Research Article

Perspectives of Health Care Professionals and Patients on Anemia in Afghanistan's Women of Reproductive Age

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ABSTRACT

Background: Anemia is a sign of poor nutrition and health in women of reproductive age. There has been little research on anemia beliefs among health care providers and women of reproductive age in Afghanistan, which makes it difficult to understand how to improve health in a region with a high anemia prevalence.

Objective: The objective of the study was to determine the perception of anemia among internally displaced women of reproductive age groups in three diverse regions of Afghanistan with large number of displaced people and to obtain a better understanding of local access, availability, health-seeking behaviour, and attitudes in order to recommend solutions.

Method: A purposive exploratory qualitative study was conducted among 21 participants, which includes (7) Key In-depth Informants (doctors) and (14) Focus Group Discussions (nurses and midwives) using face-to-face interviews in the Central, East, and West regions of Afghanistan.

Results: Most respondents described anemia as a condition characterized by weakness. All study participants perceived anemia as an important health problem, tending to cause adverse outcomes among women. It was found that short-term multiple pregnancy, low birth spacing, lack of family planning, poor health-seeking behavior, poor knowledge about healthy foods, and consumption of unhealthy foods, including eating mud and soil, as causes of anemia in the provinces. Nurses and midwives further endorsed this issue, sharing that most women were also poor enough to afford iron-rich food.

Conclusion: Poverty must be addressed as this lead's women from lower socioeconomic strata to eat fewer healthy meals and have more anemia. The government must establish an effective context specific health strategic plan that focuses not just on awareness campaigns but also on reducing inequities among WRA.

Keywords: Anemia; WRA; Socio-economic; Cultural; Education; Nutrition; Awareness; Access

Introduction

Global data shows the prevalence of anemia; 2.5 million maternal and perinatal deaths are approximated world-wide [1]. While it has also been suggested by studies that more than 1,15,000 maternal deaths happen because of anemia per year [2], both developing and developed countries are not left untouched by it.

In earlier periods, much of the research in Afghanistan was limited to examining the prevalence of anemia among women [3,4]. There is a scarcity of research on how Afghan communities and health care professionals perceive anemia, resulting in a limited understanding of the gaps in local awareness, health related context, and how they may contribute to the burden of anemia and attempts to minimize its incidence. Evidence shows that people's acceptance and successful participation in highly useful or proven interventions may be affected by a lack of information and misconceptions regarding anemia. Negative beliefs regarding the impact of iron supplementation on birth outcomes (beliefs that it would make the baby dark and/or huge), for example, were a barrier to iron supplement compliance in South India [5].

The prevalence of moderate or severe food

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insecurity in the population statistics in Afghanistan has risen from the previous year's level. In 2019, the statistics reached a peak of 63%, and a low of 45% in 2015. In Afghanistan, the prevalence of anemia among non-pregnant women aged 15 years-49 years was found to be 43.2% in 2019.This was an increase over the previous year's figure of 42.3%. The average prevalence of anemia was 36.200 percent between December 2000 and December 2019. The figures increased from 34.1 percent in 2002 to 43.2 percent in 2019 (WHO).

The current study focused on the perspectives of anemia among health care providers and WRA visiting health facilities in three Afghan regions to understand why the anemia trend is increasing, beside government and interventions by global partners. We wanted to understand in depth about perception of IDP women and WRA regarding nutrition, which would not have been possible in a quantity study and security situation was also not conducive for conducting survey.

It might help with the development of preventive interventions and measures.

Methodology

Study area

Three environmentally and geographically different administrative regions of Afghanistan with the highest prevalence of anemia [4] (DHS-2016) and IDPs (IOM) were selected for in-depth study. These were the Central Region (Kabul), the East Region (Nangarhar), and the West Region (Herat). Besides that, those are the largest provinces with large rural settings, with internally displaced families shifted from neighboring provinces because of climate change and insecurity, as well as immigrants who come back to the country, mostly living in those cities. The findings of this study will have an advantage in informing policymakers and program planners to make better decisions on appropriate intervention strategies to tackle this major public health problem and achieve the plan.

Sampling and data collection

A purposive exploratory qualitative study of twenty-one enrolled health care providers such as doctors, nurses, midwives, and WRA anemic patients in three provinces using face-to-face interviews from February to March 2019 was conducted. Data collection methods involved key-informant interviews (KIIs) and focus group discussions (FGDs). We used open-ended questions with probes during the interviews to obtain information regarding the causes of anemia in women. We chose individual, face-to-face, in-depth, semi-structured interviews for data collection as they were particularly useful for investigating personal, sensitive, or confidential issues and allowed for the probing of interesting responses and observation of body language **(Tables 1-3).**

Ethical consideration

For the research to be carried out, approval letters were received from the Institute of Research Board (IRB), Public Health Afghanistan as well as the authorities of Maulana Azad University in Jodhpur, India. Privacy and confidentiality were upheld. Formal permission was obtained from the participants before any images or audio were captured. In performing the research, we followed all the rules and regulations of the Afghan government as well as the Maulana Azad University in Jodhpur, India.

Analysis

The exploratory questions were regarding the women's perceptions of access to the health

Table1: Key-informant interviews (Gynecologist and Medical Doctors).

KIIs	Gender	Qualification	Age	Work experience
KIIs 1	Female	Gynecologist	37 years	10 years
KIIs 2	Female	Medical doctor	45 years	15 years
KIIs 3	Female	Gynecologist	35 years	6 years
KIIs 4	Female	Gynecologist	36 years	5 years
KIIs 5	Male	Medical doctor G.P	30 years	3 years
KIIs 6	Female	Medical doctor	32 years	5 years
KIIs 7	Female	Gynecologist	40 years	13 years

Table 2: Focus group discussions (Nurses and Midwives).

FDGs	Gender	Qualification	Age	Work experience
FDG 1	Female	Nurse	34 years	12 years
FDG 2	Female	Midwife	28 year	05 years
FDG 3	Female	Midwife	35 years	10 years
FDG 4	Female	Nurse	29 years	7.5 years
FDG 5	Female	Midwife	30 years	08 years
FDG 6	Female	Nurse	33 years	10 years
FDG 7	Female	Midwife	38 years	15 years

Table 3: Focus group discussions (Patients).

Patients	Age	Hb	Gravid	Education	Occupation	Husband occupation
FDG P1	40 years	10 g/dl	Multi gravid	Master	Has job	Didn't shared
FDG P2	18 years	09 g/dl	Multi gravid	Class 8	Housewife	Labor on Daily wages illiterate
FDG P3	20 years	8.5 g/dl	Primigravida	Class 10	Housewife	Jobless
FDG P4	33 years	9.5 g/dl	G4 P5	Refused info	Refused info	Refused info
FDG P5	35 years	7.5 g/dl	Multi gravid	Class 5	Housewife	Labor on Daily wages Illiterate
FDG P6	23 years	8.5 g/dl	Multi gravid	Illiterate	Housewife	Labor on Daily wages illiterate
FDG P7	22 years	10 g/dl	Unmarried	Class 12	At home	Unmarried

facility, awareness, a balanced diet for a woman, anemia, socio-cultural risk factors, and prevention and treatment of anemia. The key points of the recorded interview were noted during the interview. The audio recordings of the FGDs and KIIs were transcribed into local languages such as Dari and Pashto. The transcripts were manually coded for data analysis. Similar codes were analyzed and assembled into categories. In the final step, subcategories with similar concepts were grouped under the umbrella of themes. The reports were created from the coded parts of responses. These reports, or coded thematic segments, were then summarized into topic-specific concise narratives. The summary data was compared and triangulated with quotes from different categories of participants, and their appropriateness to the information needs was assessed. The data was analyzed using the NVivo 10 software.

Data analysis came up with three main themes in the study of anemia among the reproductive aged group. The following three key themes emerged from the different KIIs and FGDs conducted across the three regions:

- patient load
- causes and contributing factors
- accessibility and availability

Load of patient with anemia

Age group: "*Most women visiting the clinic were married and between the ages of 18 and 35 years old. Unmarried and adolescent girls are not coming to the clinic." (KIIs, Western region).*

Anemic women: Healthcare experts expressed their perspectives on the patient load in terms of anemia. For many years, most KIIs said, anemia has been a common problem, practically widespread among women of reproductive age.

At the health center, a gynecologist expressed that "*around 70-75 women are attending this hospital per day, and almost 40%-45% of those women are anemic, especially pregnant and lactating women who suffer from anemia." (KIIs, Central region)*

In a deeper interview at another PHC in western region, the doctor shared that "*the prevalence has increased now; we are finding more anemic patients reporting to this health center. I have observed the number of patients increasing incredibly for the last two to three years." (Gynecologist Eastern region, Feb 2019.)*

Diagnosis and symptoms: Anemia diagnosis was not a concern among medical personnel. Indeed, they claimed that they could quickly

identify and diagnose anemia in prenatal patients at the hospital by signs and symptoms and hemoglobin tests from blood samples, but that their main issue was the lack of a system in place to detect anemia in non-pregnant and adolescent girls. As a result, practically all of them were overlooked in terms of diagnosis. Anemia in women was mostly diagnosed in hospitals, such as during ANC and PNC visits or other illnesses.

"*Usually Married women are attending the clinic for ANC or sometimes for PMC, unmarried and adolescent girls are not coming to the clinic, so we have easily found anemia among those married women who attend primary health care. Unfortunately, we don't have any idea about those women who are not coming to the clinic. " (KIIs Eastern region).*

"Women, always come with symptoms and complain of anemia. For example, women say that they have a headache, dyspnea, weakness, vertigo, fatigue, and loss of appetite." (Midwife Central region).

■ Causes and contributing factors

IDPs and immigration: "*Immigrant people from Badghis and remote rural areas have been moved because of climate change and the lack of availability of drinking water and food, so they are more cooped up, and the prevalence of anemia has increased in this region." (Midwife, Western region)*

The FDG participants, nursing staff of the same clinic, informed us that "*security-affected migrant populations have come to the hospital, and they are anemic." (Nurse, Western region*).

Patients revealed that "*We have shifted from our houses to this province and have had lots of problems with living and food availability." (Patient, Western region).*

Awareness and literacy: Patients don't know about their anemia and do not come to the clinic specifically for treatment of anemia; They attend the clinic because of other health issues or symptoms of anemia like vertigo, weakness, headache, nausea, or pregnant women complain of stomach burn and complain of chronic diarrhea and at the same time complain of increased heart rate.

"*Educated women have some awareness about anemia and related adverse effects, but illiterate women don't have information about anemia; women and their families think to be anemic is not an issue." (KIIs, Eastern region)*

"*Some patients are aware of their anemia, and they are saying that we are anemic, and our headache and weakness are because of anemia." (Gynecologist Western region)*

A 23-year-old unmarried girl said that "*most of the time when I was working at home, my eyes were getting dark, I had vertigo and feelings of weakness. My mother told me maybe you are anemic, so for that reason, I came to the clinic." (Patient, Central region)*

One participant expressed, "I am six months pregnant. I am feeling very weak. One of my neighbors told me that one clinic has lady doctors and provides good medicine to women and told me about the good behaviour of health workers (women, multi-gravid, 3 para 4, western region).

Delayed diagnosis: Women who visited the health center in a shock condition because of severe anemia. *"Pregnant and lactating women are not coming to the clinic because of symptoms. They think it is not an illness, so women come to the clinics if they have other health issues like diarrhea, stomach pain, or severe health conditions during pregnancy or lactation; mostly they come at the stage of severe anemia. " (KIIs, Western region)*

Dietary barriers: Dietary factors have an important role in the prevention of anemia among reproductive-aged women. The specialist doctor, midwife and nurses mentioned the importance of a balanced diet, nutritious food, and iron-rich foods, which are crucial for avoiding anemia. Meanwhile, they talked about the harmful aspects of poor dietary habits, poor nutrition behaviour, and extensive drinking of tea and cold drinks at the same time, which are the leading factors of anemia among WRA.

KIIs from the east region notified that "*the dietary habits have a 100% effect on women's anemia because the women do not know their dietary habits. For example, if families are cooking and eating potatoes, rice, and bread at the same time, it means they are using excessive carbohydrates at one time*."

Other KIIs from the central region said that "*poor dietary habits have a very important role in developing anemia. During pregnancy and lactation, the requirement for iron-rich foods increases, and they should use nutritious foods to have more iron and folic acid. "*

Iron-rich foods are available in their localities,

but women are not aware of them. Especially among remote rural populations. We were able to find awareness among those women if they or their family members were healthy workers or highly educated. (Gynecologist, Eastern region).

Food diversity: A midwife shared her observations on the food diversity of WRA. "*Patients do not use iron-rich foods like vegetables and fruits. We couldn't find varieties of different foods in their diets. They used more tea the entire day and drank tea while eating food. "(FDG, Western region)*

Similarly, women concerning their food diversity mentioned that "*we were used to cooking rice at night, cooking bread in the morning, and at lunch we used that morning cooked bread with tea. While we eat meat once a month. (35 years old, housewife, multigravida patient, eastern region, February 2019)*

A patient shared that "*We are using rice, beans, chips, and vegetables; we are using vegetables once or twice a week, meat twice a month, and fruit three times a week." (Women 33 years of age multi gravid Kabul Province Feb 2019).*

Poor knowledge and unawareness of iron rich foods are a considerable cause of developing anemia. The gynecologists, midwives and nurses reported about the availability of iron rich foods in the rural and urban locations, but the majority of women do not know regarding the existence of iron in different foods, or they have little information to know; iron has thoroughly played in the prevention and treatment of anemia.

"Because of their high illiteracy level, women do not have information on the subject of iron and iron-rich foods." (KIIs, Western region).

Hard to reached locations and unavailability of nutritional diets: The lack of iron-rich foods in their communities was one of the major burdens on public health policymakers. The problem of the unavailability of iron-rich foods over the lengthy winter season was raised by FDGs and in-depth interview participants. Mountainous and hilly areas, as well as hard routes, are considered to be influencing factors in anemia.

"*The shops in rural villages are very far away from homes for people to simply purchase food for themselves; those remote communities are practically mountainous and have difficult access; also, fresh vegetables and fruits are unavailable in the winter" (KIIs, Eastern region).*

"*Fresh vegetables and fruits are not available in the mountainous rural villages during the winter. They use only bread, rice, and tea.*" (Midwife, Western region).

Patient said that "*In our village, vegetables in the summer are available but, in the winter, they are not available, thus we cook and eat based on the availability of vegetables." (FDG, Eastern region).*

Furthermore, the FDG woman revealed that "*We live in the desert; we could only use dairy because we have sheep, and we use milk and yogurt goats; there is not any shop to buy food every day." (23 years old, uneducated, multigravida, eastern region)*

Cultural, traditional, and decision-making barriers: Our study participants more strongly highlight the traditional and cultural barriers. Doctors, nurses, and midwives believe that wrong traditions and cultural practices are the major influencing factors for women's anemia, which include rumors about iron tablets, high carbohydrate and fatty diets during pregnancy and lactation, tradition of restrictions on nutritious food during pregnancy, lactation, and menstruation, culture of home delivery, and culture of restrictions on attending the clinic. Miss Conception is about iron tablets for adolescent girls and women. Doctors, nurses, and midwives are faced with the strength of cultural beliefs on the subjective effects of different foods throughout pregnancy and lactation. Pregnant women are forbidden to eat proteins (eggs, fish, meat, peas, beans), use fresh vegetables, and yogurt at the time of menstruation. And the family's attitudes toward pregnancy, such as pregnant women should take care of themselves and their pregnancy, but the husband will make the necessary decisions regarding his wife's pregnancy. For example, the husband will decide where the pregnant woman should attend her antenatal care and where the pregnant woman should deliver. According to the nurse-midwives, the strength of cultural beliefs among pregnant women and their family members results in an unhealthy lifestyle for pregnant women. Women don't take showers until 40 days after delivery. Most women are prohibited from eating healthy foods because they believe foods like fish prolong inflammation after delivery or any operation and using grains after delivery can cause abdominal

discomfort for infants through breast feeding.

KIIs notified that "*In the rural community, most primigravida try to hide their pregnancies till 4 months of gestational age. They do not share their pregnancy with the family members. Women feel shame from their pregnancy." (Gynecologist, Western region).*

"Protein, vitamins, and iron-rich foods have not been taken by pregnant women, mostly in rural areas. The concept will increase the weight of the baby and enlarge the head of the baby, and it will create problems during delivery". (Midwife, Western region).

The patient said that *"Throughout pregnancy, we avoided eating beans, peas, and meat, and at the time of lactation, we also shunned eating heavy foods, for example, beans and peas. The elders said it causes stomach pain in the baby. " (33-year-old patient, Central region)*

"My mother-in-law has forbidden me to eat meat, yogurt, cold water, potatoes, and vegetables during lactation and pregnancy as well as during pregnancy, saying vegetables have bad effects on the stomach and the baby will suffer from stomach pain. Then we must take the baby to the doctor. She says vegetables can cause a baby's stomach pain. Some women use traditional medicines during pregnancy and lactation". (FDG woman, Eastern region).

Concerning the culture of oily and carbohydrate food intake, one of our study participants highlighted that "*women use dairy products, especially butter. They like oilier, carbohydrate, and sugar-rich foods, but women are not keen on using fruits and vegetables. They think that fresh vegetables and fruits are not useful diet items, and it is useless to spend money on them." (Gynecologist, Western region).*

"*The culture of not attending the health center is very common in rural settings. That's why most of the relevant ill population remains without visits and advice from health workers. Women come to the health clinic when the illness is getting worse, thus bringing the serious condition to the health centers." (KIIs, Central region).*

"My mother-in-law and husband usually decide for me to go to the clinic. And what should I cook? family planning decisions and other housework. The workload is very high, and I must complete it by myself." (FDG patient, 18 years of age, Herat province, March 2019).

"Mother-in-law of women always interferes with women's diets and going to the health centers. They do not allow women with minor health problems to come to the clinic. Decision making is a sensitive issue inside families, always the husband and mother-in-law have rights to it. " (Gynecologist, Western region)

Gender related issues: We can see that Afghan women face more challenges in terms of gender equity and equality, particularly in rural areas where women have fewer opportunities to study, get educated, and find work. Men rolled over their livelihoods. Study participants shared their observations regarding these sensitive issues.

"*Men usually used to eat food first. Whenever men have finished eating and food remains from men, then women will eat; otherwise, women will stay hungry till they get leftovers, cornbread, or wheat bread with tea, irrespective of being pregnant or lactating."(KIIs Eastern region).*

Remorse: Doctors Midwives and nurses are greatly worried about religious leaders and family rumors about iron tablets in the local community. They thought iron tablets were a plan to make women sterile and control the population.

"*The government gave iron pills to teenage girls in schools, but some families felt that using iron tablets would cause females to become infertile." (Gynecologist, Western Region).*

"*The iron tablets, provided by NGOs or from abroad, are a population-control scheme that harms pregnant women, babies, and causes women's infertility". (Gynecologist, Western region*).

"*Rural religious leaders have expressed warnings regarding the use of iron tablets. It claims that iron tablets are hazardous and will have a negative impact on future generations. Tablets should not be used by women." (FDG Nurse, Western region).*

Medical causes: Medical causes are particularly more prevalent in the initiation of anemia. Nurses, gynecologists, nurses, and midwives discussed multiple pregnancies, abortions, complications of pregnancy, abruptio placenta, placenta previa, family planning, low birth spacing, menorrhagia and long menstruation period, parasitic infection, PPH, early marriage.

"*Anemia in women is caused by multiple pregnancies, abortions, pregnancy problems, abruptio placenta, placenta previa, not using family planning and birth spacing, parasitic infections, menorrhagia in*

women, especially young adolescent girls, and heavy menstrual cycles." (KIIS, Western region).

"*Anemia is caused by early marriages, pregnancy consequences, frequent pregnancies, low birth spacing, parasitic illness, home delivery and associated consequences, PPH, excessive monthly bleeding, and menopause." (Central region midwife).*

An 18-year-old patient participant, a housewife and lactating woman with a Hb level of 9 g/dl and symptoms of weakness, vertigo, and dyspnea who attended the health clinic, stated, "*I have three children every year I get pregnant, and the distance between each pregnancy is very short. During pregnancy, I had severe nausea and couldn't eat meat or some other foods." (FDG, western region)*

Economical related barriers: Economic issues were more frequent in rural and urban regions. The majority of women did not have enough money to cover their dietary needs and other health-related issues. KIIs and FDGs reported that most of the time it was not possible to follow the nutrition advice of health professionals they received in counseling about good food because they were unable to afford the recommended food items due to a lack of finances.

"*Most of the patients are poor, and as a result of their poverty, they were unable to come to the clinic, could not pay transportation expenses, and were unable to purchase nutritional diets." (Midwife from the central area).*

"*When I arrived at the clinic, the midwife told me that you are suffering from anemia and advised me to eat fruits and meat, but when I returned home and told my husband about the midwife's advice, he told me that I didn't have money to buy fruit and meat, and that whatever I and other family members were eating, you should also eat." (33-year-old FDG sufferer from the Midwest).*

Anemia was sometimes unrelated to socioeconomic status. that was due to the wrong habits of diet. The participant, a 33-year-old housewife from the central region, reported that *"We can afford to buy, but our children don't like to consume vegetables, fruits, and meat." They always like to eat chips, burgers, and rice, so we mostly eat chips, burgers, and rice."*

■ Accessibility and availability

Follow up: Healthcare providers could regularly follow up on pregnant and lactating women who attend their ANC, but healthcare centers do not have any follow-up cards for non-pregnant and adolescent girls. Loss of follow-up occurs even among pregnant and lactating women, if they move to another area or have a long distance from home to the clinic due to family restrictions. The majority of non-pregnant and adolescent girls didn't visit the clinic for anemia therapy. Doctors and nurses were also concerned about non-pregnant women and teenage girls since there was no follow-up mechanism in the health facility or in the community. KIIs and FDGs were concerned about pregnant and nursing mothers who were unable to visit the hospital due to a variety of factors. Although some pregnant women come for ANC visits, most pregnant women have trouble accessing health clinics.

"*We are following up our patients (weekly or monthly) and calling them to the hospital for treatment." (Gynecologist, Central Region).*

"*Women displaced from their villages because of security, climate change, and migration lose their follow-up." (Nurse, Eastern region)*

"When I came to the clinic, they provided us with a notebook and an iron tablet to examine my blood. The midwife told me to use the iron tablet for one month. When the tablets are finished, then bring your notebook with you and come back to the clinic". She told me, *"I would provide more tablets for anemia and check your pregnancy as well." (35 years old, multi, G4p5 Hb 8.5g/dl, Nangarhar province, March 2019)*

"We are from the Kochi tribes. We don't have a house to stay at one place. We are always on the move." (Anemic Patent, Eastern Region)

Shortage of work force and medicine: There was a workforce shortage, as well as an increase in the number of patients that visited the health facility. The medical personnel were unable to attend to the patients on time. According to doctors, nurses, and midwives, the excessive workload and short duty time hampered workers' capacity to provide patient care. The health staff are exhausted by the insecurity and the long distances they must travel from their homes to the clinic. Nurses and midwives are frequently faced with a lack of medicine in the clinic, and patients urgently want medicine from the clinic, making it difficult for them to manage

the current situation.

"*The deficiency of iron tablets in the clinic is the same as some of the medicines we don't have in the clinic. We have limited time for doing our duties, and lots of patients are coming to the health center. " (KII's western region)*

"*There is a severe scarcity of drugs, particularly iron supplements. The workload is quite heavy, and people are traveling from far-flung rural areas to attend health clinics." (KIIs in the east).*

"*Security is a big challenge for our job to be on time and punctual. Additionally, long-distance duty stations from my house and unsecured motorways are affecting health care services for patients who come from a long distance and cross a lot of restrictions in their community and houses. " (KIIs9 central region).*

"We belong to the Kochi tribes; we don't have houses; and we change our location in the summer and winter. We live in a remote area, and we could not attend the clinic regularly the health center is very far." (Women, Eastern region).

Behaviour and lack of belief in doctors: Doctors, nurses, and midwives discussed their challenges and raised concerns about delivering health information to all reproductive-aged women. Only they have the ability to communicate their knowledge to pregnant women who are coming for ANC. They were dissatisfied since their explanation did not fulfill all of the patient's requirements. In addition to being overburdened and having little time to advise patients and their families, doctors, midwives, and nurses were complaining about the shortage of personnel in their regions. The level of education and high illiteracy level, low level of health education in the community, media coverage for awareness was the barrier we observed it in this study.

Aside from that, people were complaining about the doctor, the nurses' behaviour, the lack of patient-doctor interaction time, and certain doctors' ego-driven inability to listen to patients. In this way, health personnel do not arouse the patient's trust, and these factors discourage them from visiting the clinic. Aside from that, people were complaining about the doctor, the nurses' behavior, the lack of patient-doctor interaction time, and certain doctors' ego-driven inability to listen to patients. In this way, health personnel do not arouse the patient's trust, and these factors discourage them from visiting the clinic.

The lack of advice to patient relatives, communication barriers, and community awareness found the gaps because community and health care professionals were not alleging to and couldn't see effective outcomes among women. However, most nurse-midwives believed that they could overcome inappropriate cultural beliefs by providing health information and actively involving the husbands and/or family members in antenatal care. Most health workers do not have good behaviors. Maybe due to the loads of work, the endurance of health workers gets low, and they behave rudely with patients.

"Lack of regular monitoring from the center, lack of training in our job, and low motivation of our personnel." (KII's western region).

The high workload of healthcare providers in a difficult situation of insecurity and conflict, as well as a long distance to travel to health centers; lack of reward, motivation, and a low salary from the government side, all had an adverse impact on health services and patient care.

Discussion

This study identified the perceptions of women and healthcare providers about anemia, its risk factors and perceived causes, its impact on women, and factors affecting the prevention and control of anemia in Afghanistan. Most patients who participated in this study were not aware of the term anemia but described anemia as a condition characterized by "blood deficiency" in the body. Doctors, nurses, and midwives who participated in this study perceived anemia as an important health problem, tending to cause serious health outcomes among women of reproductive age. In addition, study participants perceived tea and cold drink consumption with food as one of the important causes of anemia in women. Doctors, nurses, and midwives identified low birth spacing, poor access to health centers, poor health-seeking behavior, and consumption of unhealthy foods as causes of anemia in the Afghanistan provinces. These findings should help raise relevant issues to be addressed by health strategists and policymakers in Afghanistan, which has a very high prevalence of anemia. Findings from the study provide insight into the root cause, better understanding

women and healthcare providers' perceptions of anemia, and how to design context-specific strategies and interventions to prevent and control anemia among women of reproductive age in rural areas of Afghanistan in particular (NNS-Af-2013).

Doctors, nurses, and midwives perceive that insufficient facilities, high workloads, insufficient medicine, especially iron tablets, lack of training opportunities and learning resources for nurses and midwives, and limited support staff appear to be the most important barriers to anemia in health care centers. Titaley CR et al. revealed the importance and support of ANC and PNC on health outcomes in women [6]. A study in Indonesia highlighted the importance of capacity building of nurses and midwives in health care centers [7]. Medical professions need opportunities for continuous learning and increasing knowledge for better outcomes.

The study observed that the strength of cultural beliefs enormously influences women's healthy lifestyles and family participation in anemia in antenatal care programs. The same finding was made in other studies. The strength of cultural beliefs enormously influences women's healthy lifestyles and family participation in antenatal care programs [8].

Similarly, in China and India, cultural beliefs about food taboos for pregnant women contribute to the prevalence of anemia [9,10]. As a result, nurse-midwives must acquire the knowledge and skills required for culturally sensitive care.

To gain more insight into the level of health literacy of women and their families, healthcare providers, especially nurses and midwives, need to explore women's knowledge of what constitutes a healthy lifestyle as well as their cultural beliefs. Communication abilities are required to bridge the cultural diversity between health care providers and their patients [11]. Communication skills have been emphasized as one of healthcare providers' core competencies [12]. However, our study found that the majority of health care providers, especially nurses and midwives, need more training in communication skills. They would like to feel more confident by being competent in delivering health information about anemia and a healthy lifestyle to women and being able to bridge the cultural beliefs. Moreover, they would like to be more competent in the early detection of anemia among women of reproductive age, especially pregnant women.

Our study results are supported by other studies which conclude that nurses and midwives' communication skills and interaction with the patient need to be improved, and highlight those basic medical skills are also important to be improved [13].

According to the nurse-midwives, in some cases, women and families prefer to visit a traditional healer rather than visit the health care center for antenatal check-ups. The reasons for choosing a traditional healer are that they are easily accessible and do not need transportation costs [6]. Health workers' attitudes, delay in providing health care, shortage of medicine, particularly iron tablets, substandard care, unavailability of skilled attendants are some of the factors that cause un-satisfaction with the antenatal care services and discourage women from attending the hospital [14].

Anemia among women, particularly pregnant women, needs immediate attention by combining some strategies that can comprehensively combat the disease [15]. A combination of strategies could include increasing women's health knowledge, encouraging husbands or family members to participate in antenatal care programs, encouraging positive beliefs and practices, promoting professional attitudes, and providing adequate antenatal care [14,16].

The results of our study are in line with those of previous South Asian research. For example, although recognizing the signs of anemia, women were unfamiliar with the word "anemia," according to cross-sectional descriptive research done in India [17]. Women perceived anemia as "normal throughout pregnancy," according to healthcare providers, and thought weakness and dizziness were common pregnancy symptoms. This is also consistent with the findings of anemia research done in Mumbai, India. Women considered anemia to be a typical symptom of pregnancy as they believed that the pregnant woman's body had to share nutrients and blood with the fetus [10]. This finding reflects an unawareness among women about anemia and its signs and symptoms, particularly during pregnancy. This emphasizes the need to develop educational measures to help women understand

the misconceptions about anemia. The health sector in Afghanistan has a well-established community of health workers [18].

Although CHWs provide health education, there should be a separate component of awareness about anemia, its symptoms, and risks for both mothers and their newborns.

In addition, healthcare providers also perceived, illiteracy, lack of awareness about the causes of anemia, limited antenatal checkups, frequent pregnancies with low birth spacing, and large family size as primary causes of blood deficiency. Similar studies in Ethiopia and India supported our findings [19, 20]. A review has reported that a birth spacing of less than 2 years weakens the process of anatomical and physiological recovery after delivery, thus increasing the chances of anemia in upcoming pregnancies [21].

Our findings also found that, despite receiving advice on how to eat a healthy diet, women in the provinces had poor health-seeking behaviors and continued to drink tea with their meals. Research done at an Australian tertiary obstetric hospital found similar results, where women were advised on a range of topics relevant to the prevention and treatment of anemia. However, there was a lack of compliance despite this [22].

Despite receiving instructions on how to eat a balanced diet, women in the provinces had poor health-seeking behaviors and continued to drink tea with their meals, according to our findings.

As a result, further study is needed to better understand the incentives and barriers to improving women's health behaviors and perceptions of treatment compliance. Some of the causes for women's unhealthy diets and poor compliance with iron supplements, according to healthcare providers, include a lack of awareness, illiteracy, unavailability of medicine at government institutions, and financial constraints. Research in Afghanistan, advised measures such as increasing awareness, providing high-quality counseling, sending reminder messages, and providing regular iron supplements during pregnancy to guarantee appropriate coverage of prenatal iron supplementation [23]. Most of the women who came to the clinics were also too poor to buy fruits or iron-rich foods, according to the healthcare providers. This is an eye-catching discovery that points to wider social and contextual factors at function in society rather than at the individual level. Poverty, or a lack of purchasing power, is a broader social issue rather than an individual-level problem that must be addressed as a primary cause of disease [21]. For example, we can teach women about the dietary habits they have to develop as individuals in order to overcome anemia by eating a healthy diet. This strategy will fail because, regardless of how well-informed women are about the risks of anemia, some women may lack the financial, physical, or social resources to adapt their dietary habits. This means that the disease burden cannot be eliminated unless interventions address broader social variables that influence individual behaviour. Such socioeconomic variables can be addressed by increasing girls' educational attainment in order to make them self-sufficient, or by creating job opportunities for women or their spouses in order for them to purchase iron-rich foods. This would assist to have long-term and sustained impacts on women's overall health. Our research also identifies some of the major barriers to anemia prevention and control. Inadequate facilities and resources, an absence of staff support, an absence of government-led efforts to combat anemia, an absence of social networks, financial barriers and constraints, and a lack of birth spacing are all examples.

Policies cannot create change unless they are well developed and implemented. Strong lobbying is required to persuade the Afghan Ministry of Public Health (MoPH) to develop, implement, and monitor an effective, evidence-based nutrition policy. This document is intended to assist the MoPH, as steward of the health sector, and other stakeholders, such as UN agencies and national and international organizations, in reviewing the causes and underlying factors of anemia in the country, adapting appropriate policies and strategies to address the problem, and to investigate policy and program gaps and make evidence-based recommendations to the Ministry of Health on how to address them.

Conclusion and Suggestions

The findings suggest that the government develop measures for poor and vulnerable women, as well as implement health-awareness initiatives, to improve dietary practices, supplement compliance, and health-seeking behavior among women of reproductive age. To improve women health and health-seeking behaviors in

Afghanistan's regions, effective counseling tactics and context-specific health education sessions are required. In addition, sociocultural factors of health, such as poverty, must be addressed, as these contribute to lower socioeconomic stratum women eating less nutritious foods and having more anemia. As a result, the government must develop a comprehensive and successful strategic plan that focuses not only on raising awareness but also on decreasing injustices that lead to pregnant women consuming iron-deficient diets and becoming anemic.

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