Adherence to Hypertension Management Practices Based on International Society of Hypertension (ISH) Guidelines among Hypertensive Patients

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ABSTRACT: Hypertension is a significant global health concern with profound cardiovascular implications. The researchers used a quantitative research design employing a descriptive research survey approach and the instrument used to seek information was a researcher-made questionnaire for assessing demographic characteristics, adherence to hypertension management such as medication adherence, lifestyle changes, and blood pressure control. These tools were used in data analysis frequency count and percentage distribution, mean and standard deviation, and lastly analysis of variance (ANOVA). This abstract presents a study conducted in Brgy. Washington, Surigao City, focusing on adherence to hypertension management guidelines by the International Society of Hypertension (ISH). Respondents generally showed high adherence to hypertension management, primarily taking medicine, with moderate adherence to monitoring blood pressure, physical activity, and diet, influenced by demographic factors. The study found no significant difference in medication adherence or adherence to a balanced diet among hypertensive individuals in Brgy. Washington, but did show differences based on age, occupation, income, and years of hypertension, emphasizing the need for community-based initiatives.

KEYWORDS: Adherence, International Society of Hypertension (ISH), Hypertension, Hypertension Management, Survey, Surigao, Philippines.

INTRODUCTION

Over a billion people globally are impacted by hypertension, which is the leading cause of death. In the entire world, it is responsible for nearly half of all deaths brought on by heart disease and stroke. The term "the silent killer" refers to hypertension because it rarely manifests any symptoms on its own. Given its asymptomatic nature as a silent killer that frequently goes unnoticed until it displays in a hypertension-related condition like heart failure or stroke, hypertension is complicated to treat, as stated by the World Heart Federation 2022. The COVID-19 outbreak's restrictions on healthcare access and utilization and the resulting social and economic strains have significantly negatively impacted patients' day-to-day lives and management, especially those with chronic conditions like hypertension, diabetes, cardiovascular disease, and renal diseases. The ban on elective and non-urgent visits, as well as the concern over contracting the virus in the hospital setting, have significantly decreased in-person visits to general practitioners, specialists, pharmacies, and other healthcare providers, making it more difficult to diagnose patients and maintain ongoing treatments (Kjeldsen, et. al. 2022).

According to the most recent World Health Organization (WHO) data, the Philippines had the 44th-highest global mortality rate due to hypertension. The same research statistics also show that 1 in 4 Filipinos have hypertension, making them more vulnerable to stroke and other serious heart ailments. The DOH also disclosed that one of the recognized causes of mortality in the nation is hypertension, which is more common in Filipino individuals aged 20 and older. The National Nutrition Council (NNC) has intensified its initiatives to enlighten the public about the dangers and treatment of hypertension, mainly as a result of the pandemic. Since poor food and a sedentary lifestyle are the main contributors to hypertension, NNC promotes maintaining a healthy diet, doing frequent exercise, and making other lifestyle adjustments to reduce high blood pressure. The most prevalent of these chronic illnesses is hypertension (15%), which is followed closely by diabetes (4%) and cardiovascular diseases (3%). About 16% of those with hypertension and 23% of those with renal disease had not received treatment in the year before the 2016 survey, respectively, of individuals with these diagnoses of medical disorders (Abalos, 2021).

The services available at the Barangay Health Center in Barangay Washington, Surigao City, provide free blood monitoring, maintenance medication, and an examination by the on-call doctor. During the week, the Barangay Health Center is accessible to anyone needing support or care, particularly for hypertension or other health-related issues.

Based on the researcher's observations in the area, people employ telemedicine and self-monitoring of blood pressure (SMBP) because they are hesitant to visit hospitals and clinics due to the COVID-19 threat. The management of people with chronic illnesses, specifically hypertension, was interrupted during the pandemic because it was unsafe for people to visit doctors for routine checkups, it was difficult to obtain adequate medications for maintenance, it was difficult to buy food, and it was unsafe for people to go for long walks outside for exercise.

This research study aims to assess how well hypertension is managed based on the ISH guidelines in Brgy. Washington Surigao City. The study's conclusions will make it possible to recommend helping increase adherence to hypertension management based on the ISH guidelines. This output will collect feedback on the efficacy of managing hypertension based on ISH guidelines.

Framework

This study is anchored on the 2020 International Society of Hypertension Global Hypertension Practice Guidelines. The International Society of Hypertension (ISH) has created global guidelines for managing hypertension in adults aged 18. In the guidelines, the management of hypertension includes lifestyle modification, pharmacological treatment, antihypertensive treatment, and Home BP monitoring. The new ISH Guidelines employ suggestions into two categories: "optimal" (care that should be given when resources permit) and "essential," which refers to the lowest degree of care that should be given. They possess a basic, easy-to-follow structure to ensure accessibility. Implementing essential standards of care tailored to low-resource settings holds significant promise for the local context of Barangay Washington in Surigao City. This approach is pivotal due to its adaptability to the community's unique challenges and limited resources. By prioritizing fundamental healthcare strategies that optimize existing resources, such as maximizing the use of basic yet effective treatments and leveraging community health workers, it becomes possible to address the community's healthcare needs more effectively. The Guidelines Committee acknowledges that some essential standards may not be feasible in low-resource settings, such as out-of-office BP measurements or single-pill combination therapy. Despite these challenges, these guidelines can help drive local initiatives and policy changes and improve care standards to reduce hypertension-induced cardiovascular morbidity and mortality. They emphasize the importance of achieving essential care standards (Unger, et. al, 2020)

The study attempted to describe all variables considered and determined their possible associations; the demographic profile of hypertensive participants, which includes the age of the respondents ranging from 18 to 60, sex, occupation which means the current job of the respondents, civil status, monthly income, and the number of years being hypertensive. The indicators of adherence to Hypertension Management were based on the ISH Guidelines among Hypertensive Patients among Barangay Washington, Surigao City residents. The guidelines emphasize *taking medicine*, *monitoring blood pressure*, *engaging in physical activity*, and *maintaining a healthy diet* as the areas of hypertension management that will be considered in determining the management practices of each hypertensive individual. The research process included creating a survey questionnaire and involved statistical tools to analyze the findings: mean, standard deviation, frequency count and percentage distribution, and analysis of variance (ANOVA). Recommendations were then given.

Research Objectives

This study determined respondents' adherence level to the ISH hypertension management guidelines in Brgy. Washington Surigao City.

Specifically, this study determined:

1. The demographic profile of the respondents in terms of:

    1.1. age;

    1.2. sex;

    1.3. occupation;

    1.4. civil status;

    1.5. monthly Income;

    1.6. educational attainment; and

1.7. the number of years being hypertensive since the first diagnosis

2. The level of adherence among respondents to the ISH hypertension management guidelines as to:

    2.1. taking medicine;

    2.2. monitoring blood pressure;

    2.3. physical activities; and

    2.4. balanced diet.

3. The significant degree of variance in the level of adherence among respondents on the ISH hypertension management guidelines when they are grouped according to their profile?

4. The recommendations based on the findings of the study.

METHODS

The researcher used a quantitative research design employing a descriptive survey approach. 264 hypertensive individuals who are residents of Brgy. Washington, Surigao City responded to the study through a purposive sampling technique. The main instrument that the researcher used to seek information is researcher-made questionnaires for hypertension management based on the ISH Guidelines. Frequency Count and Percentage Distribution were used to quantify the profile of the respondents. Mean and Standard Deviation were used to quantify the respondents' level of adherence to Hypertension Management based on the ISH Guidelines among Hypertensive Patients in Barangay Washington, Surigao City. Lastly, the Analysis of Variance (ANOVA) was used to determine the degree of variance in the adherence of hypertension practices under study based on the ISH Guidelines when they are grouped according to their profile. Ethics in the conduct of this research were strongly considered for the academic integrity of this study. Ethical research practices in educational institutions are strongly followed since it is always the goal of educational research to contribute to the general welfare of the academic community and to generally create measurable information or data that will eventually add to the increase of human knowledge (Ederio, 2023) such as the essence depicted by this study.

RESULTS AND DISCUSSION

I – Demographic Distribution of the Respondents

Table 1.1. Age Distribution of the Respondents

Profile	f (264)	%
Age		
23 - 34	29	11.00
35 - 46	48	18.20
47 - 58	80	30.30
59 - 70	80	30.30
71 - 85	27	10.20

Table 1.1 presents the age distribution of the respondents. According to the data above, 30.30% of respondents were between the ages of 47 to 58. Following that were people aged 59 to 70 (30.30%), 35 to 46 (18.20%), 23 to 34 (11%), and 71 to 85 (10.20%). In contrast, those aged 71 to 85 10.20% ranked as the lowest, showing that this age bracket had the smallest number of respondents in the survey. The researchers were interested in understanding if the respondents' age significantly affected the demographic profile of the hypertensive patients upon their adherence to hypertension management. According to the study by Burnier et al. (2020), Studies show that drug adherence is better in hypertension individuals between the ages of 65 and 80 than in younger ones. (<50 years). Medication adherence is a crucial issue in managing chronic diseases of all ages. Contrary to common assumption, treatment adherence is higher in patients aged 65-80 than in younger people (50). However, adherence to prescriptions tends to decline in the very old for a variety of reasons, one of which being the deterioration of cognitive function or depression that occurs with age.

Table 1.2 Sex and Occupation Distribution of the Respondents

Profile	f (264)	%
Sex		
Male	106	40.20
Female	158	59.80
Occupation		
Self-Employed	41	15.50
Government Employee	57	21.60
Business Owner	33	12.50
Private Employee	33	12.50
None	100	37.90

Table 1.2 shows the sex and occupation of the respondents. As to the sex of the respondents, most were female since the data shows that 59.80% (158) were female and 40.20% (106) were male. A study by Bif et al. (n.d.) indicates that women are more conscious of hypertension than males, which tends to increase with age. Therefore, women may be more inclined to comply if they know the potential for adherence and better use of healthcare services. Women were less likely than men to use hypertension medicines regularly. Men were less likely to receive pharmacological therapy and monitoring because they focused more on family responsibilities. Some of them are not open about what they are feeling.

As to the occupation of the respondents, Table 1.2 shows that 37.90% or 100 of the respondents were unemployed, while 21.60% or 57 were government employees, 15.60% or 41 were self-employed, and 12.50% or 33 were business owners and also 12.50% or 33 were private employees. Some of the unemployed respondents were retired and financially supported by their families. In connection with that, unemployed clients or patients are more likely to be non-adherent to the management of hypertension due to several factors, such as personal beliefs, lack of information regarding adherence to hypertension management, and experience.

Table 1.3 Civil Statis and Highest Educational Attainment Distribution of the Respondents

Profile	f (264)	%
Civil Status		
Single	52	19.70
Married	144	54.50
Widowed	45	17.00
Separated	23	8.70
Educational Attainment		
Elementary Level	11	4.20
High School Level	35	13.30
College Level	83	31.40
Elementary Graduate	22	8.30
High School Graduate	33	12.50
College Graduate	67	25.40
TESDA NC Holder	3	1.10
Post Graduate Degree Holder	10	3.80

As presented in Table 1.3, most of the respondents were married since 54.50% or 144 are married hypertensive individuals or patients. This was followed by singles (19.70% or 52), widowed (17% or 45), and separated (8.70% or 23). In terms of their highest educational attainment, based on the data, most of the respondents attained College level, which accounts for 31.40% (83) of the total compared to TESDA NC Holder, which only comprises 1.10% of the total number of samples showing the fewest of the respondents. The result implies that individuals with varying degrees of educational attainment have different levels of knowledge about adherence to hypertension management.

Table 1.4 Profile of the Respondents in Terms of Monthly Income and Number of Years Being Hypertensive Since First Diagnosis

Profile	f (264)	%
Monthly Income		
<10,000	145	54.90
10,000-20,000	82	31.10
20,001-30,000	18	6.80
30,001-40,000	11	4.20
>40,000	8	3.00
Number of Years Being Hypertensive Since First Diagnosis		
0 - 10 years	220	83.30
11 - 20 years	17	6.40
21 - 30 years	19	7.20
31 - 40 years	8	3.00

Table 1.4 presents the respondents in terms of monthly income and number of years of being hypertensive since first diagnosis. Based on the data, most of the respondents' monthly income average falls within <10,000 accounting for 54.90% (145) of the respondents, compared to the >40,000 which is only 8 (3%) out of the 264 respondents. According to Lee et al. (2019), low socioeconomic status and poor adherence to antihypertensive have been associated with higher mortality and cardiovascular disease risks; nevertheless, non-adherence exposes individuals with lower incomes to more significant excess risks. This indicates the importance of promoting adherence to hypertension management, especially in low-income patients.

As for the number of years being hypertensive since the first diagnosis, the majority were living 0 to 10 years already of being hypertensive comprising 83.30% of the total respondents. Meanwhile, only 8 or 3% said that they've been living their 31 to 40 years as hypertensive individuals. This indicates that most of the respondents in the study were newly diagnosed or approaching a decade old. The researchers insinuate that it is essential to measure how well and how long they have been adhering to hypertension management based on ISH guidelines.

II – Level of Adherence in Hypertension Management
Table 2.1 Level of Adherence Among Respondents to the ISH Hypertension Management Guidelines in terms of Taking Medicine

	Indicators	M	SD	VI	QD
1.	I remind myself to take my medicine.	3.61	0.73	TM	HA
2.	I can sustain my medication or maintenance.	3.51	0.82	TM	HA
3.	I never have thought of discontinuing taking my medicine.	3.35	1.02	TM	HA
4.	I still take my maintenance even though I feel or believe that my blood pressure is under control.	3.34	1.01	TM	HA
5.	I immediately buy my maintenance medicine whenever I run out.	3.54	0.78	TM	HA
6.	I take my medicine on time.	3.51	0.79	TM	HA
7.	My housemates remind me to take my medicines.	3.30	0.99	TM	HA
8.	I go to our Barangay Health Center whenever I run out of my maintenance medication.)	3.16	1.13	MTM	MA
9.	I got anxious if my maintenance medication is running out.	3.47	0.81	TM	HA
	Average	**3.42**	**0.90**	**TM**	**HA**

Scale	Interval	Verbal Interpretation	Code	Qualitative Description	Code
4	3.25-4.00	*True of Myself*	TM	*High Adherence*	HA
3	2.50-3.24	*Mostly True of Myself*	MTM	*Moderate Adherence*	MA
2	1.75-2.49	*Slightly True of Myself*	STM	*Low Adherence*	LA
1	1.00-1.74	*Not at all True of Myself*	NTM	*Not Adherence*	NA

In terms of taking medicine, Table 2.1. revealed an average mean of 3.42 with a standard deviation of 0.90, which implies that the respondents were highly adherent to hypertension medications. Specifically, the indicator *"1. I remind myself to take my medication."* (M=3.61, SD=0.73) got the highest mean which implies *High Adherence*, while indicator *"8. I go to our barangay health center whenever I run out of my maintenance medication"* (M=3.16, SD=1.13) got the lowest mean which implies *Moderate Adherence*. These specific findings mean that the hypertensive respondents strongly remind themselves to take their medications making them highly adherent to those. However, they are not much into going to their barangay health center whenever they run out of maintenance medication. Despite this low result, the respondents are still moderately adherent to their medications.

As stated by the World Health Organization (WHO), 50 to 70% of people do not take their antihypertensive medicine as directed, making poor adherence the primary cause of uncontrolled blood pressure. Better medication adherence is strongly associated with patients' knowledge and appropriate perception of the disease, plus satisfaction with clinic visits (Hamrahian et.al., 2022). Non-adherence to medications continues to contribute to substantial healthcare costs. Studies have highlighted that improved adherence, often facilitated by reminders, can save costs by reducing hospitalizations and complications (Cutler et al., 2018).

When it comes to monitoring blood pressure (as presented in Table 2.2.), the overall average mean was 3.12 with a standard deviation of 1.06, which implies *Moderate Adherence*. The responses of the respondents are quite extreme given the high standard deviation. However, it is still generally described that most of the respondents moderately adhered to their hypertension medication when it comes to monitoring their blood pressure. Specifically, indicator *"10. I monitor my blood pressure at home with the help of my housemate."* (Mean=3.41, SD=0.91) got the highest mean rating insinuating *High Adherence,* while indicator *"12. I call or go to my private doctor."* (Mean=2.63, SD=1.25) got the lowest mean implying *Moderate Adherence* among the respondents. These imply that the respondents moderately adhere when it comes to monitoring their blood pressure as they do not need to necessarily see or call their private doctors most of the time just to check their blood pressure but find some better convenience in asking their housemates to check their pressure for them. Also by experience, not all rural residents have private doctors or housemates who can conveniently check their blood pressure using the appropriate devices. All these serve to underline the requirement that the practice of HBPM is supported with the knowledge and therapeutic education required to manage hypertension effectively (Jeromine et. al, 2022). The support and reminders from trusted individuals encourage regular monitoring, leading to better adherence to treatment plans (Carey et al., 2018; Shimbo et al., 2020).

Table 2.2. Level of Adherence Among Respondents to the ISH Hypertension Management Guidelines in terms of Monitoring Blood Pressure.

Indicators	M	SD	VI	QD
10. *I monitor my blood pressure at home with the help of my housemates.*	3.41	0.91	TM	HA
11. *I go to the health center to have my blood pressure checked.*	3.24	1.04	MTM	MA
12. *I call or go to my private doctor to monitor my blood pressure.*	2.63	1.25	MTM	MA
13. *I scheduled my follow up checkup for my hypertension.*	3.01	1.10	MTM	MA
14. *Whenever I go out, I always bring my medicine with me.*	3.27	1.02	TM	HA
15. *I tell my doctor or nurse if my blood pressure is high or low.*	3.18	1.06	MTM	MA
Average	**3.12**	**1.06**	**MTM**	**MA**

Scale	Interval	Verbal Interpretation	Code	Qualitative Description	Code
4	3.25-4.00	*True of Myself*	TM	*High Adherence*	HA
3	2.50-3.24	*Mostly True of Myself*	MTM	*Moderate Adherence*	MA
2	1.75-2.49	*Slightly True of Myself*	STM	*Low Adherence*	LA
1	1.00-1.74	*Not at all True of Myself*	NTM	*Not Adherence*	NA

Table 2.3 Level of Adherence Among Respondents to the ISH Hypertension Management Guidelines in terms of Physical Activities

Indicators	M	SD	VI	QD
16. I take a walk every morning.	3.20	0.90	MTM	MA
17. I do household chores.	3.40	0.89	TM	HA
18. I move and carry things that are heavy to lift.	2.53	1.23	MTM	MA
19. I maintained my normal weight.	3.06	0.99	MTM	MA
20. I reduced drinking alcoholic drinks	3.04	1.18	MTM	MA
21. I reduced the amount i smoke during my leisure time	3.26	1.16	TM	HA
22. I sleep if I don't have something to do.	3.05	1.02	MTM	MA
23. In my leisure time I only watch TV, YouTube, or tiktok.	3.25	0.93	TM	HA
24. I love dancing to my favorite songs in my leisure time.	2.77	1.29	MTM	MA
Average	**3.06**	**1.06**	**MTM**	**MA**

Scale	Interval	Verbal Interpretation	Code	Qualitative Description	Code
4	3.25-4.00	True of Myself	TM	High Adherence	HA
3	2.50-3.24	Mostly True of Myself	MTM	Moderate Adherence	MA
2	1.75-2.49	Slightly True of Myself	STM	Low Adherence	LA
1	1.00-1.74	Not at all True of Myself	NTM	Not Adherence	NA

In terms of physical activities presented in Table 2.3, it is shown that the overall average mean is 3.06 with a standard deviation of 1.06 which means *Moderate Adherence* among the respondents. The responses are quite extreme given the high standard deviation. However, it is still generally described that most of the respondents moderately adhered to their hypertension medication when it came to engaging in physical activities. Specifically, indicator number *"17. I do household chores"* (Mean=3.40, SD=0.989) got the highest mean rating which meant *High Adherence*, while indicator number *"21. I reduced the amount I smoke during my leisure time"* (Mean=1.74, SD=1.16) got the lowest mean rating indicating *Not Adherence* among the hypertensive respondents.

Doing household chores is common and routinary for Filipinos. For many house or home-bound persons, doing household chores is considered exercise and healthy physical activity. Meanwhile, many respondents in the study are non-smokers, hence the low result in indicator 21. Although, the respondents who are smokers expressed non-adherence to the mentioned indicator. Smoking addiction is a factor in being a non-adherent hypertensive individual and withdrawing from smoking may cause them adverse side effects. It was proven that there is an increased blood pressure among quitters, and, the current nonsmokers, particularly quitters, were often observed more significantly as hypertensive than those among current smokers. More curiously, studies show that the Blood Pressure increments in the quitters after a year were remarkably comparable to those in the present smokers. However, one-year quitters had higher BP rises than continuing smokers. Despite modest numbers in these subgroups, this tendency was detected consistently in all groups dependent on weight changes. (Lee et al. 2001). To increase adherence, patients should be aware of hypertension's impact on memory, attention, and inhibitory control. Medical doctors should emphasize the importance of regular exercise for hypertension management, implementing the simple message "sit less, walk more, and exercise" in clinical practice.is suggested that walking 10,000 steps/day effectively reduces blood pressure. (Rego et. al., 2019).

Table 2.4 Level of Adherence Among Respondents to the ISH Hypertension Management Guidelines in terms of Balanced Diet

Indicators	M	SD	VI	QD
25. I eat fruits.	3.56	0.78	TM	HA
26. I reduced eating red meats.	1.88	1.02	STM	LA
27. I reduced eating fatty foods.	2.33	1.27	STM	LA
28. I eat vegetables.	3.59	0.81	TM	HA
29. I eat fishes.	3.78	0.54	TM	HA
30. I drink 8 glasses of water.	3.53	0.67	TM	HA
31. I reduced drinking carbonated drinks like coke, royal, and sprite.	2.31	1.14	STM	LA
32. I reduced drinking colored juices.	2.36	1.12	STM	LA
33. I reduced using butter or salted butter in my meals.	2.34	1.24	STM	LA
Average	2.85	0.95	MTM	MA

Scale	Interval	Verbal Interpretation	Code	Qualitative Description	Code
4	3.25-4.00	True of Myself	TM	High Adherence	HA
3	2.50-3.24	Mostly True of Myself	MTM	Moderate Adherence	MA
2	1.75-2.49	Slightly True of Myself	STM	Low Adherence	LA
1	1.00-1.74	Not at all True of Myself	NTM	Not Adherence	NA

In terms of the balanced diet aspect, the result revealed that the overall average mean was 2.85 with a standard deviation of 0.95 implying *High Adherence* among the majority of the respondents but not significantly high. As specifically shown in Table 2.4, the result showed that indicator *"29. I eat fishes"* (Mean=3.78, SD=0.54) got the highest mean rating indicating *High Adherence* to anti-hypertension practice among hypertensive individuals by eating fish which greatly helps hypertensive individuals cope with hypertension. On the other hand, indicator *"26. I reduced eating red meat"* (Mean=1.88, SD=1.02) got the lowest mean rating hence indicating *Low Adherence* to healthy eating as an anti-hypertension practice. Red meat food is one of the most common and eaten foods, especially by young adults and adults. Hence, hypertensive individuals continue to suffer from hypertension since they could not stop eating red meat. To further lower the incidence of hypertension, the 2003 World Health Organization statement suggests eating a diet high in fruits and vegetables, consuming less salt, and consuming more potassium. People with Stage 1 hypertension could significantly lower their blood pressure by following a diet prioritizing fruits, vegetables, nuts, chicken, whole grains, and low-fat dairy products. It limits fat, red meats, sweets, and beverages with added sugar. To a lesser extent, a diet high in fruits and vegetables reduced BP and managed hypertension. (Conlin, et al., 2000)

III – Significant Degree of Variance in the Adherence to Hypertension Management Practices when the Respondents are grouped According to Profile

Table 3.1 Significant Degree of Variance in the Respondents' Adherence to Hypertension Management Practices based on the ISH Guidelines in terms of Taking Medicine when grouped according to Profile Variables

Practices	Profile	H	p-value	Decision	Interpretation
Taking Medicine	Age	7413.0	0.104	Do not reject Ho	Not Significant
	Sex	23.518	0.000	Reject Ho	Significant
	Occupation	9.901	0.042	Reject Ho	Significant
	Civil Status	18.309	0.000	Reject Ho	Significant
	Monthly Income	21.047	0.004	Reject Ho	Significant
	Educational Attainment	42.825	0.000	Reject Ho	Significant
	# of yrs. Being Dx	9.264	0.026	Reject Ho	Significant

The study found that the respondents significantly differ in their medication taking or adherence when their sex, occupation, civil status, monthly income, educational attainment, and number of years diagnosed are considered. This implies that these

mentioned profile variables define or determine the respondents' level of adherence to medication. Meanwhile, the medication adherence of hypertensive individuals does not vary when considering age. This implies that regardless of the age of the hypertensive respondents, the adherence level of the respondents remains the same and will not be influenced by maturity or age differences.

The Archives of Internal Medicine reported a strong correlation between patients' health literacy and knowledge of their illness. Additionally, a patient's faith in and usage of a drug might be impacted by their lack of comprehension of a therapy. (Polanska, 2016) According to the World Heart Federation (2021), although there are effective medications for hypertension, management of the condition is still subpar. Low levels of awareness, therapy, and control mark it. In this study, men and women may react differently to drugs due to biological differences, which could play a role. The high adherence rate in males in this study could be due to less demand for household chores than females, enabling males to dedicate more time to their health. (Herbert et. al, 2020). Higher education levels are frequently associated with improved drug adherence as compared to poorer educational backgrounds. Studies have shown that patients with higher education should have a better understanding of their medical problems and drug management and, therefore, be more adherent. (Herbert et. al, 2020). Moreover, people who are married or in committed relationships tend to have a stronger support system, which can boost adherence. Compared to married participants, single people took their prescription drugs less frequently. The reason for married patients' higher adherence rate than single patients remain unknown. (Wu JR et. al., 2012). Monthly income significantly influences medication adherence, with higher income levels often leading to better adherence due to increased healthcare resources, accessibility, and convenient options like home delivery. Lower-income people, on the other hand, might need help purchasing their drugs, which could result in non-adherence or missing doses. In the research of Rohatgi et al. (2021). Thus, medication costs and the ability to meet basic needs likely characterize their day-to-day financial status better than typical measures like income (Rohatgi et. al., 2021).

Table 3.2 Significant Degree of Variance in the Respondents' Adherence to Hypertension Management Practices based on the ISH Guidelines in terms of Monitoring Blood Pressure when grouped according to Profile Variables

Practices	Profile	H	p-value	Decision	Interpretation
Monitoring Blood Pressure	*Age*	7357.5	0.093	Do not reject Ho	Not Significant
	Sex	16.616	0.002	Reject Ho	Significant
	Occupation	0.784	0.941	Do not reject Ho	Not Significant
	Civil Status	8.916	0.030	Reject Ho	Significant
	Monthly Income	16.208	0.023	Reject Ho	Significant
	Educational Attainment	7.742	0.101	Do not reject Ho	Not Significant
	# of yrs. Being Dx	2.293	0.514	Do not reject Ho	Not Significant

Table 3.2 shows the significant degree of variance in the adherence of the respondents to Hypertension management practices based on the ISH guidelines, particularly in terms of monitoring blood pressure when the respondents are grouped according to their profile. There is a significant degree of variance in the respondents' adherence to Hypertension management practices with respect to their sex, civil status, and monthly income. This implies that these variables determine or define the level of adherence of the respondents to hypertension management particularly when monitoring blood pressure. On the other hand, regardless of the respondents' age, occupation, educational attainment, and number of years living with hypertension, the adherence level of the respondents remains the same and will not be influenced by these profile differences.

Everett & Zajacoba's 2016 study suggests that men's lower healthcare use may lead to higher hypertension rates. However, gender patterns in healthcare use reduce men's awareness of their hypertension status. Civil status doesn't determine blood pressure outcomes; it influences lifestyle choices and stress levels. Men with hypertension were more aware of their status among relatives and married women, while fewer men had their blood pressure controlled. (Redondo-Sendino, et. al., 2006). Higher monthly incomes enable better access to healthcare services, promoting regular blood pressure monitoring. Addressing this relationship requires enhancing accessibility, raising awareness, and providing healthier lifestyle resources. Factors like method complexity, availability, socioeconomic status, and cultural attitudes influence blood pressure. Home BP treatment may be feasible. (Al-Rousan et. al.,2023).

Table 3.3 Significant Degree of Variance in the Respondents' Adherence to Hypertension Management Practices based on the ISH Guidelines in terms of Physical Activities Engagement when grouped according to Profile Variables

Practices	Profile	H	p-value	Decision	Interpretation
	Age	5987.0	0.000	Reject Ho	Significant
	Sex	43.041	0.000	Reject Ho	Significant
Physical Activities	Occupation	16.740	0.002	Reject Ho	Significant
	Civil Status	8.032	0.045	Reject Ho	Significant
	Monthly Income	36.508	0.000	Reject Ho	Significant
	Educational Attainment	29.334	0.000	Reject Ho	Significant
	# of yrs. Being Dx	40.217	0.000	Reject Ho	Significant

Table 3.3 shows the significant degree of variance in the adherence of the respondents to Hypertension management practices based on the ISH guidelines, particularly in terms of engagement in physical activities when the respondents are grouped according to their profiles. This implies an association between the respondents' profile and their level of adherence in terms of physical activities. A crucial part of managing hypertension is non-pharmacological therapies. Additionally, non-pharmacological measures are encouraged to prevent hypertension in general hypertension management recommendations by the World Health Federation (2021). In the study of Tian & Zhang (n.d.), there is an association between physical activity and hypertension in middle-aged and older persons after controlling for characteristics related to mental health, chronic illness, and demographics. Older men were likelier to have high blood pressure than older women where both are already limited in terms of physical activities. The older you are, the higher the risk of hypertension in the middle-aged and elderly population. Compared with female participants, the physical activities of male hypertensive individuals were at a high level. With the increase in age, participants' physical activities levels became lower and lower.

Moreover, studies found that higher earners engage in more physical activity in their free time and paid employment, while lower earners engage more in household and caregiving duties, contradicting previous theories about leisure time opportunities (Cusatis et. al, 2019). Furthermore, Cusatis et. al, (2019) emphasizes that spouse support significantly influences an individual's physical activity trajectory, with a positive correlation between increased walking and exercise frequency and stronger emotional support (Thomas et. al., 2022). The study supports social integration theory's observation that spouses can enhance a person's sense of purpose and motivation to engage in health-promoting activities like physical activity (Berkman et al., 2000). Research contradicts the Saudi population's findings that higher educated individuals engage in less physical exercise, contrasting with other nations' findings that show greater earnings correlate with increased physical activity (Ramadhan et. al, 2019).

Table 3.4 Significant Degree of Variance in the Respondents' Adherence to Hypertension Management Practices based on the ISH Guidelines in terms of Balanced Diet Engagement when grouped according to Profile Variables

Practices	Profile	H	p-value	Decision	Interpretation
	Age	8367.0	0.991	Do not reject Ho	Not Significant
	Sex	43.041	0.000	Reject Ho	Significant
Balanced Diet	Occupation	32.699	0.000	Reject Ho	Significant
	Civil Status	0.373	0.946	Do not reject Ho	Not Significant
	Monthly Income	24.460	0.001	Reject Ho	Significant
	Educational Attainment	8.536	0.074	Do not reject Ho	Not Significant
	# of yrs. Being Dx	16.488	0.001	Reject Ho	Significant

Table 3.4 shows the significant degree of variance in the adherence of the respondents to Hypertension management practices based on the ISH guidelines, particularly in terms of balanced dieting when the respondents are grouped according to their

profiles. The respondents' sex, occupation, monthly income, and number of years living with hypertension after first diagnosis determine or define the respondents' level of adherence to hypertension management guidelines, particularly in terms of balanced dieting. Men eat more calories than women, and their eating habits differ, indicating that eating habits have been conditioned to be more feminine in women. Because they enjoy fattening meals but believe they should not, women worry more about food than men. Compared to men, women are less satisfied with the size and weight of their bodies. The etiology of eating disorders, which are far more common in women than in men, may involve sociocultural and psychological variables, which are much more prevalent in females than in males (Rolls et al., 1991). The respondents of this study were primarily unemployed which could contribute to a more irregular eating or reliance on convenient, often less nutritious, food options. The unemployed reported a reverse higher risk of getting hypertension. A plausible interpretation is that the hypertensive factors, such as social psychological factors. Education structures occupation type and income to a certain extent. Thus, one major step to control hypertension in adults is to increase their awareness of health care, especially behavior intervention (Qin et al., 2022). Individuals with higher monthly incomes often have the financial means to afford them. They may also have the resources to explore healthier food options and may afford the time for meal planning and preparation. Individuals with lower monthly incomes may need help accessing quality, fresh produce and may be more reliant on affordable but less nutritious food choices. Maintaining a unique, healthful eating plan is costly, and patients with limited resources may need help to stick to their new diet (Elbur, A., 2015).

The longer the duration since they were diagnosed with hypertension, the more adherent the patients were; this finding was consistent with previous studies. One possible reason for this was that it is convenient for hypertensive patients to become knowledgeable about hypertension and its risks, so they have better medication-taking behaviors and tend to implement preventive measures such as decreasing salt intake or diet, performing more regular exercise, controlling body weight, regularly monitoring BP, and managing stress (Pan, et. al., 2019). Barriers to dietary change have also been reported to include the price of healthy food, the difficulty in finding appropriate foods, difficulties selecting healthier options while dining out, and the difficulty of pre-planning a low-sodium diet when preparing for family members who do not have hypertension (Shim, 2020). According to Alexander's (2022) literature, it is critical to limit your salt consumption since too much salt might elevate your blood pressure.

CONCLUSION AND RECOMMENDATIONS

The hypertensive individuals in Brgy. Washington, Surigao City, generally expressed a moderate to high level of adherence to hypertension management practices based on the ISH guidelines. This means that even after the pandemic and transitions, respondents managed their blood pressure and adhered to the practices that can prevent their hypertension-related illness from complications and worsening. They executed their practices even after the lockdown, as well as the physical activity of others and balanced diet. They were aware of what they should do and the actions they could tolerate; they could also monitor their blood pressure with the help of their significant others, and they adhered to taking medicine wherever or whenever they need to.

The findings show an association between the respondents' profile and their physical activities that adhere to hypertension management guidelines. Age, sex, civil status, occupation, monthly income, educational attainment, and number of years being hypertensive since first diagnosis determine the adherence level of hypertensive individuals to hypertension management practices based on the ISH guidelines. Likewise, the respondents' sex, occupation, monthly income, and number of years living with hypertension after first diagnosis determine or define the respondents' balanced dieting practices in relation to their adherence to hypertension management guidelines. Moreover, the respondents' adherence to Hypertension management practices varies with respect to their sex, civil status, and monthly income implying that these variables determine or define the level of adherence of the respondents to hypertension management particularly when monitoring blood pressure. Lastly, the study found that the respondents significantly differ in their medication taking or adherence when their sex, occupation, civil status, monthly income, educational attainment, and number of years diagnosed are considered indicating that these mentioned profile variables define or determine the respondents' level of adherence to medication.

The findings of the study should be presented to the healthcare professionals. They could consider the results when planning and providing health education and proper information dissemination about the practices that improve their well-being so that people would have well-informed decisions that could help address adherence to hypertension management based on the ISH guidelines in far-flung communities across the country. This study's findings would enable residents to prioritize regular health checkups and

monitoring in the barangay health center or with their physicians. Based on the results, it is significant that the residents may regularly visit healthcare professionals who can help monitor and manage hypertension and other health conditions effectively. Adherence to Hypertension Management based on the ISH Guidelines among Hypertensive Patients in Barangay Washington, Surigao City. Moreover, the study may be presented to the Barangay Health Center. This study would be helpful to healthcare professionals working in the field because it would help individuals identify strategies or ways to encourage hypertensive patients to aim for adherence to hypertension management based on ISH guidelines. Aside from that, they will be able to identify unmet management requirements or standards, make possible strategies in adhering to hypertensive management, and improve or develop tailored fit health teaching plans and programs guided by the factors yielded in this study. Also, this study recommends promoting hypertension management by controlling high blood pressure at home by monitoring blood pressure regularly, taking prescribed medications, eating a nutritious diet, exercising, keeping a healthy weight, minimizing stress, limiting alcohol, and stopping smoking. It is vital to seek advice from the healthcare professional and have regular checkups to ensure the management strategy is working, depending on how severe the sickness is. Furthermore, the findings will help future researchers as the basis of their study and additional literature for future investigations. For further studies, the researchers recommend that there is a need to include the knowledge of hypertensive patients and their practices. Future researchers will be able to do this because they will have the capacity to consider the gaps that were made in the current study. The findings of this study will be shared with the nursing field. They could consider the findings when planning and delivering health education and proper information dissemination about adherence to hypertension management based on ISH Adherence to Hypertension Management based on the ISH Guidelines among Hypertensive Patients in Barangay Washington, Surigao City guidelines, allowing people to make well-informed decisions and engage in guided behavior, which could aid in addressing the problem of hypertension management. This will empower individuals and communities to live better lives by enhancing individuals and communities physical and social health. Lastly, this study can be a source of new knowledge to the readers by increasing their knowledge and influencing their attitudes towards managing hypertension, promoting caring for their well-being.

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