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FACTORS AFFECTING THE ADHERENCE TO ANTIHYPERTENSIVE MEDICATION DURING COVID-19 PANDEMIC IN SELECTED BARANGAYS OF TBOLI SOUTH COTABATO

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ABSTRACT

Adherence to medication is extremely important for the patient's wellbeing and the treatment's effectiveness. Failure to follow instructions could result in serious problems for the patient and the healthcare system. This study is about the factors affecting the antihypertensive medication adherence during the COVID-19 pandemic in selected barangays of T'boli, South Cotabato. The purpose of this study was to determine the factors affecting the adherence of hypertensive patients to their medication during this pandemic. The study utilized a descriptive cross-sectional research design, and using the purposive sampling technique, respondents were selected to ensure a reasonably balanced presentation of the variables for the study. The respondents were limited to 306 hypertensive patients with comorbidities such as diabetes, hyperlipidemia and cardiovascular disease. In collecting the respondents' data, a survey questionnaire was provided to them by the Barangay Health Workers following minimum health standards. The data was analyzed using correlational analysis to identify the significant relationship between the factors. The results showed that educational attainment had a significant relationship to perception (r=0.989) with a significant level at 0.05. Moreover, habitual smoking with (r=0.980) and comorbidity with (r=0.979), significant levels of accessibility were also contributing factors to their adherence to medication. It is found that there is a connection between respondents' demographic profile, clinical conditions, and factors influencing medication adherence to anti-hypertensive medication. Thus, healthcare staff should promote and assess hypertensive patients' medication adherence by urging them to take medicine as directed to enhance their health and avoid extra health-related burdens of this pandemic.

Key words: Medication Adherence, Hypertension, COVID-19

INTRODUCTION

Hypertension is a significant public health concern. The most effective aim of antihypertensive drug therapy is to reduce blood pressure and to decrease renal and cardiovascular morbidity and mortality. Hypertension is a common example of a longterm condition that raises severe health care problems¹. Patients are advised to stick to the recommended pharmacological and nonpharmacological treatment methods to

accomplish this purpose². According to the World Health Organization³ (2003), medical adherence is the degree of commitment of a person to a health care provider following the agreed medical recommendation. This is enhanced by an improved understanding of the treatment of disease in communities⁴. This is an integral process that is very important to avoid health barriers.

People who are diagnosed with hypertension are being non-adherent to their prescribed medication⁵. Ill-favored results may happen if a hypertensive patient stops adherence to medication, thus being non-adherent may cause serious effects. Weak adherence to therapies for chronic diseases remains a global issue despite expanded understanding⁶. Thus, this issue needs to be prevented to reduce more underlying health-associated issues and optimize clinical outcomes.

On May 1, 2020, Executive Order No. 112, s., 2020⁷, the Philippines' high-risk areas were put under enhanced community quarantine (ECQ), while the rest of the country was placed under general community quarantine (GCQ). Trading was limited during this period, and even basic commodity supply delivery was disrupted. Many nations, including the Philippines, had announced a general shortage of a variety of medications⁸ (United Nations Office on Drugs and Crime, 2020). Prior to the COVID-19 pandemic, the healthcare systems in low and middle-income countries encountered many difficulties in delivering high-quality health care due to the scarce financial resources that result in the non-availability of medicines⁹. There was no recourse to medicine due to the imposition of a lockout or enhanced community quarantine.

With this pandemic, there are many problems needed to be addressed and health is the most important one. Thus, this research aims to determine the factors that affect the adherence for hypertensive patients in Tboli, South Cotabato amidst COVID-19. This study utilized interventional tools (validated questionnaire) to determine the factors affecting the medication adherence of the hypertensive respondents. The study objectives are listed below:

1. To identify the factors affecting the adherence to hypertensive medication during COVID-19 in the selected barangays municipality of T'boli, province of South Cotabato.

2. To identify the demographic profile, lifestyle factors, and factors affecting the medication adherence of the hypertensive patients.

3. To determine the significant relationship between the factors which affects the medication adherence on the anti-hypertensive medication of the hypertensive patients.

METHODOLOGY

Study design

This study utilized a descriptive cross-sectional research design. The study involved distributing questionnaires to the selected respondents who were residing in the ten barangays of Tboli, South Cotabato. The researchers conducted the study in selected ten (10) barangays of the Municipality of T'boli, Province of South Cotabato, and were limited to three hundred six (306) hypertensive patients. The participants must be patients taking antihypertensive medications. The respondents of the study were diagnosed with hypertension with the guidance of municipal health workers, local government health officials, and barangay leaders within the respective barangay health centers in the locality. The independent variable that is the hypertensive patients' medication adherence in the selected barangays of T'boli, South Cotabato was affected by the factors such as well as the demographic profile, lifestyle factors, and the respondents' adherence to their medication.

Analysis

Before starting to receive information from patients, the purpose of the study and the duration of the questionnaire were explained to the barangay health workers and the BHW leader by the researchers, and written consent was obtained from the patients. The data collection forms were issued to the patients who decided to participate in the survey. We analyzed the data on the provided information from the respondents. The population was defined to identify the sample size that is in the study. In relation, the researchers then

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determine the population size of the patients who take antihypertensive medications and resides in the municipality of Tboli, province of South Cotabato. Responses to the questionnaire by the hypertensive patients will be statistically analyzed with the data requirements of the study. Descriptive statistics such as mean, the percent are used as statistical tools in analyzing the data. Correlational analysis was utilized to determine the significant relationship between the demographic profile, clinical factors, and medication adherence of the respondents. Inferential statistics can assist the researchers in extrapolating results from a survey to the whole population¹⁰. (Guetterman, 2019).

The researcher gathered the respondent's information regarding the factors affecting adherence to their medication during this COVID 19 pandemic. It included the demographic profile of each respondent, the clinical factors, and the medication adherence of the patients and in connection to the significant relationship between the demographic profile, clinical factors, and medication adherence of the respondents to determine the factors affecting medication adherence among hypertensive patients during COVID-19.



Figure 1 shows the research design of the study.



The researchers utilized a survey questionnaire as a technique in collecting the data from the respondents regarding the demographic data and the clinical factors associated with medication adherence of hypertensive patients.

The 16-item customized questionnaire was developed to assess the factors affecting the adherence to the antihypertensive medication during COVID-19 and consists of four parts:

- The first part consisting of respondents' general information.
- Part two (lifestyle factors)
- Part three (MyMAAT questionnaire): 12 survey items
- Part four (Factors Affecting Medication Adherence): 16 survey items

Validation and reliability tests were performed prior to the proceeding with correlational analysis.

The reliability of the instrument was assessed by the Cronbach alpha test which had a value of 0.7537 which indicates that it was acceptable or reliable to be used in the study.

Ethical approval

The study was approved by the Ethics Committee for Pharmacy Research. Provided by St. Alexius College with the code ethics number of SAC-PREC-01-FEB-004. This journal followed the protocol provided by the ethics committee due to the COVID-19 pandemic. The researchers collaborated with the Barangay Health Workers and avoided personal surveys for the distribution of the survey questionnaire to the hypertensive patients.

Methods to Measure Adherence

The study utilized a MyMAAT 12-item questionnaire.

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MyMAAT was developed by Hatah et al, (2020). ¹¹ and a panel of experts developed the face and material validity of MyMAAT. A multidisciplinary team with experience in prescription adherence and health literacy has Malavsia developed the Medication Adherence Appraisal Method (MyMAAT). MvMAAT will create a better screening method to detect patients who have not adhered to their drugs. MyMAAT, which questions the patient's perceptions on medication adherence rate, consists of 12 questions and creates a better screening method to detect patients who have not adhered to their drugs. The scores between 12 and 53 are considered as non-adherence and scores between 54 and 60 are adherence. The factors affecting the medication adherence of hypertensive patients are structured in a modified Likert fashion, on a 5-point scale. It consists of statements from the MyMAAT and P-MAI to determine the factors that affect the medication adherence of hypertensive patients. The Cronbach alpha value of the scale was found to be 0.75 in the reliability test which is defined as acceptable or reliable.

RESULTS

The results gathered from the demographic profile of the respondents showed that most of the hypertensive patients were between the ages of 41-50 years old. Most of the respondents were mostly female (66.3%), married (71.2%), high school level (20.3%) with less than PHP 9,500 income (83.0%), and most of them belong to Tboli Tribe (45.4%) in the region. 85.7 million US adults over the age of 20 have hypertension, with more than half of them being women.

Menopause increases the risk of hypertension in women by twofold. According to the study of Gast *et al* $(2019)^{12}$, belonging to an ethnic group seems to be linked with lower medication adherence. Racial/ethnic minorities have a special relationship with hypertension and are more likely to experience hypertension-related morbidity and mortality. Medication non-adherence leads to poor results, which leads to increased use of healthcare services and costs. Increased patient cost share has a detrimental effect on drug adherence.

Table 1 shows the results of the demographic profile of the hypertensive patients.

Demographic Profile

Results of the survey showed that most hypertensive patients were between ages 41-50 years old (34.5%). The current findings agreed with the results of other studies that the prevalence of hypertension for ages 40-49 years old at 33.2%. Meanwhile, respondents more than 50 years old have an aggregate prevalence of 32.1%. Results show that majority of the patient is aged 41-50 that support to the study of Ghosh et al, 2016¹³ that Hypertension incidence increased dramatically with age. regardless of gender. but disproportionately after 45 years of age

Parameters	Segmentation	N	Percentage (%) Distribution
Age	<30 years old	50	16.3
	31-40 years old	53	17.3
	41-50 years old	105	34.3
	51-60 years old	66	21.6
	>60 years old	32	10.5
Gender	Male	103	33.7
	Female	203	66.3
Civil Status	Single	26	8.5
	Married	218	71.2
	Separated	25	8.2
	Annulled	4	1.3
	Widowed	33	10.8
Education	Elem level	48	15.7
Attainment	Elem grad	45	14.7
	High school level	62	20.3
	High school grad	85	27.8
	College level	33	10.8
	College grad	23	7.5
	other	10	3.3
Household Income	less than 9,500	254	83.0
	9,501-19,000	35	11.4
	19,001-38,000	17	5.6
	38,001-66,600	0	0.0
	66,601-114,000	0	0.0
	114,000 & above	0	0.0
Ethnicity	Tboli	139	45.4
	Blaan	63	20.6
	llonggo	90	29.4
	Cebuano	13	4.2
	Maguindanao/Maranao	0	0.0
	Others	4	0.0

Table 1. Demographic Profile

At a younger age, females had a lower rate of hypertension than males, but when they got older, they crossed over and overtook males. As well to the study of Chobanian, 2003¹⁴ said that

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at the age of 40–70, each increment of 20 mmHg in systolic BP (SBP) or 10 mmHg in diastolic BP (DBP) doubles the risk of CVD across the entire BP range from 115/75 to 185/115 mmHg. Additionally, Ghosh S, 2016¹⁵ said that females also had a smaller risk of hypertension than males when they were younger, but when they became older, they exceeded the threshold and surpassed males.

Meanwhile, most of the respondents were mostly female (66.3%), It shows that there are more female hypertensive patients in the ten selected barangays of Tboli South Cotabato. Moreover, there are lesser male hypertensive patients in the locality. It supports the study of Benjamin, 2018^{16} Menopause increases the risk of hypertension in women by twofold, and to the study of Ghosh *et al.*, 2016^{17} at a younger age, females had a lower rate of hypertension than males, but when they got older, they crossed over and overtook males. In contrary to the study of Choi *et*, al 2017^{18} which state that hypertension was found to be more common in men (34.6%) than in women (30.8 %).

Majority of the hypertensive patient was married with (71.2%), it supports to the study of Azra Ramezankhani (2019)¹⁹ compared to married women, never-married women had a significantly lower risk of hypertension and cause of mortality. Solomon (2020)²⁰ also revealed that those women who experienced high blood pressure in their early middle years which has an average age of 41 have a 49.4 % higher lifetime risk of CVD than women who maintain normal blood pressure until age 55. During middle age, women's blood pressure rose at a faster rate than men. The most hypertensive patient was high school level with (20.3%), with less than PHP 9,500 income (83.0%). It supports to the study (Kretchy *et al*, $(2020)^{21}$ stated that Income and education were positively associated with medication respectively. adherence suggesting that educated men and men of affluence probably better understood the importance of taking their medication or had better access to their medications with no financial barriers to medications leading to better adherence, together with the study of (Lee *et al*, 2019)²², low income and non-adherence to drugs are significant risk factors for mortality and CVD among hypertension care initiators, and the joint combination of income and adherence seems to be much more effective than individual risk factors.

The results show that most of the hypertensive patients belong to the Tboli Tribe (45.4%) in the region, which supports the study of Wells $(2016)^{23}$, Race was either self-reported or derived from a combination of public records, purchase transactions, and consumer surveys. In time, patterns of non-adherence by race/ethnicity continue.

Table 2 shows the data of the clinical factors of the hypertensive patients

Lifestyle Factors

Results of the three pre-identified lifestyle factors that be directly associated with hypertension did not exist among the respondents interviewed. Results showed that 68.6% of the respondent were not alcoholic, it was contrary to the study of (Chobanian, 2003)²⁴ lifestyle modifications such as moderation of alcohol consumption are essential for the avoidance of high BP and is an essential aspect of the treatment in hypertension, as well as to the study of (Rehm, 2017)²⁵ Hazardous and harmful alcohol use and high blood pressure are central risk factors related to premature non-communicable disease (NCD) mortality worldwide, together with the study of (Sharma et al, 2018)²⁶ states that light to moderate intake of liquor has been related with low possibility of coronary artery disease, Heart Failure, just as cardiovascular mortality.

While 70.9% and 66.3% replied that they don't smoke cigarettes, and don't have any existing comorbidities which are supported by the study of (Lee *et al.*, 2001)²⁷ epidemiological studies

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have shown that smokers have lower blood pressure (BP) than nonsmokers.

Parameters	Segmentation	N	Percentage (%) Distribution
Alcohol consumption	Not a drinker	210	68.6
	Regular	13	4.2
	Frequent	30	9.8
	Occasional	53	17.3
Habitual Smoking	Not a smoker	217	70.9
	1-10 sticks	76	24.8
	11-20 sticks	8	2.6
	21 or more sticks	5	1.6
Comorbidities	None	203	66.3
	Diabetes	66	21.6
	Dyslipidemia	15	4.9
	Cardiovascular disease	8	2.6
	Others	14	4.6

Table 2. Lifestyle Factors

As well the study of (Li *et al.*, 2017)²⁸ states that Smoking cessation was found to be linked to a higher risk of hypertension. Present smoking, on the other hand, is not found to be a risk factor for hypertension.

However, it was noted that 21.6% of the respondents were also diabetic which could also trigger hypertension. It is supported by (CDC, 2020)²⁹ said that diabetes damages arteries and makes them targets for hardening, called atherosclerosis. That can cause high blood pressure, which if not treated, can lead to trouble including blood vessel damage, heart attack, and kidney failure, as well as to the study of (Liu, 2016)³⁰ which states that Hypertension has a high number of comorbidities that have a significant effect on the quality of life of hypertension patients. Coronary heart disease, stroke, hyperlipidemia, and arteriosclerosis were the main four hypertension comorbidities.

To determine if the hypertensive patient is adherent or non-adherent to his or her medication, the researchers utilized the MyMAAT questionnaire³¹. This tool will help the researchers to identify the adherence of the respondents.

Medication Adherence

Table 4 shows the adherence of the respondents based on the MyMAAT questionnaire. It reveals that 73.53% or a total of 225 respondents were non-adherent to their antihypertensive medication and only 26.47% or 81 hypertensive patients were adherents. Gast *et al*, 2019^{32} suggest that non-adherence may be a vital objective for the success and safety of the different therapies.

Adherence	Frequency	Percentage
Non-adherence	225	73.53%
Adherence	81	26.47%
Total	306	100%

Table 3. Medication Adherence

Nonadherence antihypertensive to and antihyperlipidemic drugs was linked to a 10 to 40% higher risk of cardiovascular hospitalizations and a 50 to 80% higher risk of mortality, according to Ho et al, 2009.³³ As a result, even small increases in minorities' medication adherence have the ability to narrow reported disparities through health race/ethnicity (Xie et al, 2019)³⁴. The study of Hatah and co-researchers also shows that the Malaysia Medication Adherence Appraisal Method (MyMAAT) creates a better screening method to detect patients who are not adherent to their medication.

To determine the medication adherence among hypertensive patients, four variables were identified in and perception. Overall results are shown in Table 5. In the determination of the level of satisfaction among hospital pharmacists, the mean of the overall responses has guided the researcher in the interpretation and analysis of the study.

Results of the survey indicated that perception among patients could affect the patients' adherence to medication. On a similar note, accessibility and perception were also contributing factors to their compliance with medication. This means that most of the respondents from the area were not fully compliant with the medication regimen during the COVID-19 pandemic to manage hypertension which calls for immediate intervention from various healthcare workers.

Acc	essibility	Mean	Description				
1.	The pharmacy is far from my area.	2.22	High				
2.	I go to the pharmacy when my medicines are out of	2.56	Moderately high				
	stock.						
3.	I can get my medicine easily without any help.	2.73	Moderately high				
4.	I often missed the appointment date to get the	2.86	Moderately high				
	supplies of my medication at the pharmacy.						
Cos	ts						
5.	I he medication is expensive.	2.30	High				
6.	I can afford to purchase my medication most of the time.	2.99	Moderately high				
7.	I perceived that I have too many medications to be taken every day	3.25	Moderately high				
8.	I rely on the free medications provided by the	2.63	Moderately high				
	barangay health center.						
Kno	wledge						
9.	In the past one month, I frequently failed to take my medication due to lack of understanding of the Doctor's instruction.	3.30	Moderately high				
10.	My daily drug doses are unclear for me.	3.11	Moderately high				
11.	I know how to take my medication properly.	2.54	Moderately high				
12.	I understand why I am taking my medication.	2.48	Moderately high				
Perception							
13.	I regularly take less medication than prescribed for fear of the side effects.	3.08	High				
14.	I forget to take my medication if no one tells me.	3.09	High				
15.	I did not fully comply with my medications because I felt it was not important.	3.16	High				
16.	In the past one month, I reduced my medication intake when I feel better or I take my medication alternately.	3.24	High				

 Table 4. Factors Affecting the Medication Adherence

STATISTICAL ANALYSIS

For all correlation coefficients, the significance level was set at 0.05. The Pearson correlation may be used to determine the strength of the relationship (r). If the r-value is 0, it means there is no relationship between two variables; if the r value is 1, it means there is a perfect positive correlation; and if the r value is -1, it means there is a negative correlation.

To determine if there is a significant relationship between demographic profile and medication adherence; and clinical factors and medication adherence among hypertensive patients during the COVID-19 pandemic, correlation analysis were conducted and results are shown in Table 6 and 7.

Demograph	Factors on Medication Adherence				
ics	Accessibil ity	Cost	Knowl edge	Percepti on	
Age	0.558	0.735	0.732	0.420	
Gender	0.120	0.155	0.129	0.157	
Civil Status	0.120	0.208	0.459	0.473	
Education attainment	0.786	0.009	0.856	0.989*	
Household Income	0.943	0.744	0.791	0.657	
Ethnicity	0.868	0.259	0.680	0.783	

Table 5. Testing Significant Relationship Between
Demographic Profile and Medication Adherence

The data shown in table 5 presents that at the significant level of 0.05, another demographic profile except the educational attainment is a factor that is likely to influence the medication adherence of the hypertensive patient and is specific to the perception. In accordance with the study of (Javadzade, 2018)³⁵ education, particularly the theory of model-based education, is successful in managing patients' blood pressure, there is some evidence that patients' reduced health literacy can act as a barrier as a result of the interventions. (Roldan, 2018)³⁶ also suggests that patient education on hypertension, its management modalities, and its long-term complications, and patient involvement are important aspects in building on the education base. Thus, this will have an improvement and a positive impact on their medication adherence

Table 6 presents the significant relationship between the lifestyle factors and the medication adherence of the hypertensive patients that at 0.05 significant level, the habitual smoking and comorbidity affects the factor accessibility and has an impact on the hypertensive patients' medication adherence.

In support of the study of $(Wang, 2017)^{37}$, when a patient is afflicted with several

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Lifestyle	Factors on Medication Adherence			
Factors	Accessibil Cos Knowled		Percepti	
	ity	t	ge	on
Alcohol	0.802	0.84	0.600	0.403
consumpti		9		
on				
Habitual	0.980*	0.72	0.901	0.767
smoking		0		
Comorbid	0.979*	0.72	0.889	0.752
ity		2		

comorbidities, the clinical status of the patient poses further problems.

Table 6. Testing Significant Relationship BetweenLifestyle Factors and Medication Adherence

This explains that if the hypertensive patient has comorbidity, the respondent is likely more to become accessible to the antihypertensive medications. Whereas in habitual smoking, the data also shows that it has a significant relationship with the factor accessibility that explains when a hypertensive patient has habitual smoking, the accessibility to the medication is more likely to increase.

Results of the statistical analysis revealed that factors that influence medication adherence among patients were educational attainment and clinical factors such as habitual smoking and comorbidity. This means that these factors will likely influence patients to adhere to medication adherence to managing hypertension. Meanwhile, other factors were found to not significantly influenced patients towards medical adherence.

Theory³⁸ Cognitive shows Social that hypertensive patients were able to identify that their educational attainment affects the factors specifically their perception of medication adherence. Meanwhile, the health belief model³⁹ fits with the result that in terms of the clinical factors, the respondents were able to identify their health habits or behaviors specifically in the habitual smoking and the comorbidity associated with their hypertension and thus, understands the effect or impact of this habits on their health and well-being. This

means that the social cognitive theory and health benefit model has an impact on the medication adherence of hypertensive patients.

The result of the study was in support of the Self-Regulation Model⁴⁰ which offers a context of understanding how medication adherence is encountered during a health hazard. Thus, explains that hypertensive patients have poor conformity with self-care behaviors. Habitual smoking and comorbidities have a profound impact on the well-being of the respondents.

The data contributes a clearer understanding that medication adherence was associated with the respondents' demographic profile that is their educational attainment as well as the clinical factors that include habitual smoking and comorbidity was related to their accessibility to their antihypertensive medication.

In evaluating the factors affecting the adherence of the hypertensive patients in the selected barangays of Tboli, South Cotabato during the COVID-19 pandemic, the respondents' educational attainment which is the demographic profile is inlined with their behavioral change technique which is significant for the improvement on their wellbeing and behavior in terms of their habitual smoking and comorbidities that is the clinical factors.

The result of the data shows a clearer understanding of the Practiced-based Model wherein the term adherence is used to characterize the actions of the hypertensive patients in the selected barangays of Tboli, South Cotabato. Patient-related causes such as inadequate understanding have been recognized as one of the factors that may also affect adherence in patient-related medical practice. This will also help provides strategies to enhance the adherence of the respondents' to their medication.

DISCUSSION

Age ranging from 41-50 is a risky age for hypertension. Females are more prone to hypertension especially those who are in the menopausal age. There are more high school graduates among the respondents. Most of the respondents have a household income of 9,500 per month. There were more married hypertensive patients than unmarried. A greater number of Tboli hypertensive patients are respondents to the study.

Not all hypertensive patients were alcoholics or smokers; the disorder can also be caused by genetics and other comorbidities including hyperlipidemia, asthma, and cardiovascular disease. Because of the hypertensive patients' location, they are unable to quickly reach their drugs, and because of the pandemic's lockdown, they are unable to move or leave their area to obtain their medicine in the town antihypertensive medicines where are accessible. There should be a lower or reduced price or cost of the antihypertensive medication even though there are free medications in the barangay health center or the rural health unit, other hypertensive patients are not used to the medications and feel that the medications don't take effect or made them any better or well and so they just buy in the pharmacies because they think that this is more effective than those that re provided in the barangay. For certain areas, hypertensive patients understand that they are taking their drug prior to the physician's clear clarification, which leads to a deeper understanding of how to take their medication. Hypertensive patients take fewer drugs than necessary because they are fearful of the adverse effects and the consequences of their body or health, as well as the fear that it will worsen their disease rather than improve it and because they are being frugal and dividing their medication to meet their medication needs during the week.

Tables 5 and 6 show the rate and results on how adherent does the respondents in terms of their medication. The researcher discovered

that there is a connection between respondents' demographic profile, clinical conditions, and factors influencing medication adherence on anti-hypertensive medication, since the more factors they do, the less adherent they are, and the fewer factors they do, the more adherent they are. The researchers discovered that there is a greater element that influences the respondents' adherence as a result of their research. Adherence to medication plays a critical role in disease prevention and is critical to patient progress. Since many diseases are progressive, inadequate drug adherence leads to disease development, decreased quality of life, and treatment failure; thus, good medication adherence is critical for the patient to manage the disease and prevent it from progressing or worsening.

The results indicate that the respondents are not taking their antihypertensive drugs as prescribed. It also yields a positive outcome, demonstrating that respondents believe that accessibility has a significant impact on their adherence. Respondents also agreed that the drug was costly, that they could not afford it, and that they relied on the barangay health center for their antihypertensive medication. Respondents deny that they do not take their medication because they do not follow the doctor's instructions or that they are unsure about their regular medication doses, and they believe that they know how to take their medication and why they are taking it. Respondents agree with all variables under this component in their perceptions of drug adherence.

SUMMARY OF FINDINGS

The majority of the respondents were from ages 41-50 with a frequency of 105 and a percentage of 34.31%. Also, female respondents dominated the study with a total percentage of 66.34%, or 203 out of 306. On the other side, a large number of married hypertensive patients joined as respondents of the study with 71.24% or 218 out of 306

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respondents. In addition, most of the respondents were high school graduates holding a frequency of 85 with a percentage of 27.78%. The household income of the hypertensive patients wherein 254 or 83.01% of the respondents is less than P9,500. Lastly, 45.42% or 139 respondents are Tboli by ethnicity.

Most of the respondents are non-drinkers having 68.63% or 210 in frequency, whereas daily drinkers (>4 days a week) have a frequency of 13 and a percentage of 4.25%. A great number of the respondents said they were non-smokers with a frequency of 217 and a percentage of 70.92%, while the least said they were heavy smokers (21 or more sticks), with a frequency of 5 and a percentage of 1.63 percent. In terms of comorbidities, the respondents do not have any comorbidities. The least number of respondents chose cardiovascular disease, which has a frequency of 8 and a percentage of 2.61 percent, while the rest chose hyperlipidemia which has a percentage of 66.34 percent and a frequency of 203.

In measuring the adherence of the respondents, most of the respondents are non-adherent with a frequency of 225 and a percentage of 73.53%. The results of the correlational analysis indicated that there is a significant relationship between clinical conditions and hypertensive patients' medication adherence, with habitual smoking and comorbidity affecting factor accessibility and having an effect on hypertensive patients' medication adherence at the 0.05 significant level.

The researcher discovered that there is a connection between respondents' demographic profile, clinical conditions, and factors influencing medication adherence on anti-hypertensive medication, since the more factors they do, the less adherent they are, and the fewer factors they do, the more adherent they are. The researchers discovered that there is a greater element that influences the respondents' adherence as a result of their

research. Adherence to medication plays a critical role in disease prevention and is critical to patient progress. Since many diseases are progressive, inadequate drug adherence leads to disease development, decreased quality of life, and treatment failure; thus, good medication adherence is critical for the patient to manage the disease and prevent it from progressing or worsening.

CONCLUSION

The study found a link between respondents' demographic profile, clinical problems, and variables influencing anti-hypertensive drug adherence, with the more factors they do, the less adhering they are, and the fewer factors they do, the more adherent they are. Thus, comorbidities. habitual smoking. and academic attainment all have an influence on hypertension patients' adherence. Medication adherence is essential for disease prevention and patient improvement. Adherence to medication plays a critical role in disease prevention and to patient progress. To achieve and improve patient health, the researchers recommend encouraging patients to stick to their medication regimens. More initiatives and lectures should be held by local governments and communities to ensure and improve hypertensive patients' medication adherence

RECOMMENDATION

Inspired by the results of the study the following recommendation are suggested:

The researchers recommend to health care professionals to encourage their patients to comply with their prescribed medication for them to be able to help improve their patients' health. The health care workers must strengthen their campaign on medication adherence especially to hypertensive patients to lessen the eases of having hypertension in the community. Likewise, they should provide seminars and education on the importance of being adherent to medication. Health care authorities should also provide factual and relative information on the importance of medication adherence to hypertension.

CONFLICT OF INTEREST

The authors declared no conflict of interest

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