Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.10
Original Article

KNOWLEDGE AND ATTITUDE TOWARDS PREVENTION OF ANEMIA AMONG PREGNANT WOMEN AGED 18-45 YEARS AT KAYUNGA REGIONAL REFERRAL HOSPITAL, KAYUNGA DISTRICT. A CROSS-SECTIONAL STUDY.

Jonan Tumwesige, Sharifah Nabukenya*
Kampala School of Health Sciences.

Abstract.

Background.

The Majority of maternal mortality is associated with higher rates of pregnancy-related complications such as maternal anemia. The prevalence of anemia in pregnancy remains a consistent threat among pregnant women. This study aimed to assess the Knowledge and attitude toward the prevention of anemia among pregnant women aged 18-45 years at Kayunga Regional Referral Hospital, Kayunga District.

Methodology.

The study used a cross-sectional study design, with simple random sampling as the sample technique. Data was collected on a sample size of 50 respondents using semi-structured questionnaires written in the English language with open and ended questions as data collection tools; analysis was done manually using tally sheets, pens, and paper, entered in an Excel computer program; presented in tables and figures; then interpreted.

Results.

(40%) of the participants were within the age bracket of 24-29 years, (50%) had attained a secondary level of education. (60%) of respondents had ever heard about anemia, (52%) knew death as the side effect of anemia, and (66%) knew that pregnant women are supposed to take folic acid supplements every day. (84%) of respondents agreed that going for antenatal visits is important, (75%) agreed that a mother and a child could benefit from taking iron supplements, (62%) disagreed that cultural or religious beliefs prevent pregnant women from eating certain types of food and (50%) always preferred to sleep under ITNs.

Conclusion.

Adequate knowledge of the prevention of anemia was unveiled. A poor attitude towards the prevention of anemia was also established.

Recommendations.

The MOH of Health should ensure that ferrous sulfate and folic acid are readily available in all public health facilities so that they can be provided to these pregnant mothers as the need arises. This will reduce the incidence of maternal anemia incidences.

Keywords: *Pregnant Women**,** Knowledge and Attitude**,** Pregnancy-related Anaemia, Kayunga Regional Referral Hospital, Kayunga District.*
Submitted: *2024-04-12* ***Accepted:*** *2024-10-24*
Corresponding Author: *Jonan Tumwesige*
Email: *jonantumwesige72@gmail.com*
Kampala School of Health Sciences.

Background.

Globally, majority of the maternal mortality occurs in low- and middle-income countries. These were associated with higher rates of pregnancy-related complications such as maternal anemia (responsible for around 303,000 maternal and 336 new deaths during and following delivery (WHO, 2018). In Uganda, the proportion of anemia in pregnant women is slightly higher in rural areas than in urban areas 35% and 29% respectively. This is attributed to economic, social, and other negative consequences (UBOS &ICF, 2017).

Even though Uganda is implementing a minimum public health package to combat pregnancy anemia, the prevalence of anemia in pregnancy remains a consistent threat among pregnant women due to low antenatal care attendance since normal diet cannot meet the demand of some women for

iron, especially women with an already established iron deficiency. This is also evidenced by the available HMIS records in Kayunga Regional Referral Hospital that reveal that an average of 350 pregnant women attend antenatal care within a week 7% attend only 1- 2 ANC visits, 69% attend three ANC visits, and only 22% who complete the recommended four ANC visits; only 30% take iron supplements and 35% take IPT at least one dose within hospital, 46% of the pregnant women sleep under treated mosquito nets on daily basis.

However, due to low uptake of ANC visits, most pregnant women miss anemia interventions and health education sessions and this exposes a pregnant woman to low productivity, obstructed labor, intrauterine growth retardation, low birth weight, preterm delivery, decreased immune function, birth defects, cretinism and decreased intelligent quotient and significant impact on the health of the fetus hence leading to maternal cases. Therefore, this study aimed to assess the Knowledge and attitude toward the prevention of anemia among pregnant women aged 18-45 years at Kayunga Regional Referral Hospital, Kayunga District.

Methodology.

Study design

A cross-sectional descriptive research design in nature is used in this study. The design is considered favorable because it has helped the researcher to use various survey methods to gather quantitative data within a reasonable period of time.

Study area

Kayunga Regional Referral Hospital is approximately 70.8 kilometers from Kampala. The facility is comprised of the following clinics and departments; ART, Laboratory, pharmacy, antenatal, inpatient, and outpatient department. It also includes an accident and emergency department, nutrition ward, and maternity center, the facility receives an average of 250 patients on a daily basis.

Study population

Study population refers to a large group of people possessing one or more characteristics in common on which a research study focuses. Therefore, the study targeted a population of pregnant women attending antenatal care aged 18 to 45 years and present during the period of data collection in the selected area of study.

Sample size determination

Kothari & Gaurav (2014), defined sample size determination as the number of items to be selected from the universe to constitute a sample. The sample size was calculated using Burton's formula (1905).

S=2 (QR) O: where
S= required sample size
Q= number of days the researcher spent while collecting data
R= maximum number of people per day
O maximum time the interviewer spent on each participant.
2×5×10×0.5hrs =50
Therefore, the researcher used 50 respondents.

Dependent variable

The dependent variable in this study was the prevention of anemia in pregnancy.

Independent variables

Independent variables were knowledge and attitude toward the prevention of anemia among pregnant women.

Inclusion criteria

The inclusion group was composed of pregnant women aged 18-45 years in Kayunga Regional referral hospital utilizing Antenatal care services present during the period of data collection and willing to consent to take part in carrying out the study.

Exclusion criteria

The exclusion criteria group was composed of women attending antenatal present during the period of data collection and not willing to consent to take part in carrying out the study.

Sampling technique

A simple random sampling technique was used to select respondents from the source population. Because it ensures freedom from human bias and each member of the target population has an equal and independent chance of being included.

Data collection method.

A semi-structured questionnaire was designed and used by the researcher to collect data from respondents. The questionnaire was designed according to the specific objectives of the study with open and closed questions, written in English language and later translated into the local language Luganda for respondents who could not be able to comprehend English language. The questionnaire was preferred because it was suited to collect data from a larger sample considering the nature of the study population.

Pre-testing of the questionnaire.

For uniformity of the data collection, pretesting of the questionnaire was done among 15 pregnant women in Kayunga Regional referral hospital in Kayunga district in

order to ensure that questions were easily understood by all the respondents and the pre-tested instruments helped to identify questions that might have caused ambiguity and contradiction.

Data collection procedure

After approval of the research proposal; an introductory letter from the Kampala School of Health Sciences research committee to the study area was obtained. When permission was granted the researcher and trained two research assistants administered the questionnaire to the respondents through interviews in the local language Luganda. The purpose of the study was explained to the participants and data collection began with the signing of a consent form among pregnant women at the ANC unit. The data collection process was done in a way that alphabet letters written on paper were given to the respondents to pick; those who picked the letter "A" were interviewed first after consenting and the process continued until the required sample size was attained. The respondents were asked questions following the designed questionnaire to avoid being biased. After the interview, each respondent was thanked for participating in the study.

Quality control

Right respondents were selected through the inclusion and exclusion criteria.

All activities regarding data collection were done under the monitoring and supervision of the research assistants.

The study team met after data collection to review the collected data and cross-check the filled questionnaires for correctness and completeness.

Standard operating procedures for coronavirus were also followed and maintained for the purpose of protecting the study participants and data collectors from the risks of coronavirus. Therefore, quality control was done to ensure the accuracy and validity of the data collected.

Data analysis and presentation.

Data was analyzed manually using tally sheets and entered in a computer using Microsoft Excel computer program to generate tables, pie charts, and bar graphs for easy presentation of findings.

Results.

Demographic data

Table 1: Shows the distribution of respondents according to demographic data (N=50)

Response	Frequency(f)	Percentage (%)
Age		
18-23 years	10	18
24-29 years	21	40
30-34years	13	22
35-39 years	3	12
40-44 years	3	8
Total	**50**	**100**
Education levels		
Never went to school	7	14
Primary	14	28
Secondary	25	50
Tertiary institution/ University	4	8
Total	**50**	**100**
Religion		
Protestant	9	18
Catholic	22	44
Muslim	3	6
Others	16	32
Total	**50**	**100**
Marital status		
Single	9	18
Married	32	64
Separated	7	14
Widowed	2	4

Total	**50**	**100**
Tribe		
Acholi	27	54
Langi	7	14
Alur	3	6
Dinka	5	10
Others	8	16
Total	**50**	**100**
Occupation		
Un employed	35	70
Self-employed	10	20
Employed	5	10
Total	**50**	**100**
Gestation age		
1-3 months	4	8
4-6 months	20	40
7-9 months	26	52
Total	**50**	**100**

Table 1: Indicates that most of the respondents (40%) were within the age bracket of 24-29 years whereas the least (18%) were within the age bracket of 40-45 years. As regards education levels, half of the respondents (50%) had attained a secondary level of education whereas the least (8%) had attained a tertiary institution/ University level of education. The study further revealed that almost half of the respondents (44%) were Catholics by religion whereas the least (6%) were Muslims by religion. Findings obtained from 50 respondents showed that the majority of the respondents (64%) were married in education whereas the minority (4%) were widows.

The study revealed that most of the respondents (54%) were Acholi by tribe whereas the least (6%) were Alur by tribe. Based on the study findings, the majority of the respondents (70%) were unemployed whereas the minority (10%) were employed. The study discovered that most of the respondents (52%) were within the gestation age of 7-9 months whereas the least (8%) were within the gestation age of 1-3 months.

Knowledge towards Prevention of Anaemia among Pregnant Women Aged 18-45 Years

Figure 1: Shows the distribution of respondents according to whether they had ever heard about anemia (N=50).

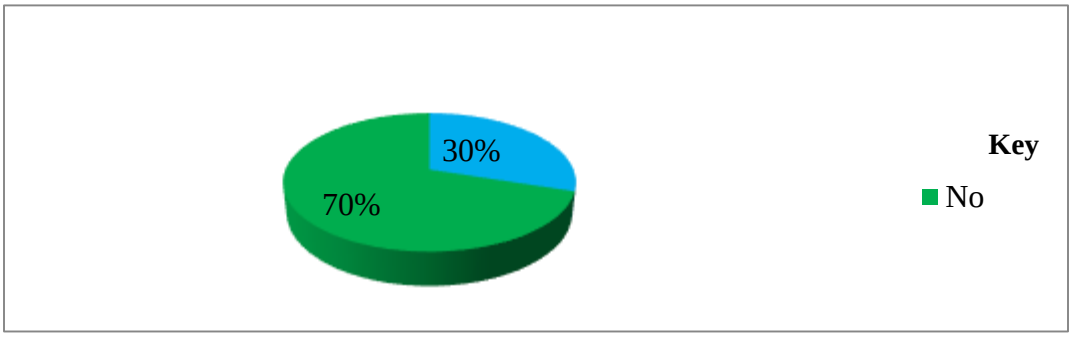


Figure 1: showed that, the majority of the respondents (70%) had never heard about anemia whereas the minority (30%) had never heard about anemia.

Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.10
Original Article

Table 1: Shows the distribution of respondents according to where they obtained information about anemia. (N=35)

Response	Frequency(f)	Percentage (%)
Media	7	6
Family member	12	17
Hospital	23	57
Others	8	20
Total	**50**	**100**

Table 2: shows that most of the respondents (57%) obtained information about anemia from hospitals whereas the least (6%) obtained information about anemia from media.

Table 2: Shows the distribution of respondents according to what causes anemia in pregnancy (N=50).

Response	Frequency(f)	Percentage (%)
Malaria	25	50
Inadequate food intake	13	26
Virginal bleeding	1	2
Hookworm infestation	5	10
I don't know	6	12
Total	**50**	**100**

Table 3: shows that half of the respondents (50%) knew malaria as the cause of anemia in pregnancy whereas the least (6%) knew virginal bleeding as the cause of malaria in pregnancy.

Table 3: Shows the distribution of respondents according to their knowledge about the signs and symptoms of anemia (N=50).

Response	Frequency(f)	Percentage (%)
Dizziness	14	28
General body weakness	7	14
Paleness	22	44
Fatigue	2	4
I don't know	5	10
Total	**50**	**100**

Table 4, indicates that most of the respondents (44%) knew paleness as the sign and symptom of anemia whereas the least (4%) knew fatigue as the sign and symptom of anemia.

Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.10
Original Article

Figure 1: Shows the distribution of respondents according to their knowledge about the side effects of anemia in pregnancy(N=50)

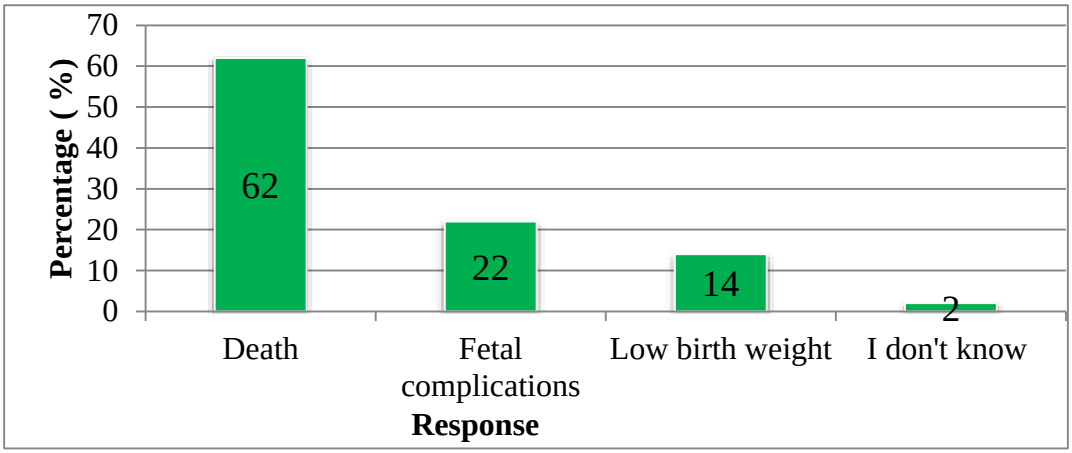


Figure 2: shows that more than half of the respondents (62%) knew death was the side effect of anaemia whereas the least (2%) didn't know the effects of anaemia in pregnancy.

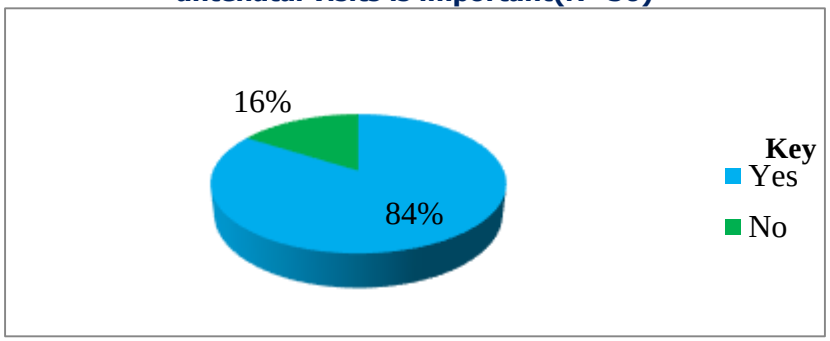
Table 4: Shows the distribution of respondents according to their knowledge about how frequently a pregnant woman is supposed to take folic acid supplements (N=50)

Response	Frequency(f)	Percentage (%)
Every day	38	76
Twice in a day	5	10
Three times a week	3	6
5- 6 times a week	4	8
Total	**50**	**100**

Table 5 indicates that the majority of the respondents (76%) reported that pregnant women are supposed to take folic acid supplements every day whereas the minority (6%) reported that pregnant women are supposed to take folic acid supplements 5-6 times a week.

Attitude towards prevention of anemia among pregnant women aged 18-45 Years.

Figure 2: Shows the distribution of respondents according to whether they think going for antenatal visits is important(N=50)



https://doi.org/10.71020/jwhr.v1i12.10

Figure 3: shows that the majority of the respondents (84%) agreed that going for antenatal visits is important whereas the minority (16%) disagreed.

Table 5: Shows the distribution of respondents according to whether they think a mother and a child can benefit from taking iron supplements (N=47)

Response	Frequency(f)	Percentage (%)
Yes	40	85
No	7	15
Total	**47**	**100**

Table 6: shows that the majority of the respondents (85%) agreed that a mother and a child can benefit from taking iron supplements whereas the minority (15%) disagreed.

Figure 3: Shows the distribution of respondents according to whether cultural or religious beliefs prevent pregnant women from eating certain types of food (N=50).

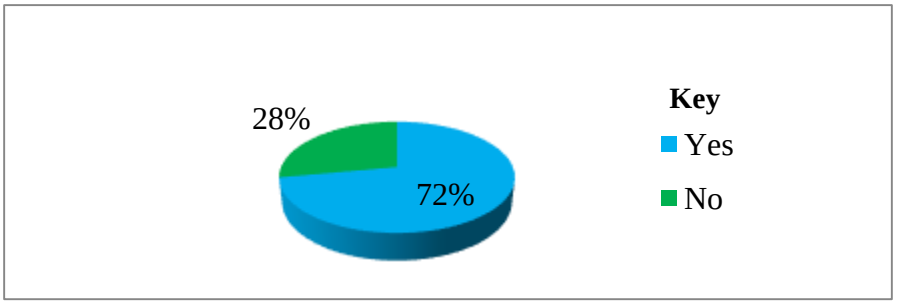


Figure 4: showed that more than half of the respondents (72%) disagreed that cultural or religious beliefs prevent pregnant women from eating certain types of food whereas the least (28%) disagreed that cultural or religious beliefs prevent pregnant women from eating certain types of food.

Table 6: Shows the distribution of respondents according to whether they always preferred to sleep under insecticide-treated nets (N=50).

Response	Frequency(f)	Percentage (%)
Yes	30	60
No	20	40
Total	**50**	**100**

The table shows that most of the respondents (60%) always preferred to sleep under insecticide-treated nets whereas the least (40%) didn't always prefer to sleep under insecticide-treated nets.

Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.10
Original Article

Figure 4: Shows the distribution of respondents according to how they feel when they sleep under insecticide-treated nets (N=50)

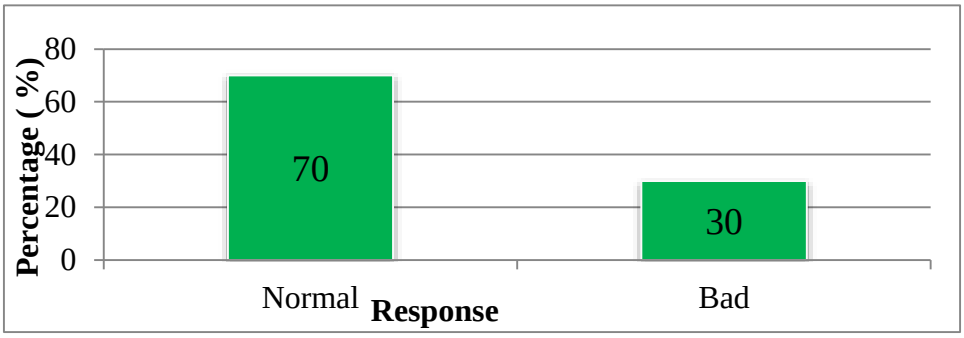


Figure 5: indicates that the majority of the respondents (70%) reported that they feel normal when they sleep under an insecticide-treated net whereas the minority (30%) reported that they feel bad when they sleep under an insecticide-treated net.

Discussion of results.

Knowledge towards prevention of anemia among pregnant women aged 18-45 years

Findings obtained from a sample of 50 respondents showed that more than half of the respondents (70%) had ever heard about anemia. This specifies that an outstanding number of study participants were responsive about the study background. The current study results were in line with Gowri et al, (2017), where results regarding awareness of anemia showed that 79.3% of the women had heard about anemia.

Additionally, most of the respondents (57%) obtained information about anemia from the hospital. This is attributed to the fact that within hospitals, health workers provide detailed information about different medical conditions, and the probability of being the most considerable source was expected. The study results were in line with Swapna (2017), where most of the mothers (64%) had information about anemia from health workers.

The study further revealed that half of the respondents (50%) knew malaria was the cause of anemia in pregnancy. This could be a result of the fact that during ANC visits women were oriented about danger signs of anaemia. Findings were consistent with Justina & Athumani (2018), where results regarding knowledge of anemia prevention showed that about two-fifths (36.7%) of the respondents were able to mention the causes of anemia.

In regards to signs and symptoms of anemia, most of the respondents (44%) knew paleness. This signifies a direct relationship between women's sources of information and general awareness about the study context. The study results were consistent with Keneni et al (2018), where results showed that 71.6% of them were able to identify the symptom of anemia as paleness.

More than half of the respondents (62%) knew death as the side effect of anemia and therefore, this showed that respondents were aware of the side effects of anemia. Study results were in disagreement with Swapna (2017), where 62 of the mothers knew about fetal complications like low birth weight.

Given the study findings, the majority of the respondents (76%) knew that pregnant women are supposed to take folic acid supplements every day. This could be attributed to the fact that women had never been informed about the purpose of using folic acid from different sources. This is in line with a study that was done by Sobia et al (2017), where 57.1% noted that pregnant women are supposed to take folic acid supplements every day (single tablet).

Attitude toward prevention of anemia among pregnant women aged 18-45 years

The study discovered that almost all respondents (94%) agreed that going for antenatal visits is important and therefore, this denotes that an outstanding number of study participants had perceived vital reasons as to why they should go for ANC visits. Study findings were consistent with (Adesuyi)(2016), where 63.1% strongly agreed that regular antenatal visits are necessary for pregnant women.

The majority of the respondents (85%) agreed that a mother and a child can benefit from taking iron supplements. Such perception divulges that a significant number of study participants had favorable attitudes toward anemia prevention. This is in agreement with Hiwot et al, (2021), where findings showed that 84% of women agreed that IFS can prevent anemia.

Based on study findings, more than half of the respondents (72%) disagreed that cultural or religious beliefs prevent pregnant women from eating certain types of food. This could be attributed to the fact that most of the study participants didn't perceive cultural beliefs to be of great importance in their daily lives. Study results were in line

with Tewelde et al (2021), where findings showed that (80%) of the mothers disagreed that their cultural beliefs do not prohibit women from eating certain types of food.

The study revealed that most of the respondents (60%) always preferred to sleep under insecticide-treated nets. This indicates that a substantial number of participants were afraid of being at risk of getting malaria infection. The study results were in line with Nasreen et al (2017), where (72%) of the respondents strongly preferred to sleep under insecticide-treated nets.

The majority of the respondents (70%) reported that they feel normal when they sleep under insecticide-treated nets. This implies that the majority of the women felt comfortable when they slept under ITNs. The current findings were consistent with a study that was done by (MIKYAS)(2015), where findings showed that (52%) of the respondents reported having felt normal when they slept under ITNs.

Conclusion

The study unveiled adequate knowledge of the prevention of anemia. Study participants also had a poor attitude towards the prevention of anemia as respondents agreed that going for antenatal visits is not important, they also agreed that a mother and a child can benefit from taking iron supplements, they disagreed that cultural or religious beliefs prevent pregnant women from eating certain types of food, they always preferred to sleep under insecticide-treated nets and they feel normal when they sleep under insecticide-treated nets.

Limitations of the study.

Some respondents didn't have enough time to fill out the whole questionnaire due to more time required for the study.

Encountered financial constraints to run the study since research is a lengthy process and the study area was a little bit far away.

The language barrier also affected the researcher since many clients were not knowing English.

Recommendation.

The MOH of Health should make sure ferrous sulfate and folic acid are readily available in all public health facilities so that they can be availed to these pregnant mothers as the need arises and this will reduce maternal anemia incidences.

Health workers at Kayunga Regional Referral Hospital should continue to sensitize pregnant women on the dangers of not sleeping under ITNs, irregular ANC visits, and iron intake which was observed among a notable percentage rates of women to close the research gap.

Acknowledgment

I would like to thank the almighty lord who gave me strength and direction. Without you, my life would have no meaning.

I am grateful to my supervisor Mrs Nabukenya Sharifa for her time and professional supervision accorded to me during this research report.

Furthermore, I express my heartfelt gratitude to my parents for all the encouragement, sacrifices, guidance, and support as well.

Much appreciation to my friends Mwesigwa Moses, Isaac Murungi, Moses Owiny, Sumaya Muwanguzi, Mukonyezi Jocyce, and all members of my discussion as well as all my other classmates who have done all they could in many aspects of living at Kampala School of Health Sciences. I will always live to remember all of you for making life as lively as possible.

List of abbreviations.

ANC	:	Antenatal Care
Hb	:	Hemoglobin
HIMS	:	Health Information Management System
ICF	:	International Classification of Functioning
IDA	:	Iron Deficiency Anemia
IFA	:	Iron Folic Acid
IPT	:	Intermittent Preventive Therapy
ITNs	:	Insecticide-Treated Mosquito Nets
MoH	:	Ministry of Health
UBOS	:	Uganda Bureau of Statistics
WHO	:	World Health Organization

Source of funding.

There is no source of funding.

Conflict of interest.

The authors declare no conflict of interest.

Availability of data.

Data used in this study is available upon request from the corresponding author.

Authors contribution.

JT designed the study, conducted data collection, cleaned and analyzed data, and drafted the manuscript and SN supervised all stages of the study from conceptualization of the topic to manuscript writing and submission.

Authors biography.

Jonan Tumwesige is a student with a diploma in clinical medicine and community health at Kampala School of Health Sciences.

Sharifah Nabukenya is a research supervisor at the Kampala School of Health Sciences.

References.

1. Arega (MIkyas) (2015). Assessment of knowledge, attitudes, and practices regarding maternal
2. Nutrition among pregnant women attending antenatal care clinics in public hospitals in Addis Ababa, Ethiopia.
3. (Adesuyi)EO (2016). The attitude of pregnant women attending ante-natal clinics toward adequate https://doi.org/10.9734/BJMMR/2016/23427
4. Diet in the Prevention of Anemia in Selected Hospitals in Osogbo; British Journal of Medicine & Medical Research, vol. 14, no. 12, 1-10 pp.
5. Gowri Dorairajan, Sakthi Devi and Palanivel Chinnakili (2017). Influence of awareness and
6. Attitude about anemia and iron supplements on anemic status of pregnant women attending a Tertiary Care Centre in South India; J Contracept Stud. Vol. 2, no.1
7. Justina A. Margwe & Athumani M. Lupindu (2018). Knowledge and attitude of pregnant women
8. in rural Tanzania on prevention of anemia; African Journal of Reproductive Health; vol. 22, no.3, 71pp
9. Hiwot Yisak & Amien Ewunetei (2021). Knowledge, attitude, and practice with iron folic
10. supplementation among antenatal care attendant women Debre Tabor, South Gondar Zone, J Women's Health Gyn, Vol 8: 103
11. Keneni Berhanu, Daka, Jayanthigopal Dereje, Bayissa Demisie (2018). Assessment of
12. knowledge and practice towards prevention of anemia among pregnant women attending
13. antenatal care at government hospitals in West Shoa Zone, Ethiopia; Journal of Health, Medicine, and Nursing, Vol.50
14. Nasreen Begum & Meezan (2017). Knowledge, attitudes & practices regarding anemia among pregnant women; IJSRD, /Vol. 5/Issue 4.
15. Sobia Jamil, Sidra khan, Halima sadia (2017). Knowledge attitude & practice of folic acid consumption in pregnant women; Int J Pharm Sci & Scient Res. vol. 3, no.7, 75-82. https://doi.org/10.25141/2471-6782-2017-7.0074
16. Swapna M K (2017). A study to assess the knowledge and practices regarding the prevention
17. anemia among antenatal women attending selected Health Centres of Haryana; International Journal of Research in Social Sciences Vol. 7 Issue 6,
18. Teweldemedhin LG, Amanuel HG, Berhe SA, Ghidey G, Zemenfes T,Eyasu H3 (2021). Effect
19. Of nutrition education by health professionals on pregnancy-specific nutrition knowledge and healthy dietary practice among pregnant women in Asmara, Eritrea: a quasi-experimental study. BMJ Nutrition, Prevention & Health; vol.3, no.13.
20. UBOS & ICF (2017). Uganda Demographic and Health Survey 2016: Key Indicators report. Kampala; UBOS and Calverton: Maryland
21. (WHO)(2020). Prevalence of anemia among pregnant women from 2000-2019.Geneva Switzerland.

Journal of World Health Research
Vol. 1 No. 12 (2024): December 2024
https://doi.org/10.71020/jwhr.v1i12.10
Original Article

PUBLISHER DETAILS:

PUBLIC HEALTH CORPS AFRICA LIMITED

Contact: +256 702 986 663
Email: info@phafrica.org/worldhealthresearch2024@gmail.com
Website: https://whr.phafrica.org
Address: Scholar's Summit Nakigalala, P. O. Box 166256, Entebbe Uganda, East Africa