

Original Article

The Assessment of Knowledge Regarding Anemia in Primigravida in Tertiary Care Hospital

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ABSTRACT

Background: Anemia remains the most common nutritional deficiency worldwide, particularly among pregnant women. It significantly impacts maternal and fetal health, contributing to both morbidity and mortality. The problem is exacerbated by a general lack of awareness about the condition, its prevention, and management.

Objective: The objective of this study was to assess the level of knowledge regarding anemia among primigravida women attending a tertiary care hospital in Lahore, aiming to identify key educational gaps that could be addressed to improve health outcomes.

Methods: This descriptive cross-sectional study was conducted at the Gyne Out-Patient Department of a Public Hospital in Lahore. A total of 150 primigravida women were purposively sampled. Participants were excluded if they were visiting the labor room only or had a medical background. Data were collected through self-administered questionnaires, which included sections on demographic information and knowledge about anemia. Ethical approval was obtained from the institutional review boards, and informed consent was secured from all participants. Statistical analysis was performed using SPSS version 25, employing descriptive statistics and chi-square tests for categorical data.

Results: Out of the 150 participants, 41.3% demonstrated poor knowledge regarding anemia, 30% had moderate knowledge, and 28.7% exhibited good knowledge. Awareness of dietary sources of iron and the impact of dietary habits on iron absorption was notably low among the respondents.

Conclusion: The study revealed a significant lack of knowledge about anemia among primigravida women at the surveyed hospital, highlighting an urgent need for targeted educational interventions. Improving anemia awareness can potentially enhance maternal and fetal health outcomes.

Keywords: Anemia, Primigravida, Iron Deficiency, Maternal Health.

INTRODUCTION

Anemia, particularly iron deficiency anemia (IDA), represents a significant public health challenge globally, affecting a substantial proportion of women of reproductive age and pregnant women. Iron deficiency, despite the abundance of iron as a natural resource, persists primarily due to inadequate dietary intake necessary for optimal hemoglobin production (1-3). This deficiency is alarmingly prevalent and is the leading cause of anemia, affecting various population groups but notably more critical among pregnant women due to their increased physiological demands (4, 5). The World Health Organization categorizes IDA as a major public health issue, particularly in developing countries where it ranks as a leading cause of morbidity among women and children (6). The implications of anemia in pregnancy are profound, as it contributes directly and indirectly to maternal mortality rates by complicating pregnancy with increased risks of heart failure, preeclampsia, and various forms of hemorrhage (7). Moreover, anemia during pregnancy is linked with adverse outcomes both for the mother and the fetus, including poor fetal growth, preterm birth, and increased perinatal mortality.

Research has shown that the awareness and understanding of anemia among pregnant women, particularly its causes, prevention, and management, are critically low (8). This deficiency in knowledge can significantly hinder the effective management and prevention of anemia, which is crucial for improving maternal and fetal health outcomes (9). Furthermore, nutritional education,

which has been shown to play a pivotal role in managing anemia, remains underutilized as a preventive strategy in many settings. Educating pregnant women about the importance of dietary iron, the role of vitamin C in enhancing iron absorption, and the negative impact of certain dietary habits, such as the consumption of tea or coffee immediately after meals, which can inhibit iron absorption, is vital (10). The current study focuses on assessing the knowledge levels of anemia among primigravida women attending a tertiary care hospital. By identifying specific gaps in knowledge and understanding, the study aims to highlight areas where educational interventions could be particularly impactful, thereby contributing to the broader efforts of reducing the prevalence and severity of anemia among pregnant women (11). This research not only seeks to add to the existing body of knowledge but also to inform health policy and practices in maternal health care settings, particularly in regions where anemia is prevalent and poses significant health risks (12).

MATERIAL AND METHODS

The study employed a descriptive cross-sectional design to assess the knowledge of anemia among primigravida women at a tertiary care hospital in Lahore, Pakistan. The study population consisted solely of primigravida patients who were purposively sampled from the Gyne Out-Patient Department. Patients who visited the labor room only or had a medical background (such as doctors or nurses) were excluded to avoid bias in self-reported knowledge. The study was conducted after obtaining approval from the Ethical Review Committee of the Superior University Department of Nursing and the Medical Superintendent of the Public Hospital Lahore. This ensured compliance with the ethical principles of the Helsinki Declaration concerning human research (13).

Data collection involved administering a self-administered questionnaire, which was translated into Urdu to ensure comprehension among the study population. The questionnaire was designed to capture demographic data and assess the knowledge levels about anemia—its causes, symptoms, consequences, and prevention methods (14). The questionnaire also included sections on dietary habits and awareness of nutritional elements important for preventing anemia. Prior to data collection, informed consent was obtained from all participants, who were assured of the confidentiality and purpose of the study (15).

Data were entered and analyzed using SPSS version 25. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data. The chi-square test was employed to explore the associations between participants' demographic characteristics and their knowledge levels about anemia. A p-value of less than 0.05 was considered statistically significant, indicating meaningful differences or associations within the data. The results were aimed at identifying the gaps in knowledge that could be addressed in future educational interventions to reduce the incidence and impact of anemia among pregnant women.

RESULTS

In the study, demographic characteristics and anemia knowledge assessments were systematically analyzed and summarized in a series of tables, each depicting distinct aspects of the data collected from the 150 primigravida participants. Below is a description of the key results, along with improved tabular presentations where applicable.

Table 1: Age Distribution of Participants

Age Group	Frequency	Percent	Cumulative Percent
< 20	28	18.7%	18.7%
21-30	93	62.0%	80.7%
30-40	29	19.3%	100.0%
Total	150	100.0%	100.0%

This table indicates that the majority of the study participants were within the 21-30 age group, representing 62.0% of the total sample, suggesting a higher concentration of younger women in the reproductive age attending the outpatient services.

Table 2: Educational Background of Participants

Education Level	Frequency	Percent	Cumulative Percent
Illiterate	84	56.0%	56.0%
Educated	66	44.0%	100.0%
Total	150	100.0%	100.0%

More than half of the participants (56%) were classified as illiterate, highlighting a significant challenge in disseminating health-related information through written educational materials.

Table 3: Awareness of Iron Deficiency Anemia

Response	Frequency	Percent	Cumulative Percent
Yes	59	39.3%	39.3%
No	34	22.7%	62.0%
Don't Know	57	38.0%	100.0%
Total	150	100.0%	100.0%

The awareness level about iron deficiency anemia was fairly low, with only 39.3% of participants acknowledging their familiarity with the condition, suggesting a lack of effective communication and education on this critical health issue.

Table 4: Knowledge of Anemia's Effects on Health

Response	Frequency	Percent	Cumulative Percent
Decreased Growth and Development	49	32.7%	32.7%
Stillbirth	5	3.3%	36.0%
Prematurity	6	4.0%	40.0%
Low Birth Weight Baby	9	6.0%	46.0%
All of the Above	38	25.3%	71.3%
Don't Know	43	28.7%	100.0%
Total	150	100.0%	100.0%

A substantial number of participants (28.7%) were not aware of the severe effects of anemia, such as decreased growth and development, stillbirth, and prematurity, indicating critical gaps in the understanding necessary for preventive healthcare.

Table 5: Anemia Knowledge Score

Knowledge Level	Frequency	Percent	Cumulative Percent
Poor	62	41.3%	41.3%
Moderate	45	30.0%	71.3%
Good	43	28.7%	100.0%
Total	150	100.0%	100.0%

The assessment of knowledge regarding anemia revealed that a significant proportion of the participants (41.3%) had poor knowledge, with only 28.7% displaying a good understanding of the condition.

These tables collectively demonstrate the pressing need for targeted educational interventions aimed at improving knowledge about anemia among pregnant women, particularly in settings similar to the study environment. Enhanced awareness and understanding could potentially lead to better prevention and management of anemia, thereby improving maternal and perinatal health outcomes.

DISCUSSION

The results of this study underscore a substantial deficiency in the knowledge regarding anemia among primigravida women attending a tertiary care hospital in Lahore, reflecting similar findings in other developing regions (13, 14). Notably, a significant proportion of participants exhibited poor or moderate understanding of anemia's risk factors, symptoms, consequences, and management. This observation is particularly concerning given the direct correlation between anemia awareness and maternal health outcomes. Poor awareness can lead to increased maternal morbidity and mortality due to complications such as preeclampsia and hemorrhage, which are more likely to occur in anemic pregnancies (1, 6).

Previous studies have similarly highlighted gaps in anemia knowledge among pregnant women, suggesting a widespread issue across different geographical and cultural contexts (14). The lack of knowledge about the importance of iron-rich diets and the role of vitamin C in enhancing iron absorption observed in this study is consistent with findings from other low to middle-income countries (15). This highlights a crucial area for intervention, particularly in educating women about dietary sources of iron and habits that may inhibit iron absorption, such as the consumption of tea or coffee immediately following meals (16).

Despite the study's insightful findings, several limitations warrant consideration. The use of a cross-sectional design restricts the ability to establish causality between variables. Additionally, the study's focus on a single hospital limits the generalizability of the results to all primigravida women in Lahore or broader populations. Future studies could expand the scope to multiple centers and employ longitudinal designs to better understand the dynamics of anemia knowledge over time (16-17).

The results from this study strongly support the need for targeted educational programs as part of antenatal care services to improve anemia knowledge among pregnant women (18). Such programs could significantly contribute to reducing the prevalence of anemia by encouraging dietary changes and supplementation adherence (19, 20). Moreover, healthcare providers should be trained to communicate effectively about anemia and its prevention, ensuring that pregnant women receive and understand vital information regarding their health and that of their developing fetus.

CONCLUSION

In conclusion, enhancing the knowledge of anemia among pregnant women could be a key strategy in improving maternal and fetal health outcomes in regions similar to the study setting. Implementing comprehensive educational interventions that address specific knowledge gaps identified through such research could lead to a substantial decrease in the incidence and severity of anemia in pregnancy, ultimately improving the quality of life for mothers and children.

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