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Original Research Article

Psychocognitive Determinants of Hypertension Prevention Practices among Women in Southwestern Nigeria

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Abstract: Hypertension is an important risk factor for the development of numerous cardiovascular diseases. The prevention of hypertension is vital in the reduction of cardiovascular disease mortality and associated morbidities. Numerous studies have focused in the prevalence of hypertension and the prevalence of risk factors for cardiovascular diseases in Nigeria. However, this study investigated the knowledge of women in hypertension, perceived severity of hypertension and barriers towards engaging in hypertension prevention practices so as to establish key areas to focus public health promotion activities. This study was a cross sectional quantitative research carried out to investigate the pyschocognitive determinants of hypertension prevention practices among women residing in Akinyele Local Government Area of Oyo state in Southwest Nigeria. A total of 370 consenting women were recruited into the study using a multi-stage sampling technique and data was collected using the aid of an interviewer-administered questionnaire. Majority of study participants (74.9%) demonstrated fair knowledge of risk factors for hypertension while many participants (65.4%) had good knowledge of prevention practices for hypertension, with an overall mean knowledge score of 12.39±2.37 on a 24-point scale. Many participants (59.2%) had positive perception of severity of hypertension with a mean perception score of 23.80±2.814 on a 27-point scale. The most reported barrier towards engaging in hypertension prevention practices among participants was financial constraint in maintaining healthy eating habits. Furthermore, there is a significant association between participants' level of education and their knowledge of hypertension. There is also a significant association between barriers towards hypertension prevention such as lack of awareness from media sources, financial constraint and knowledge of hypertension. The knowledge of hypertension among women in Akinyele Local Government Area is fair, with some level of wrong perception still persistent. To improve the knowledge and perception of women regarding hypertension there is need for community-wide sensitization and peer education through existing women trade groups targeting enlightenment and dispelling of misconceptions about hypertension. Women should also be sensitized on pocket-friendly readily available consumables that aid in promoting health and prevention of hypertension.

Keywords: Hypertension, Knowledge, Perception, Barriers, Community, Women.

INTRODUCTION

Cardiovascular diseases, malignancies, chronic respiratory diseases, and diabetes are examples of non-communicable diseases that are costly but mostly preventable. These diseases have similar modifiable risk factors and are a major source of poverty and a hindrance to economic growth (World Health Organization, 2019). Hypertension has developed into a severe lifelong health condition that cuts across all phases of life with high prevalence among adults as a result of numerous factors associated with adulthood (Ayogu, Ezeh and Okafor, 2021). Hypertension is described as a blood pressure measure where the systolic blood pressure is ≥ 130mmHg and/or diastolic blood pressure is ≥ 80 mmHg (Whelton, Carey, Aronow, Casey, Collins and Himmelfarb, 2017). Globally, the burden faced as a result of non-communicable disease, including hypertension, is rising incredibly, with reports from the World Health Day on hypertension demonstrating that

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Africa would suffer the most (WHO, 2023). Researchers and policymakers in Africa have for long placed focus on infectious disease such as HIV/AIDS and tuberculosis. However, changes in socioeconomic factors which influences health, most especially changes in lifestyle which is directly influenced by urbanization, has led to a higher frequency in the development of non-communicable diseases such as cardiovascular disease for which hypertension stands as a risk factor (Van derSande, 2003). Men suffer from cardiovascular disease such as hypertension at a far higher rate than women. This helps to explain why hypertension, stroke and heart attack and other type of cardiovascular diseases have always been regarded as a man's concern. Cardiovascular diseases such as hypertension are not only the major contributor to the mortality rate of women globally, but it is also one of the primary drivers of Disability-Adjusted Life-Years lost (DALY). Overall, women's cardiovascular disease is under-recognized, and women are at a disadvantage when it comes to cardiovascular disease (Woodward, 2019). Although, due to misapprehensions about cardiovascular diseases being a male disease, significant gaps exist in women's cardiovascular disease risk perceptions and reality (Wilmot, O'Flaherty, Capewell, Ford and Vaccarino, 2015). However, close to half of all adults with hypertension are women and there is a higher risk of developing other cardiovascular disease among women with hypertension than men (Oyelade and Ademola, 2021).

In 2008, cardiovascular disease resulted in 1.2 million death among women aged between 20 and 59 years, and this happens to be the most productive stages in life (WHO, 2019). Rates of cardiovascular disease among men have declined dramatically in recent decades, while women's rates have not followed suit (Lee and Foody, 2008). Cardiovascular illnesses are the second most common cause of death in women aged 45 to 64, and the third most common cause of death in women aged 25 to 44 (Rosamond, Flegal and Furie, 2008). In 2016, WHO revealed Nigeria's mortality rate as a result of non-communicable stood at 29%, and 11% of these cases of mortality were attributed to cardiovascular conditions. Cardiovascular diseases such as hypertension, heart failure, and stroke have increased rapidly over the past 20 years in Nigeria (WHO, 2019). The impact of cardiovascular diseases are more affected by developing countries and eighty percent of women who will die from coronary heart disease will do so in poor and middle income countries (WHO, 2011). Improvements in strategies involving health promotion and education, health-care delivery, as well as numerous public-health initiatives, helped to reduce communicable disease-related death rates dramatically. However, prolonged economic progress, combined with adoption of global trends and fundamental switches in the nature of work-related activities, resulted in major switch in consumption patterns, levels of physical activity, and smoking behaviors, all of which plays a critical role in the development of hypertension (Ike and Onyema, 2020).

Despite the fact that modifiable cardiovascular disease risk factors are the same for men and women, their impact on men and women is vastly different (Gao, Chen, Sun and Deng, 2019). The high rate of cardiovascular disease, such as coronary artery disease, is due to the increased prevalence of significant modifiable risk factors such as hypertension in women. Women have a higher incidence of all identified risk factors than men in general, with the exception of cigarette smoking. Modifiable risk factors for cardiovascular diseases that have been identified to be of higher prevalence among women in south-eastern Nigeria include truncal and general obesity and unhealthy food consumption (Eze, Kalu and Nnaji, 2020). Despite the fact that community-based CVD preventive interventions have been deployed in low and middle income countries, there are still limitations in their effectiveness in these contexts (Lawlor, Bradley, Cupples and Tully, 2018).

Determining the precision of risk- perception of important cardiovascular disease risk factor such as hypertension is an important research purpose that could lead to targeted and strategic interventions to enhance risk communication and improved health outcomes (Cainzos-Achirica and Blaha, 2015). In a study conducted in Cross River state, Nigeria, results revealed that participants had poor level of knowledge of hypertension prevention practices among adults (Obaji, 2021). Similarly, participants had poor perception of severity of hypertension in a study conducted among staffs of a tertiary institution in Nigeria (Mgbahruike and Lelesi, 2019). This indicates the need to establish women's knowledge of hypertension and also the perception of severity of hypertension, so as to identify areas that could be tackled in reducing the burden of cardiovascular diseases.

The Health Belief Model guided as the conceptual framework for this study. The components of this model was used to guide the selection of variables in relation to this study subject. The application of the Health Belief Model are as follows;

- Perceived Susceptibility: Based on this study, perceived susceptibility as a component of Health Belief Model assessed women's belief of how they feel about being susceptible to hypertension as well as factors that put them at risk of developing hypertension. Questions on perceived susceptibility in this study include: (Section C: Q1 to Q12, and Section D: Q6 and Q8).
- Perceived Severity: The perceived severity component assessed women's assumed seriousness of hypertension and its potential long-term consequences. Questions on

perceived severity in this study include: (Section D: Q1 to Q8).

- Perceived Barriers: Perceived barriers assessed women's belief regarding influences that hinder or discourage adoption of healthy practices for the prevention ofhypertension. For example, some of these influences may include financial constraints or family responsibilities. Questions on perceived barriers include: (Section E: Q1 to Q8).
- Perceived Benefits: it is the assessment of women's perception of advantages of adopting lifestyle changes that will prevent hypertension.
- Cues-to-action: These are external factors such as related information from media, promoting the desired behavior.
- Self-Efficacy: This refers to women's ability to successfully adopt the desired behavior of staying healthy and practicing what will prevent the occurrence hypertension. Self-efficacy is achieved when perceived benefits outweighs perceived barriers.

EXPERIMENTAL SECTION/MATERIAL AND METHODS

Study Design

The study was a descriptive, cross sectional study in which multi-stage sampling was used to select participants until the sample size for the study was met. A structured questionnaire was administered to 370 consenting women within the age bracket of 20 to 60 yearswho resided within Akinyele Local Government Area, Oyo State.

Study Site

This study was carried out in Akinyele Local government Area, Ibadan, Oyo state, Nigeria. Akinyele LGA was chosen randomly for this study; Akinyele LGA is considered a traditionally rural LGA in Ibadan with most of the wards located in rural towns and villages thus proving unique criteria for investigating the knowledge, perception and barriers towards prevention of hypertension among women with diverse level of education among other socio-demographic features.

Akinyele LGA is one of the 11 Local Government Areas that make up Ibadan metropolis and has it's headquarter at Moniya. Akinyele Local Government Area was created in 1976 and it shares boundaries with Afijio Local Government Area to the North, Lagelu Local Government Area to the East, Ido Local Government Area to the West and Ibadan North Local Government Area to the South. According to the 2006 census, Akinyele LGA has a population of 211,359 comprising of 105,633 males and 105,726 females. The area also falls within the forest and derived savannah. Major streams are Ode-Ose, Odo-Ona, Odo- Oba. Using 3.2% growth rate from 2006 census figures, the 2010 estimated population for the Local Government Area was 239,745. Residents in Akinyele Local Government Area are mostly traders or civil servants. Akinyele Local Government Area is subdivided into 12 political wards.

Study Population

The study population comprised of women within age bracket of 20 to 60years who resided within Akinyele Local Government Area of Oyo State and gave informed consent to willingly participate in the study.

Sample Size

A minimum of 370 women as derived by the formula below were enrolled from 6 wards within Akinyele Local Government Area to ensure a true representation of the entire population of women. A non-response rate of 10% was also added.

$n = Z^2pq/d^2$

Where n is the sample size; z is the z-score (reliability coefficient) of 1.96 at 95% confidence interval; p is the estimated proportion of an attribute present in the population (Mean perception of severity percentage score for cardiovascular disease among adults according to Hamid Yimam Hassen, Mark Bowyer, Linda Gibson, Steven Abrams and Hilda Bastiaens, 2011) 32.3% (0.323); q is 1-p, and d is the desired level of precision which is 5% (0.05). The calculated sample size was 336, with 34 from the 10% non response added, this gave a total of 370 subjects.

Sampling Technique

A multi-stage sampling technique was employed in this study. A sample of three hundred and seventy (370) eligible women participated in the study. The selection of respondents involved four (4) stages.

Stage one: Simple random technique was used in the selection of six wards under the twelve (12) wards.

Stage two: The selection of six communities under each selected ward was also done by simple random sampling technique.

Stage three: 22 houses were selected under each selected community of the identified ward was carried out by using systematic sampling technique; a bottle was spinned at the centre of each community by the investigator. The spinned bottle was allowed to turn around unhindered and allowed to come to rest. The interviewer commenced from the part where the mouth of the bottle is pointing to. Balloting was done to select every second house in the community in the direction of the spinned bottle.

Stage four: one respondent per house was conveniently selected to take part in the study. The convenience is due to the nature of the respondents being women within age 20 to 60 years. In a situation where the researcher or research assistant came across more than one respondent

that falls in this category, balloting was done to select the sole respondent for the study.

Instrument for Data Collection

An interviewer-administered questionnaire was utilized to elicit information among 370 eligible and consenting women in Akinyele Local Government Area, Oyo state. This instrument contained five sections; section A focused on socio demographic details of participants with variables such as age as at last birthday, marital status, religion, ethnicity, occupation and number of children. Other sections (B-E) contained questions on knowledge of risk factors for hypertension, knowledge of prevention practices for hypertension, perceived level of severity of hypertension and barriers towards engaging in hypertension prevention practices.

Data Analysis

Administered questionnaires were serially numbered to ensure simple identification, entry, and recall. All completed surveys were double-checked before data input so as to verify that they are complete and correct. Statistical Package for Social Science (SPSS version 20) software was used to analyze the data using descriptive (mean, median, mode) and inferential (Chi square) statistical analysis. Tables and figures were used to present the results obtained, and the level of significance was set at $p < 0.05$.

Knowledge of risk factors for hypertension was measured using a 12-point knowledge scale; knowledge score 0 to 4.9 was categorized as poor, 5 to 8.9 was categorized as fair while 9 to 12 was categorized as good knowledge. Knowledge of hypertension prevention practices was measured using a 12-point knowledge scale; knowledge score 0 to 4 was categorized as poor, 5 to 8 was categorized as fair while 9 to 12 was categorized as good knowledge. Overall mean knowledge score was 12.39±2.374 on a 24-point knowledge scale. Perceived level of severity of hypertension was measured using a 27-point perception scale; perception score <24 was categorized as negative perception while >24 was categorized as positive perception.

Barriers towards engaging in hypertension prevention practices were analyzed using descriptive statistics to identify the options that was mostly selected by participants and the frequency. The hypotheses were examined to establish the significant relationships that exist between variables.

Ethical Considerations

Approval to conduct this study was obtained from Oyo State Research Ethical Review Committee (Ref: AD 13/479/263B). The participants were informed of their rights to decline or withdraw from the research without any undesirable effects and written informed consent form was signed by participants who were interested in participating in the research. The written informed consent contained simple languages and was void of any technical terms to ensure full understanding of the purpose of the research. The confidentiality of the participants was ensured and protected as there was no request for names and personal addresses.

DISCUSSION

All the participants' age range fell between 20 to 60 years with a mean age of 36.1±10.7 years. Majority (88.4%) of participants were of Yoruba ethnicity. Many (60.8%) of participants were Christians. Less than half (45.1%) of participants had received secondary education while more than one-third (39.2%) had received tertiary education. Many (67.0%) of the participants were traders with small-scale businesses, while majority (95.4%) of participants had 0-5 children in their household (Table 1).

Table 1: Socio-demographic characteristics of participants (N=370)

Variable	Frequency	Percentage
Age		
20-30	134	36.2
31-40	127	34.3
41-50	59	15.9
51-60	50	13.5
Religion		
Christianity	225	60.8
Islam	143	38.6
Traditional	2	0.5
Ethnicity		
Yoruba	327	88.4
Igbo	19	5.1
Hausa	7	1.9
Others	17	4.6
Highest Level of Education		
Secondary	167	45.1
Tertiary	145	39.2
Primary	48	13.1
None	10	2.7
Occupation		
Trader	248	67.0
Artisan	57	15.4
Teacher	24	6.5
Student	23	6.2
Unemployed	7	1.9
Health Worker	6	1.6
Civil servant	5	1.4
Number of Children		
0-5	353	95.4
>5	17	4.6

* **Mean Age = 36.1±10.7 years.**

Knowledge of hypertension (risk factors and prevention practices)

Knowledge of hypertension

The knowledge of risk factors for hypertension showed that many (63.8%) of the participants indicated that excessive salt consumption is a potential factor for development of hypertension among women. Many (63.5%) of participants affirmed that when a women is

obese/overweight it leads to the development of hypertension (Table 2).

Very few participants (4.9%) indicated that lack of sleep does not create tendency for hypertension in women. Less than one third (21.9%) of the participants reported that inadequate consumption of water does not lead to hypertension in women. Majority (75.7%) of participants indicated that engaging in stressful activities enhances the possibility of hypertension in women.

Many (64.6%) of participants highlighted that engaging in tobacco smoking puts women at risk of developing hypertension. Many (63.5%) of participants also indicated that having a family history of hypertension may make an individual develop hypertension, less than half (40.8%) of participants reported that food poisoning is not risk factor for hypertension. Less than half (41.9%) of participants affirmed that hypertension cannot be caused by mystical means "juju" (Table 2).

The knowledge of prevention practices for hypertension showed that Many (68.1%) of participants indicated that lack of consumption of alcohol is a preventive practice for hypertension among women. The majority (70.3%) of participants identified lack of tobacco smoking as a preventive measure for hypertension. Majority (90.8%) of participants highlighted reduced stress level as preventive practice for hypertension among women (Table 2).

Majority (78.9%) of participants also identified reduced consumption of sugar as a preventive measure for hypertension. Majority (94.6%) of participants reported routine blood pressure check-up as a preventive practice for hypertension, likewise, majority (87%) of participants affirmed that reduced intake of salt is a preventive practice for hypertension. Majority (95.9%) of participants reported that consumption of fruits and vegetables is a preventive practice for hypertension. Majority (92.2%) of participants also reported that engaging in routine physical exercises is a prevention practice for hypertension. Majority (82.4%) of participants identified reduced consumption of fatty foods is a preventive measure for hypertension (Table 2).

The mean knowledge score for knowledge of risk factors for hypertension was 4.57±1.54, with a minimum knowledge score of 0 and maximum score of 9. The mean knowledge score of prevention practices for hypertension was 7.82±1.592, with a minimum knowledge score of 2 and maximum of 11. The overall knowledge of participants was pooled and assessed on a (0-24) point scale. This was further categorized into rages with 0-8 points as poor knowledge, 9-16 points as fair knowledge and 17-24 points as good knowledge. Participants overall mean knowledge score was 12.39±2.374. Majority had fair knowledge of hypertension.

There was a statistically significant association between knowledge of hypertension and level of education of participants (χ^2= 10.35; P=0.004) (Table 3).

Table 2: Knowledge of Hypertension (Risk factors and prevention practices)

Risk factors for hypertension	**Yes (%)**	**No (%)**
Excessive salt consumption is a potential factor for development of hypertension among women	236(63.8)	134(36.2)
When a women is Overweight/Obese, it may lead to hypertension	235(63.5)	135(36.5)
Engaging in stressful activities as a woman is likely to enhance the possibilities of developing hypertension	280(75.7)	90(24.3)
Whether a woman engages in tobacco smoking will not lead to development of hypertension	239(64.6)	131(35.4)
Having a family history of hypertension may make an individual fall victim of hypertension	235(63.5)	135(36.5)
Food poisoning is potential factor for developing hypertension	151(40.8)	219(59.2)
Hypertension could be sent to an individual through mystical means "Juju"	155(41.9)	215(58.1)
Over thinking	162(43.8)	208(56.2)
Not drinking enough water may lead to the development of hypertension among women	81(21.9)	289(78.1)
If a woman experiences lack of sleep, it creates tendency for development of hypertension	18(4.9)	352(95.1)
Noise is a potential causative factor for hypertension	4(1.1)	366(98.9)
Pregnancy	2(0.5)	368(99.5)
Prevention practices for hypertension	**Yes (%)**	**No (%)**
Lack of consumption of alcohol	252(68.1)	118(31.9)
Lack of tobacco smoking	260(70.3)	110(29.7)
Reduced stress	336(90.8)	34(9.2)
Reduced consumption of sugar	292(78.9)	78(21.1)
Routine blood pressure check-up	350(94.6)	20(5.4)
Reduced salt intake	322(87.0)	48(13.0)
Consumption of fruits and vegetables	355(95.9)	15(4.1)
Engaging routine physical exercise	341(92.2)	29(7.8)
Reduced consumption of fatty food	305(82.4)	65(17.6)
Less thinking	29(7.8)	341(92.2)
Having enough of sleep	18(4.9)	352(95.1)
Drinking enough water	33(8.9)	337(91.1)

Note: The overall mean knowledge score was 12.39±2.374 (poor [3.8%], fair [89.2%] and good [7.0%]).

Table 3: Knowledge of hypertension, marital status and level of education

Socio demographic characteristics	Knowledge category			Chi-square value	*P*
	Poor (%)	Fair (%)	Good (%)		
Marital Status					
Single	4(3.9)	90(88.2)	8(7.8)	2.174[a]	0.903
Married	9(3.6)	222(89.2)	188(7.2)		
Divorced	0(0.0)	5(100)	0(0.0)		
Widowed	1(7.1)	13(92.9)	0(0.0)		
Level of Education					
None	2(20.0)	8(80.0)	0(0.0)	19.353[a]	0.004*
Primary	3(6.2)	44(91.7)	1(2.1)		
Secondary	5(3.0)	155(92.8)	7(4.2)		
Tertiary	4(2.8)	123(84.8)	18(12.4)		

*****Significant relationship; Chi-square test.

Perceived level of severity of hypertension

Many (68.9%) of the participants reported that they do not worry about developing hypertension because it may be life threatening. Many (64.3%) of participants also disagreed if hypertension could cause long-term financial problems. Majority (91.6%) of participants indicated that improper management of hypertension may generate multiple health problems. Also, majority (92.7%) of participants also reported that a woman can suffer from hypertension over a long period of time if not properly managed (Table 4).

Majority (74.3%) participants disagreed that hypertension cannot necessarily lead to death, while majority (75.7%) of participants also disagreed on not being worried about developing hypertension. Majority (91.1%) of participants disagreed on hypertension not resulting into stroke and many (61.6%) of participants also disagreed on being too healthy to develop hypertension. Majority (85.4%) of participants disagreed on whether hypertension is not that serious and does not pose threat to health (Table 4).

Perceived level of severity of hypertension was measured using a 27-point perception scale; perception score <24 was categorized as negative perception while >24 was categorized as positive perception, the minimum and maximum recorded score was 13 and 27 respectively and a mean perception score of 23.80±2.814 was recorded among participants.

Table 4: Perceived level of severity of hypertension

Perception statements	Agree (%)	Undecided (%)	Disagree (%)
I don't worry about developing hypertension because it may be life threatening	77(20.8)	38(10.3)	255(68.9)
Having hypertension may not necessarily cause long-term financial problems for m	98(26.5)	34(9.2)	238(64.3)
If I do not properly manage hypertension, it may degenerate into multiple health problems for me	339(91.6)	10(2.7)	21(5.7)
A woman can suffer from hypertension over a long period of time if not properly managed	343(92.7)	13(3.5)	14(3.8)
Hypertension cannot necessarily lead to death	57(15.4)	38(10.3)	275(74.3)
As a woman, I am not worried of developing hypertension	53(14.3)	37(10.0)	280(75.7)
Hypertension cannot result into stroke in a woman	15(4.1)	18(4.9)	337(91.1)
I am too healthy to develop hypertension	102(27.6)	40(10.8)	228(61.6)
Hypertension is not that serious and does not pose threat to health	28(7.6)	26(7.0)	316(85.4)

Note: Mean perception score = 23.80±2.814.

Barriers towards engaging in hypertension prevention practices

Among participants, financial constraint (14.2%) was identified as the most notable barrier for their engagement in hypertension prevention practices. Family responsibilities (13.5%) and presence of large amount of fast food in the society (12.1%) were also identified as significant barriers to engagement in hypertension prevention practices. Lack of encouragement from family, friends and local groups (12.0%), inadequate knowledge of hypertension prevention practices (11.7%) and lack of time to engage in physical exercise (11.5%) was also highlighted by participants amongst others (Table 5).

There was a statistically significant association between knowledge of hypertension and lack of awareness of media sources among participants (χ^2=9.447; P=0.009) (Table 6).

Table 5: Barriers towards engaging in hypertension prevention practices

Statements	Frequency	Percentage (%)
Lack of time to engage in physical exercise	230	11.5
Inadequate knowledge of hypertension prevention Practices	233	11.7
Family responsibilities	269	13.5
Lack of encouragement from family, friends and local groups	239	12.0
Reducing consumption of alcohol and tobacco smoking is very difficult	205	10.3
Financial constraint	284	14.2
Presence of large amount of fast food in the society	242	12.1
Lack of awareness from media sources	184	9.2
Having regular check-up to monitor blood pressure is too expensive	91	4.6
Ignorance	17	0.9

Table 6: Knowledge of hypertension and lack of awareness from media sources

Barriers category	Knowledge category			Chi-square value	*P*
	Poor (%)	Fair (%)	Good (%)		
Lack of awareness from media sources					
Yes	5(2.7)	173(94.0)	6(3.3)	9.447[a]	0.009*
No	9(4.8)	157(84.4)	20(10.8)		

*****Significant relationship; Chi-square test.

DISCUSSION

The study was appropriate among this age group as it was able to document results regarding knowledge of risk factors for hypertension, knowledge of prevention practices for hypertension, perceived level of severity of hypertension and barriers towards engaging in hypertension prevention practices from both young women, middle-aged women and older women. Religious representation tilted more towards the Christian participants and more than one-third were Muslims. Also, many of participants were married and majority of the participants were from Yoruba ethnic group due to the fact that the study was conducted in the South-western part of Nigeria which is Yoruba dominated. Less than half of participants had received secondary education while more than one-third had received tertiary education and many of participants were traders. This result was similar to findings reported by Odelola *et al*., 2021.

The study revealed fair level of knowledge of hypertension for both risk factors and prevention practices among this sample of women living in south western Nigeria. Previous studies have also shown similar fair level of knowledge among women. Study findings showed that women reported that tobacco smoking puts women at risk of developing hypertension. This result supports the findings of Mosca *et al*., (2014) which was conducted among women aged 18 and above, in which majority of the participants identified tobacco smoking as a major risk factor for hypertension.

The findings from this study also revealed that many of participants had the knowledge that excessive salt consumption is a risk factor for development of hypertension, and many participants also know that when a woman is obese/overweight it leads to the development of hypertension. This observation is similar to the findings in earlier studies conducted in Ghana and Nigeria by Sefah *et al*., (2021) and Oyelade *et al*., (2021).

The findings from this study revealed that many of the participants had good knowledge of prevention practices for hypertension as many of the participants identified lack of consumption of alcohol as a preventive practice for hypertension among women. This observation goes in line with results from a study conducted in by Gong *et al*., (2020) where majority of participants identified reduced alcohol intake as a preventive practice for hypertension. Majority of participants also had the knowledge that lack of tobacco smoking is a preventive measure for hypertension among women. This is line with a study conducted by Su *et al*., (2018) where many participants reported cessation of tobacco smoking as a means of preventing hypertension.

Majority of participants also reported that reduced level of stress and reduced consumption of sugar as practices for prevention hypertension. This further supported findings from a study conducted by Sefah *et al*., (2021) where participants identified lifestyles changes as well as reduced stress as means of preventing hypertension.

Majority of participants had knowledge that reduced consumption of salt, consumption of fruits and vegetables and engaging in routine physical exercises are efficient means of preventing hypertension among women, this is in concurrence with findings from a previous study conducted by Gong *et al*., (2020) in which the aforementioned practices were identified as preventive practices for hypertension. Also, Majority of participants had knowledge that reduced consumption of fatty foods and routine blood pressure check-up are preventive measures for hypertension. This is in line with a study conducted by Kusuma (2009) where participants

which comprised of housewives revealed that resisting fried foods and fast foods as well monitoring blood pressure are essential for preventing hypertension.

Subsequently, the level of education was a variable that could exert influence on the knowledge of participants on hypertension.

In addition to the findings above, this study revealed that more than half of participants had positive perception of severity of hypertension. However, more than one-third of the participants had negative perception of severity of hypertension. This highlights the presence of false perceptions about the severity of hypertension and translates to the possibility in engaging in hypertension prevention practices. This proposes a crucial need for health education to improve the perception about hypertension. This result supports findings in a study conducted by Dankoli (2022) which revealed that a moderate percentage of participants had positive perception of severity of hypertension.

Importantly, majority of participants identified financial constraint and lack of encouragement from family, friends and local groups and family responsibilities as barriers towards engaging in hypertension prevention practices. This is in concurrence with studies conducted by Mosca *et al*., (2010) and Kamalasundar *et al*., (2020) where results revealed that poor motivation and financial constraint were the major barriers identified by research participants towards tackling risk factors for developing hypertension.

Lastly, from the test of association between variables, this study showed that lack of awareness from media sources as well as financial constraint are variables that could affect participants' knowledge of hypertension. Lack of awareness from media sources about hypertension could be as a result of increased focus on communicable diseases such as the corona virus and HIV/AIDS. This goes in line with findings from the World Health Organization which revealed that women have a higher percentage of illiteracy than men, therefore they experience restricted access to information about non-communicable disease risk factors which may hinder adoption of prevention practices and treatment (WHO, 2019).

CONCLUSION

This study provided a better understanding of the psychocognitive predictors of hypertension prevention practices among women in Akinyele Local Government Area, Oyo state, Nigeria. According to the findings of this study, majority of participants had fair knowledge of risk factors for hypertension, good knowledge of prevention practices for hypertension. Many participants had positive perception of hypertension. Also, findings revealed that financial constraint and lack of encouragement from family, friends and local group were the most notable barriers towards engaging in hypertension prevention practices among participants. The study clearly indicates that the knowledge and perception of women towards hypertension should be improved through adequate sensitization at the community level, this could be implemented through women trade groups and other groups to enhance acceptability.

Women should also be sensitized on pocket-friendly readily available consumables that promote health and aid in prevention of hypertension.

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