

KNOWLEDGE, ATTITUDE, AND PRACTICES TOWARDS NON- PHARMACOLOGICAL MANAGEMENT OF HYPERTENSION AMONG PATIENTS AGED 40 – 75 YEARS IN WAKISO HEALTH CENTRE IV, WAKISO DISTRICT. A CROSS-SECTIONAL STUDY.

Derrick Bonyo* , Harrison Sida

Kampala School of Health Sciences, P. O. Box 14263, Kampala – Uganda.

Abstract

Introduction:

The specific objectives of the study were to assess knowledge, attitude, and practices towards non-pharmacological management of hypertension among patients aged 40-75 years in Wakiso Health Centre IV, District.

Methodology:

The study adopted a cross-sectional study design with a simple random technique as a sampling technique on a sample of 50 respondents. Data was collected using questionnaires with semi-structured and open-ended questions written in the English language; data was later analyzed manually and systematically by compiling percentages using Microsoft Excel computer program to generate bar graphs, tables, and pie charts.

Findings:

The knowledge of non-pharmacological management of hypertension showed that; almost all respondents (90%) had ever heard about non-pharmacological management of hypertension, (67%) obtained information health facility. The attitude towards non-pharmacological management of hypertension showed that; (78%) of respondents perceived hypertension to be extremely dangerous to their health, (70%) agreed that non-pharmacological management of hypertension is highly beneficial to their health, (56%) agreed that they could manage hypertension alone with non-pharmacological lifestyle modifications. from practices towards non-pharmacological management of hypertension depicted that; (56%) of respondents reported that they don't smoke, (44%) daily they carry out physical exercises for 30 minutes, (40%) reported that they rarely add salt to their foods on the table and (52%) commonly feed on carbohydrates.

Conclusion:

The knowledge and attitude towards non-pharmacological management of hypertension were significant impressing though practices prerequisites some improvements to bridge the research gap since a notable number of participants were not entirely adopting self-care non-pharmacological practices

Recommendation:

Health Centre IV administration should sensitively continue to sensitize hypertensive patients on the importance of adopting fully non-pharmacological management practices to control hypertension, with a focus on identifying gaps in the research gap.

Keywords: knowledge, attitude, practices, non- pharmacological, hypertension, Submitted: 2023-07-06 Accepted: 2023-08-20

1. Background of the study.

Non — pharmacological interventions for hypertension such as dietary modifications, exercise, avoiding stress, and minimizing alcohol consumption help to reduce the daily dose of anti hypertensive medication and delay the progression from pre-hypertension to hypertension stage. However, an estimated 1.28 billion adults aged 30-79 years worldwide had hypertension, most (two-thirds) living in low- and middle-income countries and less than half of adults (46%) of adults were unaware that they have the condition (WHO, 2021).

According to the (CDC, 2019), nearly half of the adults in the United States (47%, or 116 million) had hypertension, only about 1 in 4 adults (24%) with hypertension have their condition under control, and about half of adults (45%) with uncontrolled hypertension have a blood pressure of 140/90 mmHg or higher. This includes 37 million U.S. adults (CDC, 2019).

In sub-Saharan Africa, the burden of non-communicable diseases of all ages indicates total DALYS due to NCDs increased by 67.0% between 1990 (90.6 million) and the proportion of total DALYs attributed to NCDs (from 18.6% -29.8% of the total burden (Gouda et al., 2019).

A national wide survey that was done in Nigeria revealed that the prevalence of hypertension overall was 38.1%, 41.8% in women, and 31.8% in men. The prevalence rate of 37.5% among rural dwellers was similar to 39.2% among their urban counterparts (Odili et al., 2020). Of the six regions, the South-East had the highest prevalence of hypertension (52.8%) while the lowest rate of 20.9% was observed in the North-Central region (Odili et al., 2020). According to different categories of age groups prevalence increased steadily from 6.8% among participants aged 30 years and below to 63.0% among those 70 years and above (Odili et al., 2020).

The unadjusted national prevalence of hypertension among adults in Uganda was 321.5% in

2017. The prevalence was higher among males and females 35.3% vs 28.1%. The prevalence did not differ by rural-urban status: 32.0% (urban) vs. 30.9% (rural); before age- and sex- adjustment, hypertension was highly prevalent in the East (37.3%) West (36.1%), and Central (32.0%) Regions, but it was comparatively less prevalent in the North (21.7%) and West-Nile (25.1%) Regions (Lunyera et al., 2018).

1.1. General objective.

To assess the knowledge, attitude, and practices towards non-pharmacological management of hypertension among patients aged 40-75 years in Wakiso Health Centre IV, Wakiso District.

1.2. Specific objectives.

To find out the knowledge towards non-pharmacological management of hypertension among patients aged 40-75 years in Wakiso Health Centre IV, Wakiso District.

To assess the attitude towards non-pharmacological management of hypertension among patients aged 40-75 years in Wakiso Health Centre IV, Wakiso District.

To assess the practices towards non-pharmacological management of hypertension among patients aged 40-75 years in Wakiso Health Centre IV, Wakiso District.

2. METHODOLOGY.

2.1. Study design.

The study employed a descriptive cross-sectional design where data was gathered at only one point at a time with questionnaires. This design was preferred because it allowed the researcher to solicit personal and self-reported information directly from respondents.

2.2. Study area.

Wakiso health center IV is located in the Wakiso District along Hoima Road central part of Uganda; with 17.0 km from Kampala District. The health facility has got several departments namely; inpatients, outpatients, maternity, eye

* Corresponding author.

Email address: dexderrick000@gmail.com
(Derrick Bonyo)

clinic, family planning and immunization, theatre, ART clinic, dental clinic, laboratory, and antenatal care clinic. The health facility receives an average number of patients of 80-90 per day.

The study was done for eight months that is to say August 2022- March 2023 for both the proposal and report.

2.3. Study population.

The study population comprised hypertensive patients aged 40-75 years attending medical services at the outpatient department and willing to take part in the study.

2.4. Sample size and sample size determination.

The sample size was determined using the formula by Kish and Leslie (1988). $N = \frac{Z^2 \cdot P \cdot Q}{d^2}$

Whereby;

N = sample size needed

Z = standard deviation 1.96

P = Rate of occurrence of challenges faced by hypertensive patients assumed to be 50% because it is unknown

$Q = 1 - P$

d = Acceptable error 10% Therefore $N = \frac{1.96^2 \times 0.5 \times 0.5}{0.1^2}$

N = 96

The sample size is meant to be 94 but due to time financial and time constraints, 50 respondents were used.

2.5. Selection criteria.

2.5.1. Inclusion criteria.

Hypertensive patients aged 40-75 years seeking medical services and present during the period of data collection and willing to consent were considered for the study.

2.5.2. Exclusion criteria.

Hypertensive patients but not willing to be part of the study critically ill were excluded from the study.

2.6. Study variables.

2.6.1. Dependent variable.

Non-pharmacological management of hypertension was the dependent variable.

2.6.2. Independent variables.

Knowledge, attitude, and practices towards non-pharmacological management of hypertension among patients were the independent variables.

2.7. Sampling technique.

A purposive sampling technique was used to select the sample from the source population. The technique was preferred because it directly targets the exact individual with the interest of the study.

2.8. Data collection method.

Data was collected using a pretested semi-structured questionnaire written in English language and later translated into the local language (Luganda) specifically for respondents who were not able to interpret the questions. The questionnaires had both open and ended closed questions to analyze the hypothesis for the study. This data collection tool was preferred to other data collection methods because data was collected in a short period.

2.9. Pre-testing of questionnaire.

The questionnaires were printed in English language and then pre-tested at Buwambo Health Centre IV, Wakiso district among 10 respondents; the information gathered was used to rectify and update the data collection tool. The results from the pre-tested questionnaires were not considered in the main study.

2.10. Sampling procedure.

After approval of the research proposal by the supervisor, a letter of introduction was provided from the principal of Kampala School of Health Sciences and later presented to the medical director of the Wakiso district. When permission was granted, two research assistants were trained about the questionnaire and how to collect data;

thereafter, the researcher and his assistants introduced themselves to respondents; The researcher, therefore, was well positioned to tap the Hypertensive patients at OPD and inpatients to seek their consent, respondents meeting inclusion criteria were assembled in a private room to ease the data collection process.

2.11. Data management.

Completed questionnaires were edited for completeness and consistency. The researcher further recorded data and checked errors and omissions.

2.12. Quality control.

Standard operating procedures such as wearing face masks, maintaining social distancing, and hand washing were strictly followed to curb the spread of the virus.

Data collection was conducted under maximum privacy to ensure that the respondents provide the right information.

The researcher ensured that the questions in the questionnaire were framed in such a way that they bring out the answers to the research questions.

Two research assistants were trained on the subject matter of the study, research tools, and ethics. They participated in the pre-testing of the questionnaire before the actual study which was done in few days before the execution of the study.

2.13. Data analysis and presentation.

Data was analyzed manually, sorted, edited, and arranged according to the themes based on the objectives of the study using a scientific calculator. Data were coded and entered into a computer and presented using Microsoft Excel software to generate tables and figures for easy interpretation of the study findings.

2.14. Ethical considerations.

An introductory letter was obtained from the principal of the Kampala School of Health Sciences. It was taken to the medical director of Wakiso Health Centre IV, Wakiso District where the study was conducted; when permission was

granted; the researcher and his assistants introduced themselves before conducting the study; informed consent was obtained from each respondent. Participants were free to drop out from the study at any stage without fear of retribution and they were assured of the data collected from the study was kept confidential.

3. STUDY FINDINGS.

3.1. Respondent's bio data.

The study findings in table 1 depicted that most of the participants (40%) were within the age bracket of 50-55 years whereas the least (8%) were within the age bracket of 70-75years.

The study further revealed that more than half of the respondents (58%) were females whereas the least (42%) were male.

In regards to religion, almost half of the respondents (44%) were Catholics whereas the least (6%) were Muslims.

In view of the study findings related to education levels, majority of the respondents (60%) had attained secondary level of education whereas the minority (6%) had never gone to school.

The study also showed that half of the respondents (50%) were self-employed whereas the least (10%) were unemployed.

Findings from the study revealed that majority of the respondents (66%) were married whereas the least (2%) were widowed.

Basing on the study results, more than half of the respondents (62%) were Baganda by tribe whereas the least (2%) were Banyarwanda by tribe.

The study results revealed that most of the respondents (54%) had $>25 \text{ kg/m}^2$ whereas the least (4%) had $<18.5 \text{ kg/m}^2$

3.2. KNOWLEDGE TOWARDS NON-PHARMACOLOGICAL MANAGEMENT OF HYPERTENSION AMONG PATIENTS AGED 40-75 YEARS

Figure 1 indicates that nearly (90%) of the respondents had ever heard about non-pharmacological management of hypertension

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

Variables	Frequency(f)	Percentage (%)
Age (Years)		
40-45	9	18
50-55	20	40
60-65	17	32
70-75	4	8
Total	50	100
Sex		
Male	21	42
Female	29	58
Total	50	100
Religion		
Catholic	22	44
Muslim	3	6
Protestant	6	12
Others	19	38
Total	50	100
Level of education		
Never went to school	3	6
Primary	9	18
Secondary	30	60
College/University	8	16
Total	50	100
Occupation status		
Employed	5	10
Unemployed	20	20
Self-employed	25	50
Total	50	100
Marital status		
Single	2	4
Married	33	66
Divorced	4	8
Widowed	1	2
Total	50	100
Tribe		
Muganda	31	62
Mukiga	5	10
Munyarwanda	1	2
Munyankole	3	6
Others	10	20
Total	50	100
Body mass index (kg/m²)		
<18.5	4	8
18.5- 24.9	19	38
>25	27	54
Total	50	100

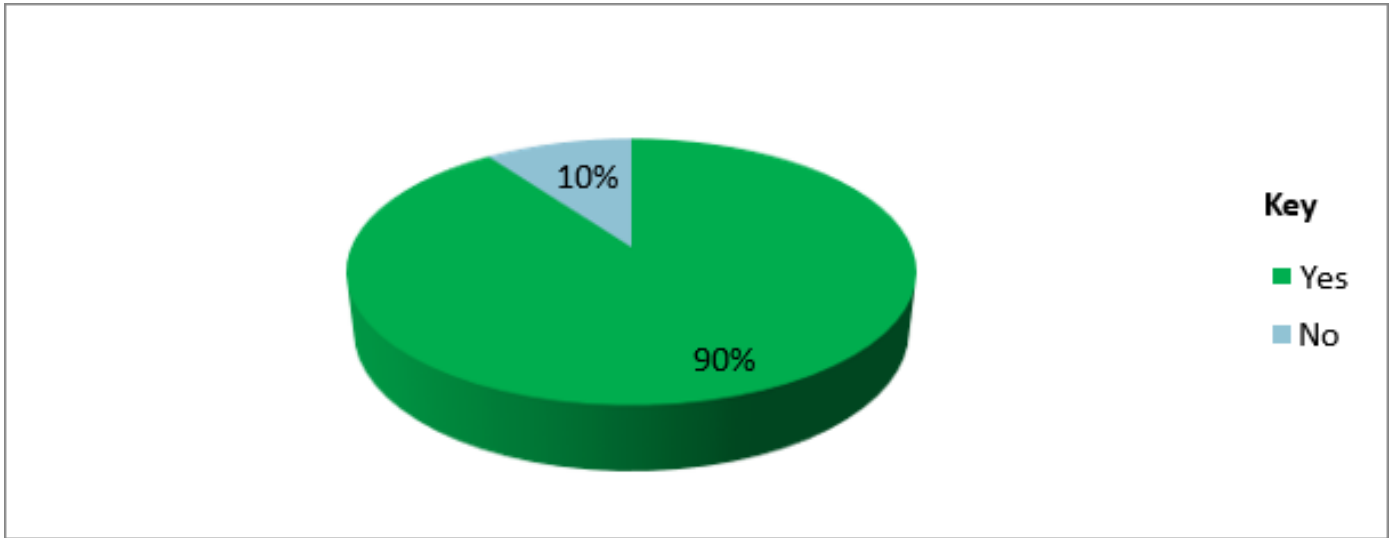


Figure 1: Shows the distribution of respondents according to whether they had ever heard about ever heard about non-pharmacological management of hypertension (N=50)

whereas the least (10%) had never heard about non- pharmacological management of hypertension.

Table 2 shows that more than half of the respondents (67%) obtained information about non-pharmacological management of hypertension from health facilities whereas the least (7%) obtained information about non -pharmacological management of hypertension from family members.

Table 3 shows that most of the respondents (58%) knew over weight as the risk factor for hypertension whereas the least (8%) they didn't know the risk factors for hypertension.

Figure 2 indicates that most of the respondents (52%) knew how to self-monitor their blood pressure whereas the least (48%) didn't know how to self-monitor their blood pressure.

Table 4 shows that half of the respondents (50%) knew regular exercise as a non-pharmacological method of hypertension whereas the least (2%) knew other options such as avoiding smoking and controlling stress.

Figure 3 indicates that most of the respondents (56%) knew spiced foods as the category of food to be avoided by hypertensive patients whereas the least (8%) knew fatty foods as a category of food to be avoided by hypertensive patients.

3.3. ATTITUDE TOWARDS NON-PHARMACOLOGICAL MANAGEMENT OF HYPERTENSION AMONG PATIENTS AGED 40-75 YEARS

Figure 4 shows that the majority of the respondents (78%) perceived hypertension to be extremely dangerous to their health whereas the least (2%) perceived hypertension not at all dangerous to their health.

Table 5 indicates that the majority of the respondents (70%) perceived non-pharmacological management of hypertension to be highly beneficial to their health whereas the minority (4%) were not sure about the importance of non-pharmacological management of hypertension.

Figure 5 shows that more than half of the respondents (68%) agreed that non-pharmacological management of hypertension alone is efficient to delay the progression of pre-hypertension to the hypertension stage whereas the least (6%) were not sure.

Table 6 hows that most of the respondents (54%) preferred to manage hypertension with traditional herbs whereas the least (8%) preferred to manage hypertension with prayers.

Figure 6 indicates that most of the respondents (56%) agreed that they could manage hypertension alone with non-pharmacological lifestyle

Table 2: Shows the distribution of respondents according to where they obtained information about non-pharmacological management of hypertension (N=45)

Response	Frequency (f)	Percentage (%)
Health facility	30	67
Family member	3	7
Media	7	15.1
Others	5	11
Total	45	100

Table 3: Shows the distribution of respondents according to their knowledge of the risk factor for hypertension (N=50)

Response	Frequency (f)	Percentage (%)
Over weight	29	58
Age	7	14
Smoking	5	10
I don't know	4	8
Others	5	10
Total	50	100

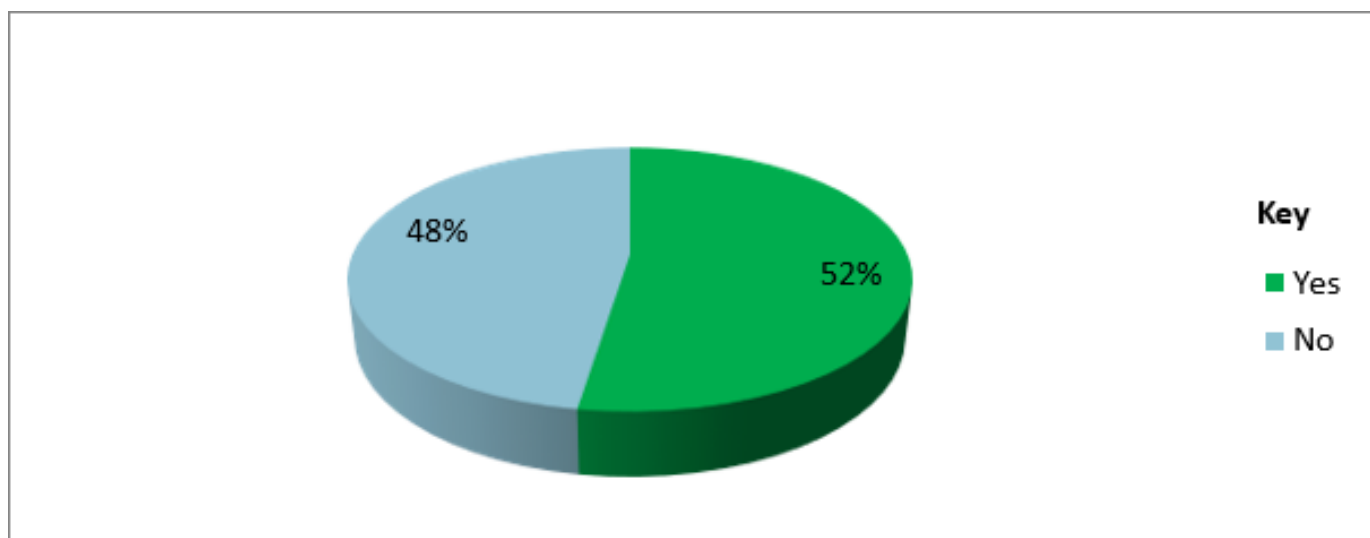


Figure 2: Shows the distribution of respondents according to whether they knew how to self-monitor their blood pressure (N=50)

Table 4: Shows the distribution of respondents according to their knowledge about methods for non-pharmacological management of hypertension (N=50)

Response	Frequency (f)	Percentage (%)
Regular exercise	25	50
Eating balanced diet	17	34
Eating vegetables	6	12
Others	2	4
Total	50	100

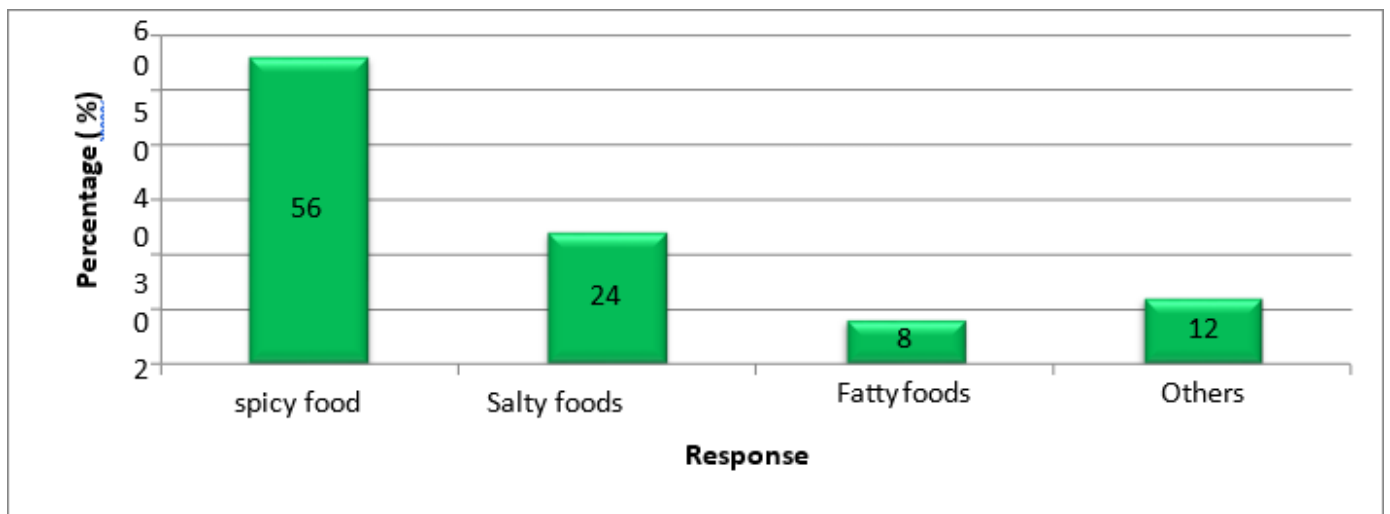


Figure 3: Shows the distribution of respondents according to the categories of food to be avoided by hypertensive patients Percentage (%)

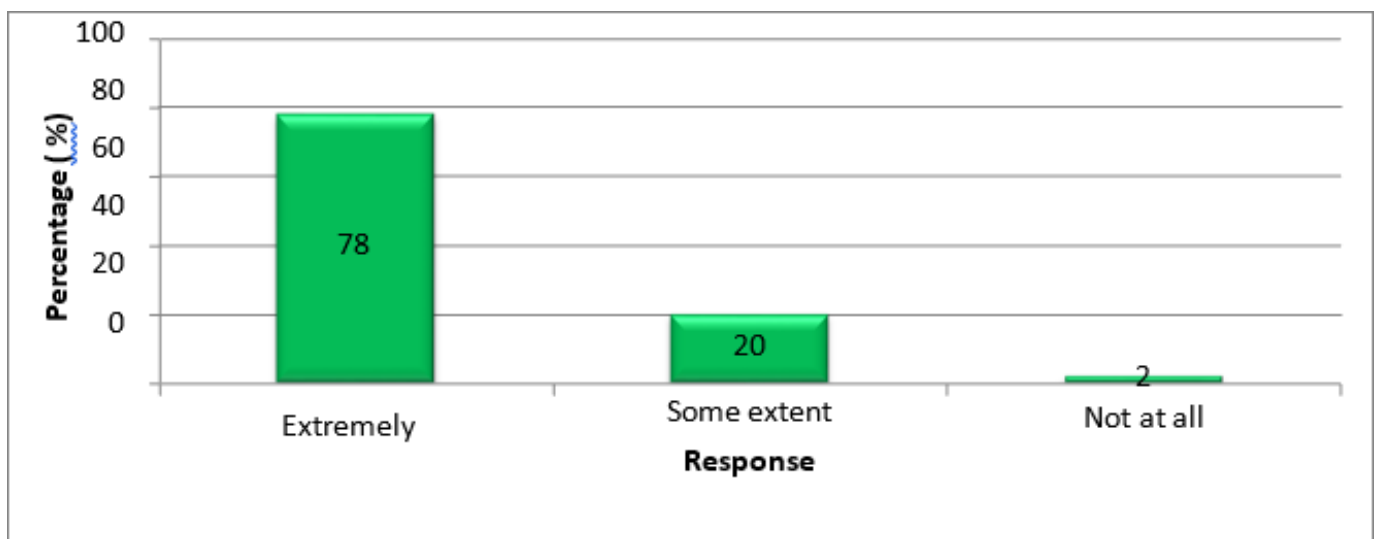


Figure 4: Shows the distribution of respondents according to their views about how dangerous is hypertension to their health Percentage (%)

Table 5: Shows the distribution of respondents according to how they perceive the importance of non-pharmacological management of hypertension to their health (N=50)

Response	Frequency (f)	Percentage (%)
Highly beneficial	35	70
Moderately beneficial	13	26
Not sure	2	4
Total	50	100

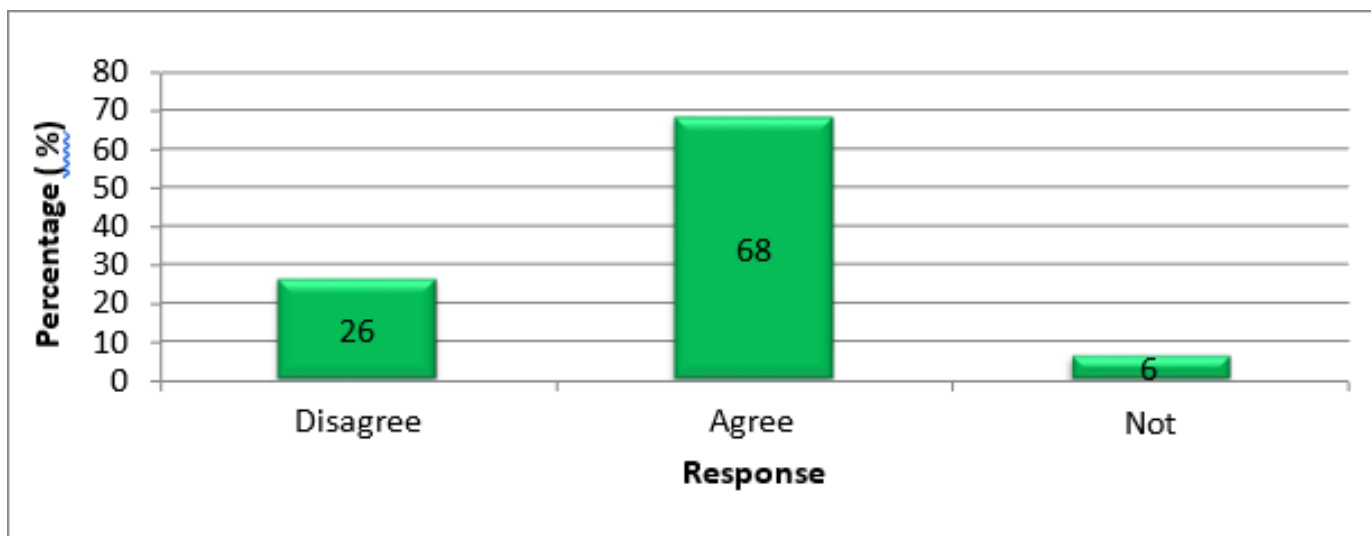


Figure 5: Shows the distribution of respondents according to their views about whether non-pharmacological management of hypertension alone is efficient to delay the progression of pre-hypertension to hypertension in stage. Percentage (%) (N=50)

Table 6: Shows the distribution of respondents who disagreed about whether non-pharmacological management of hypertension alone is efficient to delay the progression of pre-hypertension to the hypertension stage according to what they would wish to use to manage hypertension (N=13)

Response	Frequency (f)	Percentage (%)
Ant pharmacological medicines	5	38
Traditional herbs	7	54
Prayers	1	8
Total	13	100

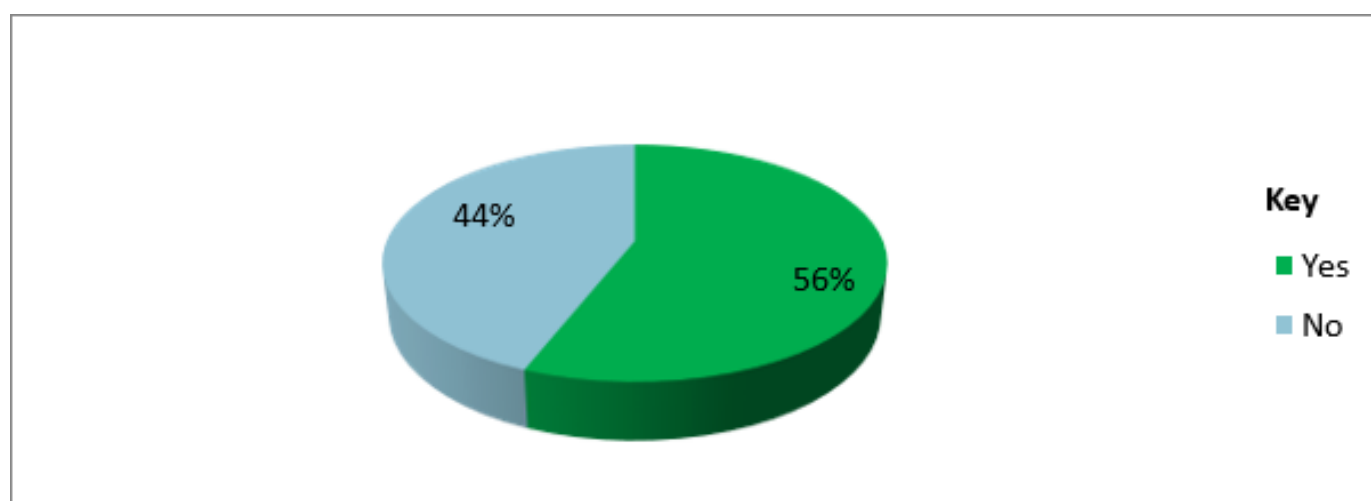


Figure 6: Shows the distribution of respondents according to whether they could manage hypertension alone with non-pharmacological lifestyle modifications (N=50)

modifications whereas the least (44%) they didn't have the ability to manage hypertension alone with non-pharmacological lifestyle modifications. Table 7 illustrates that half of the respondents (50%) were willing to recommend non-pharmacological management of hypertension strategies to their fellow hypertensive patients whereas the least (10%) were not willing.

3.4. PRACTICES TOWARDS NON-PHARMACOLOGICAL MANAGEMENT OF HYPERTENSION AMONG PATIENTS AGED 40-75 YEARS.

Figure 7 shows that the majority of the respondents (76%) never had a blood pressure machine at home whereas the least (24%) had a blood pressure machine at home.

Table 8 shows that more than of the respondents (67%) who had BP machines at home regularly self-monitor their blood pressure whereas the least (33%) irregularly self-monitor their blood pressure.

Figure 8 indicates that the majority of the respondents (56%) reported that they don't smoke whereas the least (16%) reported that they frequently smoke.

Figure 9 shows that almost half of the respondents (44%) reported that daily they carry out physical exercises for 30 minutes whereas the least (16%) reported that daily they carry out physical exercises for 40 minutes

Table 9 indicates that most of the respondents (40%) reported that they rarely add salt in their foods on table whereas the least (2%) reported that they always add salt in their foods on table.

4. Discussion of findings

4.1. Knowledge of non-pharmacological management of hypertension among patients aged 40-75 year.

From a sample of 50 respondents, almost all respondents (90%) had ever heard about the non-pharmacological management of hypertension. This is attributed to the fact majority of the study participants were already diagnosed with

hypertension and they were most likely to be informed about the study background.

In addition, more than half of the respondents (67%) obtained information about non-pharmacological management of hypertension from health facilities. This could be a result of the fact that at health facilities health workers make diagnoses and sensitize patients about non-pharmacological management of hypertension. Therefore, a high possibility of being the main source of information was anticipated. Current findings differ from a study that was done by Nadege et al (2021), where results showed that the frequent source of information about non-pharmacological management of hypertension was the Tanve health project study as noted by (99.5%) of participants.

The study further revealed that most of the respondents (58%) knew over weight was the risk factor for hypertension. This notifies a significant overview of the general awareness of hypertension. Study findings were in line with Abiy & Teketel (2019), where results revealed that (73.7%) of respondents understood that; weight gain can worsen their condition.

From the study findings, most of the respondents (52%) knew how to self-monitor their blood pressure. Therefore, this could be attributed to the fact that an average number of the study sample had never been sensitized about self-monitoring of their BP for easy management of hypertension. The current findings were inconsistent with Addisu et al (2020), where results depicted that 85.6% of respondents were unaware of self-monitoring BP.

In regards to knowledge about non-pharmacological methods of hypertension, (50%) of the respondents knew regular exercise. This implies that a significant number of study participants were conversant with the study background. This differs from a study that was carried out by Debalina et al (2016), where 39% of participants knew the benefits of balanced diet in the management of HTN.

Given the study findings, (56%) of the respondents knew spiced foods as the category of food to be avoided by hypertensive patients, and such

Table 7: Shows the distribution of respondents according to whether they would recommend non-pharmacological management of hypertension strategies to their fellow hypertensive patients (N=50)

Response	Frequency (f)	Percentage (%)
Yes, but a notable few	20	40
No	5	10
Yes	25	50
Total	50	100

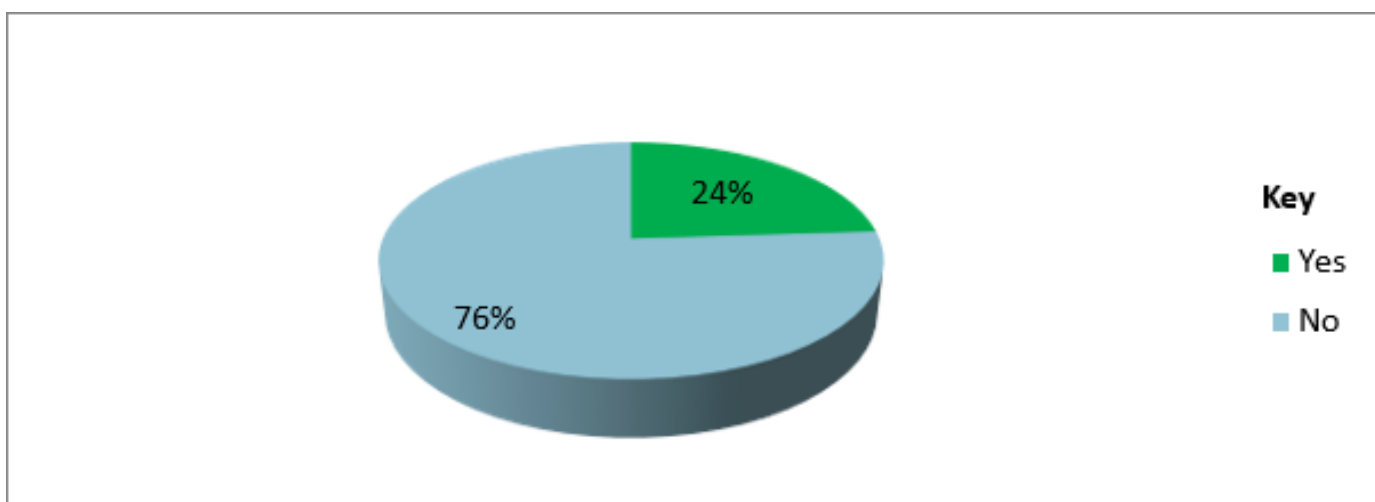


Figure 7: Shows the distribution of respondents according to whether they had a personal blood pressure machine at home (N=50)

Table 8: Shows the distribution of respondents who had BP machines according to how often they self-monitor their blood pressure (N=12)

Response	Frequency (f)	Percentage (%)
Regularly	8	67
Irregularly	4	33
Total	12	100

Table 9: Shows the distribution of respondents according to how often they add salt to their foods on the table (N=50)

Response	Frequency (f)	Percentage (%)
Never	17	34
Sometimes	12	24
Rarely	20	40
Always	1	2
Total	50	100

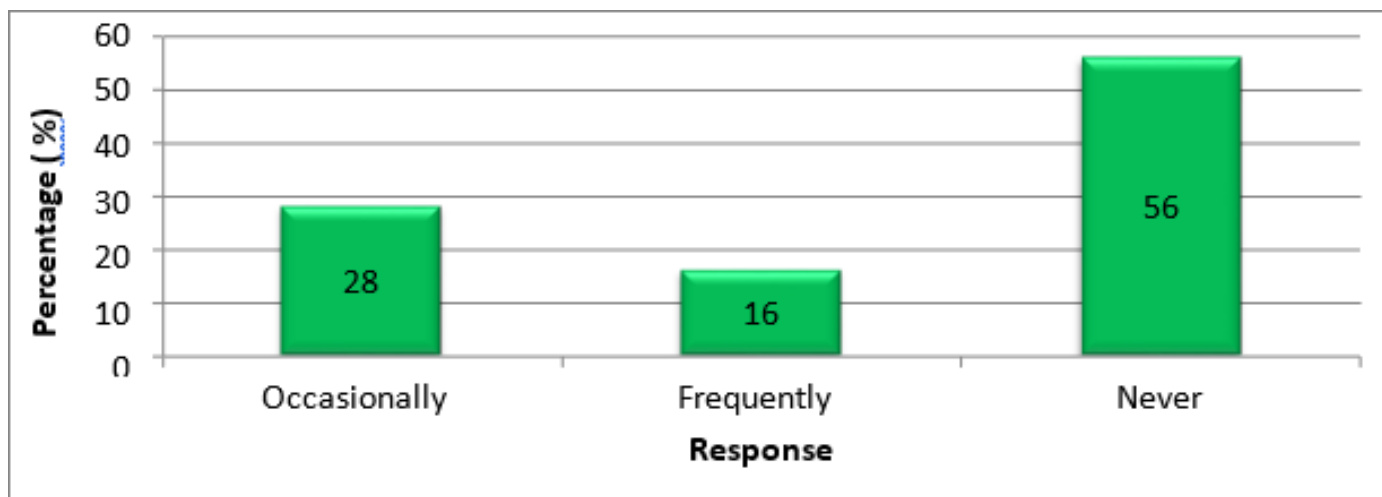


Figure 8: Shows the distribution of respondents according to how often they smoke (N=50)

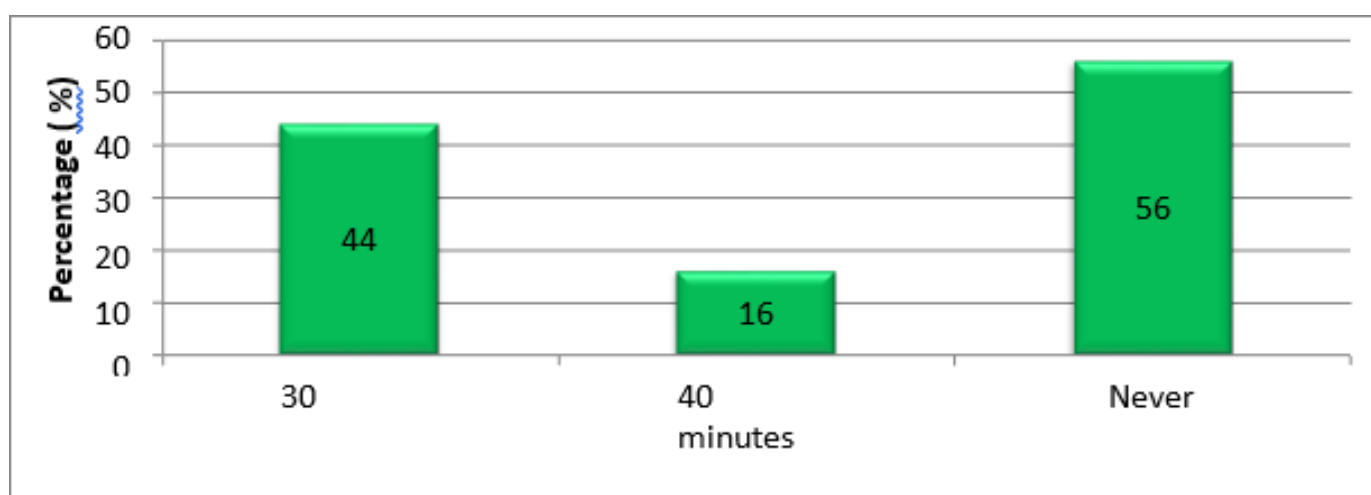


Figure 9: Shows the distribution of respondents according to how long they take to carry out physical exercises daily Percentage (%) (N=50)

response depicts an implication that study participants possessed knowledge about the risk factors of hypertension. The study findings were not in line with Reyhani P, (2020), where results regarding foods to be avoided by hypertensive patients indicated that 82.5% knew salty foods.

4.2. Attitude towards non-pharmacological management of hypertension among patients aged 40-75 years.

The study further revealed that the majority of the respondents (78%) perceived hypertension to be extremely dangerous to their health. This could be a result of the fact that study partic-

ipants had never gone through hypertension illness with related minor or major complications. Therefore, from previous experiences they were most likely to perceive hypertension to be dangerous to their health. This agrees with findings obtained from a study that was done in Tanvè Benin by Nadege et.al (2020), where findings revealed that around 99.2% of respondents considered hypertension is a serious disease.

Study results depicted that the majority of the respondents (70%) perceived non-pharmacological management of hypertension to be highly beneficial to their health and therefore, this could be attributed to the fact that the

majority of the study participants had already acknowledged that hypertension is extremely dangerous to their health hence paving the way to positive attitude towards non-pharmacological methods. The study results were in line with Elsie et al (2018), where findings showed that (88%) were willing to adopt lifestyle modification to manage hypertension.

Study results further revealed that most of the respondents (56%) could manage hypertension alone with non-pharmacological lifestyle modifications. This indicates that a substantial number of participants were most likely to adopt non-pharmacological lifestyle modifications for hypertension as the study was yet to discover. The study findings were contrary to a study that was done by Seham& Samira (2015), where findings depicted that 60.4%from patients were disagree that; it is easy for them to modify their diet, healthy diet alone effective to control hypertension.

Findings also revealed that half of the respondents (50%) were willing to recommend non-pharmacological management of hypertension strategies to their fellow hypertensive patients. This could be a result of the fact that an average number of the study participants had perceived non-pharmacological management of hypertension to be highly beneficial to their health. This agrees with the study that was done at MizanTepi University Teaching Hospital by Abiy&Teketel (2019), where findings revealed that 66.4% were in favor of encouraging their friends to adopt lifestyle modification practices to manage hypertension.

4.3. Practices towards non-pharmacological management of hypertension among patients aged 40-75 years.

Based on the study results, the majority of the respondents (76%) never had a blood pressure machine at home. such response notifies that a substantial number of study participants might have had no ability to own a personal BP machine. This is consistent with results from a study that was done by Sewunet et al (2019), where 87%

of the study sample never had a personal BP machine.

Among the notable ones who had a personal BP machine, more than of the respondents (67%) regularly self-monitored their blood pressure. This indicates that they were eager to monitor their BP to enhance the easy management of hypertension with non-pharmacological methods.

The study also revealed that more of the respondents (56%) reported that they don't smoke. Therefore, this implies that an average number of study participants were adopting preventive measures since smoking is also a risk factor for hypertension. The study results were relatively similar to findings obtained from a study that was carried out in South Ethiopia by Eyasu et al (2017), where (91.2%) of respondents were not smokers.

Most of the respondents (44%) reported that daily they carry out physical exercises for 30 minutes. Such a response denotes that very few of the study participants could carry out physical exercises as per the required minimal time. The study findings were inconsistent with Tilahun et al (2015), where results revealed that (45%) had never participated in any vigorous exercise.

Results from the study showed that most of the respondents (40%) rarely add salt to their foods on the table. This is clear evidence that depicts that study participants were afraid of the related complications that result from adding salt to their foods on the table. The study results were in line with Abiy & Teketel (2019), where results showed that (26.3%) of participants limited salt consumption sometimes.

However, most of the respondents (52%) reported that they commonly feed on carbohydrates. This could be a result of the fact such types of foods were easily accessible by respondents even though such types of foods don't provide nutrients that guarantee full management of hypertension. This is not in line with Abiy & Teketel (2019), where (39.2%) of respondents adopted the DASH diet.

5. Conclusion.

Given the total sample of findings obtained from 50 participants the following conclusions were drawn by the researcher:

The knowledge about non-pharmacological management of hypertension was significantly impressive since almost all respondents (90%) had ever heard about non-pharmacological management of hypertension, (67%) obtained information from health facility, (58%) of participants knew about weight as a risk factor for hypertension, (52%) knew how to self-monitor their blood pressure, (50%) knew regular exercise and (56%) knew spiced foods as the category of food to be avoided by hypertensive patients.

The study also depicted that participants possessed positive attitudes towards non-pharmacological management of hypertension because (78%) of respondents perceived hypertension to be extremely dangerous to their health, (70%) agreed that non-pharmacological management of hypertension is highly beneficial to their health, (56%) agreed that they could manage hypertension alone with non-pharmacological lifestyle modifications and (50%) were willing to recommend non-pharmacological management of hypertension strategies to their fellow hypertensive patients

Practices towards non-pharmacological management of hypertension were a little bit fairly agreeable since underneath an average number of the participants were complying with non-pharmacological management of hypertension with evidence of (56%) of respondents who reported that they don't smoke, (44%) daily they carry out physical exercises for 30 minutes, (40%) reported that they rarely add salt in their foods on the table and (52%) commonly feed on carbohydrates.

The researcher generally concluded that; knowledge and attitude towards non-pharmacological management of hypertension were significant impressing though practices prerequisites some improvements to bridge the research gap since a notable number of participants were not entirely adopting self-care

non-pharmacological practices.

6. Recommendations.

The following recommendations were made with future hopes of closing the research gap:

The government of Uganda through the Ministry of Health should continue to set and implement effective and comprehensive education strategies to reach the public on hypertension. This could be done through the use of television, radio, internet, and other social media platforms focusing on complications of uncontrolled HTN and the importance of self-care behaviors in hypertension to reduce long-term complications.

Many patients utilize medical professionals for information and guidance, it is thus important that Wakiso health center IV administration thoroughly should sensitively continue to sensitize hypertensive patients on the importance of adopting fully non-pharmacological management practices to control hypertension, with a focus on identifying gaps in practices to close the research gap

These findings also buttress that health workers at Wakiso health center should inform family members of hypertensive patients about their important roles in encouraging patients to undergo hypertension control or all types of self-care practices domains and strongly promote the practice.

Further large-scale studies need to be undertaken to obtain a clearer picture of the level of non-pharmacological management of hypertension in different parts of the country for a genuine standing overview

7. Acknowledgment.

All, thanks to the Almighty God, who has kept and led me this far.

Highly I indebted my supervisor Dr. Harrison Sida (MPS) for his unfailing efforts and time invested to guide me through this research.

In addition, my appreciation goes to my parents for their prayers, moral and financial support throughout this program.

Much gratitude to my classmates especially Kimmula Moses, I am very grateful for their utmost contribution in one way or another.

8. List of Abbreviations.

DALYs: Disability-Adjusted Life Years
DASH: Dietary Approaches to Stop Hypertension.

YLD: Years of Living with Disability
CVDs: Cardiovascular Diseases
GBD: Global Burden of Disease
KSHS: Kampala School of Health Sciences
MoH: Ministry of Health
UAHEB: Uganda Allied Health Examinations Board
WHO: World Health Organization

9. Publisher details:

Publisher: Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256775434261
Location: Wisdom Centre, P.O.BOX. 148, Uganda, East Africa.



10. References.

1. Abiy Tadesse Angelo , Teketel Ermias Geltore. (2019). . Lifestyle modification practices and associated factors among diagnosed hypertensive patients in Mizan Tepi University Teaching Hospital South west Ethiopia : cross-sectional study Volume 2, Article 156 23. *PAM J.*, 2, 56-170.
2. Centers for Disease Control and Prevention. (2019). *Hypertension Cascade: Hypertension Prevalence, Treatment and Control Estimates among U.S. Adults Aged 18 Years and Older Applying the Criteria from the American College of Cardiology and American Heart Association's 2017 Hypertension Guideline—NHANES 2015*. USA.
3. Debalina Sahoo, Harshida Gosai, Ujjwal Sahoo, J.M. Harsoda. (2016). Awareness and Practices of Non-Pharmacological Approaches for Management of Hypertension in a Geriatric Population. , *Int J Med Students.*, 10-15.
4. Gouda HN, Charlson F., Sorsdahl K., Alize Ferrari, Holly Erskine. (2019). Burden of non-communicable disease in Sub Saharan Africa 1990-2017 results from global burden of disease study 2017. *Lancet Global health*, 7 (10), 1375-1387.
5. Lunyera J, Kirenga B, Stanifer JW, Kasozi S, van der Molen T, Katagira W. (2018). Geographic differences in the prevalence of hypertension in Uganda: Results of a national epidemiological study. *PLOS ONE*, 13 (18).
6. and practices among students in estern province schools,Saudi Arabia. *Hindawi journal of environmental and public Health*, 10-19.
7. Nadège Corine Yessito Houehanou, Ariyoh Salimanou Amidou, Arnaud Joël Djidjoho SonouGwladys Gbaguidi, Latifath Ibouaraïma, Philippe Lacroix, Dismand Houinato. (2021). Knowledge, Attitudes and Practices towards Hypertension among Hypertensive Patients in Rural Area, Tanvè (Benin). *Universal journal of public health*, 8 (4), 120-126.
8. Odili N. Augustine, Babangida S. Chori, Benjamin Danladi, Peter C. Nwakile, Innocent C. Okoye, Umar Abdullahi, Maxwell N. Nwegbu, Kefas Zawaya, Ime Essien, Kabiru Sada, John O. Ogedengbe, Akinyemi Aje and Godsent C. Isiguzo. (2015). Prevalence, Awareness, Treatment and Control of Hypertension in Nigeria: Data from a Nationwide Survey 2017. *Global Heart*, 5 (147), 100-130.
9. Osama E. Salama, Heba M.T Elweshahi, Asmaa M.G., Abd E.L. Raheem. (2017). Knowledge, attitude and compliance with hand hygiene practices among health care

- workers in Alexandria Main University Hospital. *Highnstitute of public health*, 47 (2), 39-47.
10. Seham A. Abd El-Hay & Samira E. El Meza-yen . (2015). . Knowledge and perceptions related to hypertension, lifestyle behavior modifications and challenges that facing hypertensive patients; *IOSR Journal of Nursing and Health Science*. 4 (6),15-26.
 11. Sewunet Ademe, Fekadu Aga, Debela Gela. (2019). Hypertension self-care practice and associated factors among patients in public health facilities of Dessie town, Ethiopia. *BMC Health Services Research*, 19-51.
 12. Tilahun Tesfaye, Tesemma Sileshi, Gizaw Dabessa. (2015). Knowledge, attitudes and practice of non -pharmacologic therapy among hypertensive patients in Bishoftu, Ethiopia;. *Journal of Health, Medicine and Nursing*, 19.
 13. WHO. (2021). *Hypertension fact sheet* . . Geneva, Switzerland.
 14. WHO. (2021). *Key facts and figures: World hand hygiene day 2021*. Geneva, Switzerland.
 15. WHO. (2021). *Progress of household drinking water, sanitation and hygiene 2000-2020: Five years into SDG*:. Geneva, Switzerland.
 16. Wake AD, Bekele DM, Tuji TS. Knowledge and Attitude of Self-Monitoring of Blood Pressure Among Adult Hypertensive Patients on Follow-Up at Selected Public Hospitals in Arsi Zone, Oromia Regional State, Ethiopia: A Cross-Sectional Study. *Integr Blood Press Control*. 2020 Mar 5;13:1-13. doi: 10.2147/IBPC.S242123. PMID: 32189970; PMCID: PMC7068036.
 17. Elsie Adjei (2018). Assessing knowledge, attitude and practices of lifestyle modification among persons with hypertension in cape coast metropolis. <https://ir.ucc.edu.gh/xmlui/bitstream/handle/123456789/3423/ADJ EI%202018.pdf?sequence=1&isAllowed=y>.
 18. Reyhani P, Azabdaftari F, Ebrahimi-Mamagani M, Asghari-Jafarabadi M, Shokrvash B. The Predictors of High Dietary

Salt Intake among Hypertensive Patients in Iran. *Int J Hypertens*. 2020 Apr 7;2020:6748696. doi: 10.1155/2020/6748696. PMID: 32328301; PMCID: PMC7168708.