8% had moderate anemia with

hemoglobin concentration from 8-9g/dl(120 out of 377) and 44.0% had mild anemia with hemoglobin concentration from 10-11g/dl (166out of 377) and 12% women are non-anemic whose hemoglobin is greater than 11-12g/dl.

Laboratory investigation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6-7g/dl	43	11.4	11.4	11.4
	8-9g/dl	120	31.8	31.8	43.2
	9-10g/dl	166	44.0	44.0	87.3
	>11-12g/dl	48	12.7	12.7	100.0
	total	377	100	100	

This table shows that more than half of the study population had no awareness about anemia and its consequences.219 out of 377 subjects were not aware of anemia (percentage is 41.9%) and158 out of 377 subjects were aware of anemia (percentage is 58.1%). In this study the subjects with no awareness of anemia are slightly higher than those who were aware.

Are you aware about anemia					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	158	41.9	41.9	41.9
	No	219	58.1	58.1	100.0
	Total	377	100.0	100.0	

This table shows the socio economic status of the subjects, which his categorized in to three values as income below50,000, between 50,000to 100,000 and morethan100,000.

85.9%of the Subjects had income below 50,000 (324outof377). 11.4% of the subjects had income 50,000-100,000 (43outof377). Only 2.7% of the subjects had income more than100,000 (10 out of 377).
(TABLE_4.3)

Socioeconomicstts					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below50,000	324	85.9	85.9	85.9
	50,000-100,000	43	11.4	11.4	97.3
	morethan100,000	10	2.7	2.7	100.0
	Total	377	100.0	100.0	

This table shows that 93 out of 377 subjects were from nuclear family (percentage is 24.7) and 200 out of 377 subjects were from joint family (percentageis53.1%) and 84 out of 377 subjects were from extended family (percentage is 22.3%). It shows that most of the people in this study are from joint family back ground.(TABLE_4.4)

Type of family					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nuclear	93	24.7	24.7	24.7
	Joint	200	53.1	53.1	77.7
	extended	84	22.3	22.3	100.0
	Total	377	100.0	100.0	

DISCUSSION

This study was conducted in Peoples medical university hospital Nawabshah with the objective to measure the prevalence and awareness of anemia in pregnant women in age group 15-49years.The results indicates high prevalence of anemia which is 87% among pregnant women.

The result of our second objective which is to evaluate the awareness of anemia indicates that 41.9% were aware about anemia and 58.1% were not aware about anemia. The reason for high prevalence and lack of awareness can be due to low literacy rate in women belonging to low socioeconomic class and not getting proper antenatal care as this study was conducted during covid-19 situation mostly pregnant women were afraid to visit hospitals due to fear of contracting corona virus which also affects the quality of antenatal care, due to the covid-19 situation most pregnant women not completed all the antenatal visits which can impact negatively on their health leading to poor health outcomes and ultimately anemia.

Data collection during the pandemic situation was the biggest challenge for us as pregnant ladies were afraid to communicate with us and they were avoid answering all the questions. In our study 85.9% respondents were from poor socioeconomic class, 11.4% from middle class and only2.7% were from upper class this indicates poverty as a significant factor responsible for high prevalence of anemia.

According to data collected 24.7% respondents were from nuclear family, 53.1% from joint family system and 22.3%from extended families. This indicates that family type is one of the factors in health condition of pregnant women in large family systems women often do not have time to take care of their selves and are more carless in

their dietary habits.

Factors such as low socioeconomic status, joint family system, lack of awareness of anemia were found to be risk factors for anemia. Prevalence calculated in this study was higher than many other studies conducted in Pakistan. Comparison may be difficult due to different locality and variety in the cultural aspects and changes in the sample size for study.

In contrast with developing countries to the developed countries many studies show that anemia is more prevalent in developing countries, there are several factors responsible for this, like ignorance by government, cultures and traditions, gender discrimination, lack of education, lack of management of programs, etc. In my study prevalence of anemia in pregnant women was 87% however; it varies between developed and developing countries. According to World Health organization recent prevalence estimated of developing countries like Pakistan (44%), India (50%), Nigeria(55%), Maldives (49%), united republic of Tanzania(48.1%), Yemen(57%) but in developed counties prevalence is very low such as United states of America(11.5%) and United kingdom(16.5%),Switzerland (14.9%),France(16%).

In Pakistan there are some similar studies which reported high prevalence of anemia, the reasons for high prevalence varies according to geographic locations; in countries like Pakistan the major reasons behind high prevalence of anemia include low socioeconomic status, lack of family planning, low literacy rate, poverty, in joint family systems. The prevalence of anemia evaluated in my research study was higher than the global anemia prevalence because this study was conducted in a government hospital where people mostly belonging to low socioeconomic class visits the hospital and they are not aware about anemia.

An experimental and descriptive study conducted in Shaheed Benazirabad from 2016-17indicates 52.5% moderate anemia, 27.5% mild anemia and 19.9% severe anemia. Whereas my study results indicates 31.8% moderate anemia, 44.0% mild anemia and 11.4% severe anemia, the difference in results could be due to different methodologies of research and difference in situation overtime.[9]

A community based Cross-sectional study was conducted in Nawabshah city district shaheed benazirabad, this study reported the prevalence of anemia in pregnant women which is 61.9%. The difference in results can be due to it was a community based cross sectional study where as our study was hospital based.[10]

A study conducted in Thatta reported that the prevalence of anemia (61.3%) Similarly, a prospective observational study conducted in Hyderabad reported the prevalence of anemia (90%)which is quite high.[11]

A study conducted in Lahore reported the prevalence of anemia (80%) a similar finding of this study was that it also reported high prevalence of anemia among low socioeconomic class. The limitations of our study are it was a cross sectional study so it cannot give causes of anemia which are responsible for high prevalence of anemia in pregnant women for that other study designs with larger sample size is required another limitation is it was limited to pregnant women only however the strength of this study being cross sectional study is it gives magnitude of a disease or health condition which helps to plan and allocate health resources according to need.

CONCLUSION

The reason for high prevalence of anemia and lack of awareness of anemia in pregnant women could be due to study being conducted at people's medical university hospital Nawabshah which is a government hospital and mostly pregnant women with low socioeconomic status visited the hospital. Our study confirmed that anemia is also one of the crucial health problems in pregnant women. Contributory factors include family type, socioeconomic status and anemia awareness. This study will be helpful to plan policies specifically for pregnant women, which will reduce anemia in pregnancy and adverse maternal outcomes due to anemia which will results in low maternal mortality and morbidity.

CONFLICT OF INTEREST: No competing interest declared.

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