

MEDICATION ADHERENCE AMONG HYPERTENSIVE FACULTY MEMBERS AT SAINT MARY'S UNIVERSITY: ASSESSING COMPLIANCE LEVELS

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ABSTRACT

Hypertension (HTN), a major global health concern often referred to as the "silent killer," continues to be a leading cause of morbidity and mortality worldwide. Despite being preventable and manageable, its prevalence remains high due to various modifiable and non-modifiable risk factors, including lifestyle, age, and stress. This study aimed to determine the level of compliance among hypertensive faculty members of Saint Mary's University, Bayombong, Nueva Vizcaya, in their medication maintenance. Additionally, certain demographic factors were identified, along with their potential contribution to the level of compliance. A quantitative research design utilizing a validated questionnaire was employed for the study. Findings revealed that while hypertension was more prevalent among older, full-time faculty respondents, overall medication compliance was poor. Statistical analysis showed no significant differences in adherence levels across sex, age, employment status, or school affiliation, indicating that compliance levels are the same regardless of these factors. Based on the findings, the study recommends institutional interventions, including wellness programs, consistent monitoring, counseling, and collaborative health initiatives, to improve compliance and health outcomes. Additionally, informative infographics tailored to faculty needs were developed to raise awareness and support ongoing health education.

Keywords: Hypertension, medication compliance, faculty health, risk factors, health behavior

INTRODUCTION

By this age, a non-communicable disease affects a large number of people, regardless of age, race, or gender. This disease is responsible for high rates of morbidity and mortality, as it is a major risk factor for several life-threatening disorders. Because it often causes no noticeable symptoms, it has been called the "silent killer" (Columbia University Irving Medical Center, 2023). This major global health concern is hypertension (HTN), commonly known as high blood pressure. According to the World Heart Federation (n.d.), HPN is the leading risk factor for death globally, affecting more than 1 billion people. It is a primary cause of heart disease and stroke-related deaths worldwide.

According to Gaffari-Farm et al. (2020), improved health knowledge and making healthy lifestyle choices are crucial for effectively managing high blood pressure. Individual lifestyle factors do not solely cause hypertension (HPN); it is also influenced by non-modifiable factors, with age being one of the primary contributors. Race is another significant non-modifiable factor, as the prevalence of high blood pressure, access to treatment, and treatment outcomes vary considerably across different ethnic groups (Babu et al., 2023). While genetic differences play a major role in these disparities, lifestyle choices and socioeconomic status also contribute significantly by shaping behaviors such as diet and physical activity.

Educational programs that focus on managing mental stress may help reduce the impact of conditions such as hypertension. Modifiable and non-modifiable risk factors are interrelated, and the effects of hypertension can often be prevented or managed through healthier lifestyle choices, diet modification, and regular exercise. However, some patients are unable to control their hypertension through lifestyle changes alone, which is why medication is often prescribed.

Antihypertensive medication is effective in maintaining healthy blood pressure levels. Still, it must be taken as directed by a healthcare professional. Noncompliance can lead to sudden increases in blood pressure or the need for higher doses, as the body gradually becomes less responsive to lower doses. Unfortunately, not all patients adhere to their prescribed treatment regimen. Various factors, including occupational demands, influence compliance. Many adults, particularly those in demanding professions such as teaching, may forget to take their medications or engage in regular physical activity due to work-related time constraints. Despite being in a profession that generally provides access to health knowledge and resources, including government-issued health guidelines, a significant proportion of teachers continue to experience concerning rates of hypertension.

Considering the risks associated with uncontrolled hypertension and the unique challenges faced by many individuals, it is essential to understand why some patients struggle to adhere to their medication regimens. Despite ongoing government interventions, mortality rates from hypertension-related complications remain high due to poor treatment adherence, late diagnosis, and inadequate management strategies. According to the World Health Organization (2023), hypertension affects over 1.28 billion adults worldwide. Yet, only 42% are diagnosed and treated, and even fewer achieve effective blood pressure control. While numerous studies have examined compliance with antihypertensive medications, few have specifically focused on faculty members, particularly those teaching at the tertiary level. For example, Ramawant et al. (2020) investigated 400 hypertensive patients. They found that 224 exhibited high compliance with their prescribed medications, whereas the remainder demonstrated poor or noncompliance. This study highlights a gap in understanding the relationship between hypertension knowledge and compliance levels. Therefore, increasing public awareness is crucial for identifying risk factors and promoting healthier lifestyles.

While hypertension affects individuals across all populations, there is a perceived prevalence of the condition among educators, including faculty, staff, and instructors, which is often attributed to stress from their demanding workloads. Although research has identified a positive correlation between hypertension management and educational attainment—suggesting that individuals with higher levels of education tend to demonstrate better compliance—further investigation is warranted. Faculty members, by virtue of their education, are generally knowledgeable, capable of verifying information, and able to follow instructions accurately. However, when combined with the stress and workload inherent in academic professions, it becomes critical to examine their adherence to antihypertensive medications.

Hence, this study aimed to examine medication adherence among faculty members. This research is significant because it highlights an understudied population that, despite being well-educated and informed, may encounter various barriers in managing their health, particularly regarding adherence to prescribed antihypertensive medications. Faculty members are often expected to serve as role models in both knowledge and behavior; however, the high demands of academic work, long hours, stress, and personal responsibilities can interfere with their ability to maintain consistent health practices. By examining patterns of medication adherence, this study seeks to identify the underlying factors that contribute to noncompliance or treatment lapses.

The findings of this research can help enhance support systems within academic institutions, such as employee wellness programs, access to medical consultations, and education on medication management. Ultimately, these findings may inform institutional health policies that are more responsive to faculty members' unique needs. This study is particularly relevant for college faculty at Saint Mary's University, as it emphasizes the importance of medication adherence for hypertension and provides insights to improve adherence practices.

By creating an infographic for this study, complex medical information can be presented in a simplified, accessible format, highlighting the importance of adherence and promoting better health outcomes. Ultimately, these efforts can lead to improved self-management, reduced health risks, enhanced quality of life, and sustained productivity in academic roles.

Statement of the Problem

This study aimed to understand the level of compliance among college faculty members at Saint Mary's University, grouped by respondent profile. To achieve this, data gathering and analysis were conducted from December 2024 to January 2025. Consequently, the study answered the following questions:

1. What is the demographic profile of the respondent in terms of:
 - a) Sex
 - b) Age
 - c) Employment
 - d) School
2. What is the faculty member's level of compliance in hypertensive maintenance?
3. Is there a significant difference in the level of compliance with maintenance medicine among college faculty members at Saint Mary's University when grouped by their profile?
4. What infographics about medication for hypertension can be produced and distributed among the faculty members?

METHODOLOGY

This study employed a descriptive-comparative quantitative design. The researchers chose Saint Mary's University as the locale. This study covered all tertiary-level faculty members at Saint Mary's University, namely, the School of Teacher Education and Humanities (STEH), School of Engineering, Architecture and Technologies (SEAIT), School of Accountancy and Business (SAB), and School of Health and Natural Sciences (SHANS).

A purposive sampling method was employed in this study, wherein participants were deliberately selected based on specific criteria—in this case, faculty members diagnosed with hypertension. Although purposive sampling typically involves selecting a subset of a population, the researchers opted to include the entire accessible population of hypertensive faculty members at Saint Mary's University, thirty-two (32) individuals. The criteria for the selection of the respondents participating in this study included the following: a) a definite diagnosis of the disease by the physician, b) taking hypertensive medication/s, c) being a faculty member of Saint Mary's University, and d) willingness of the respondents to participate in the study.

The researchers adopted the Hill-Bone Compliance Scale (HBCS), a 14-item Likert scale, to assess three subscales of a hypertensive client's domain: intake of sodium, keeping of appointments, and taking medications. The four-point Likert scale's validity and reliability were assessed by a panel of experts, including doctors and nurses, and have been used in several countries to study cases of hypertension. In a study by Commodore-Mensah et al. (2023), the HBCS ranged from 0.74 to 0.84, indicating reliability. Three items (nos. 3, 4, and 5) identified a respondent's sodium intake; two items nos. 6 and 7) identified the appointment-keeping domain; and, lastly, nine items nos. 1, 2, 8, 9, 10, 11, 12, 13, and 14) make up the medication-taking domain. The survey questionnaire can be located in Appendix B of the study.

The researchers reconfirmed that the respondent met the inclusion criteria and again

asked for their permission. A brief explanation of the purpose of the study and assuring the respondent of her confidentiality in accordance with the Data Privacy Act of 2012 or Republic Act No. 10173 was done before the conduct of the research. The HBCS score was calculated by summing the individual items and the respondents' corresponding answers. The lowest score is 14 points, and the highest is 56 points. To test for a significant difference in respondents' compliance levels by faculty department, a one-way ANOVA was used. The same tool was used to test the significance of the difference between respondents' compliance levels and age. On the other hand, the significant difference in respondents' level of compliance by sex was determined using an independent-samples t-test.

RESULTS AND DISCUSSION

Section 1: Profile of the Respondents

The demographic characteristics of the respondents included sex, age, employment status, and school affiliation. Regarding sex, the majority (56.3%) of respondents are female, accounting for more than half of the total sample. The results suggest that for this scenario, hypertension is more prevalent among the female faculty members. This contrasts with data from the National Health and Nutrition Examination Survey, which indicates that the age-adjusted prevalence of hypertension was higher among men (51.0%) than among women (39.7%) (Ostchega et al., 2020). However, other studies also suggest that women, specifically postmenopausal women, are more vulnerable to hypertension due to hormonal changes that contribute to the increase in blood pressure (Barton & Meyer, 2009). Moreover, another study also noted that men have a higher incidence of hypertension compared to women of the same age until the sixth decade of life (Gillis & Sullivan, 2016).

Regarding age distribution, the largest proportion of respondents is in the 39-51 age group (46.9%), followed by the 52-65 age group (37.5%). The youngest age group, 26-38 (15.6%), has the least representation among middle adults. This distribution aligns with existing research suggesting that hypertension risk increases with age. According to the Centers for Disease Control and Prevention (CDC), during the 2017-2018 period, hypertension prevalence among U.S. adults was 22.4% among those aged 18-39, 54.5% among those aged 40-59, and 74.5% among those aged 60 and over (Ostchega et al., 2020). Similarly, the Health Survey for England reported that hypertension prevalence increased from 9% among individuals aged 16 to 44 to 60% among those aged 65 and over (Health Survey for England, 2023).

In terms of employment status, more than half of the respondents (62.5%) are employed full-time. At the same time, a smaller proportion holds part-time positions. The higher number of full-time faculty members being diagnosed with hypertension may suggest that individuals with greater work-related responsibilities may be more susceptible due to factors affecting their lifestyle. This is supported by related studies indicating that work-related factors are among the significant risk factors for hypertension (Kurtul et al., 2020). Additionally, a study found that individuals working 49 or more hours per week had a 70% greater chance of developing masked hypertension and a 66% greater chance of sustained hypertension compared to those working fewer hours (American Heart Association News, 2019).

Regarding school affiliation, the majority of respondents were from the School of Health and Natural Sciences (SHANS), followed by the School of Teacher Education and Humanities (STEH). The School of Accountancy and Business (SAB) had the fewest respondents. In contrast, the School of Engineering, Architecture, and Information Technology (SEAIT) had the fewest.

In this study, a higher prevalence of hypertension was observed among female faculty members, particularly those aged 39 to 51. This finding aligns with Cheng et al. (2022), who

reported that the risk of elevated systolic blood pressure increases steadily from age 35 onward and accelerates particularly in women. Similarly, Everett et al. (2015) noted that although men generally exhibit higher hypertension rates, women demonstrate greater awareness and are more likely to be diagnosed, which may contribute to the higher observed prevalence among females in this sample. Additionally, the predominance of middle-aged adults in the sample reflects age-related hypertension risk trends reported in previous studies (Cheng et al., 2022).

Section 2: Faculty members' level of compliance in hypertensive maintenance

Table 1

Mean Level of Compliance of the Respondents in Terms of Hypertensive Maintenance

Statements	Mean	SD	QD
How often do you forget to take your high blood pressure medicine?	3.28	1.02	Some of the time
How often do you decide NOT to take your high blood pressure medicine?	3.78	0.42	None of the time
How often do you eat salty food?	2.63	0.83	Some of the time
How often do you shake salt on your food before you eat it?	3.09	0.89	Some of the time
How often do you eat fast food?	2.84	0.57	Some of the time
How often do you make the next appointment before you leave the doctor's office?	2.44	1.05	Most of the time
How often do you miss scheduled appointments?	3.59	0.71	None of the time
How often do you forget to get prescriptions filled?	3.63	0.71	None of the time
How often do you run out of high blood pressure pills?	3.63	0.66	None of the time
How often do you skip your high blood pressure medicine before you go to the doctor?	3.75	0.51	None of the time
How often do you skip your high blood pressure pills when you feel better?	3.69	0.54	None of the time
How often do you miss taking your high blood pressure pills when you feel sick?	3.75	0.51	None of the time
How often do you take someone else's high blood pressure pills?	3.78	0.49	None of the time
How often do you miss taking your high blood pressure pills when you are careless?	3.56	0.67	None of the time
Overall	47.44	5.27	Good Compliance

Legend: 14-28 (Poor compliance), 29-42 (Average compliance), 43-56 (Good compliance)

Table 1 suggests that the respondents exhibit good compliance with their hypertensive maintenance, with an overall mean of 47.44. Among the specific behaviors assessed, high adherence was evident in the statement, "How often do you decide NOT to take your high blood pressure medicine?" and *How often do you take someone else's high blood pressure pills?*, both of which recorded the highest mean scores of 3.78. Other medication-related behaviors, such as *How often do you skip your high blood pressure medicine before you go to the doctor?* (M = 3.75) and *How often do you miss taking your high blood pressure pills when you feel sick?* (M = 3.75), also had high mean scores, indicating that the respondents generally comply with their prescribed medication regimens.

The behavior regarding *how often you forget to take your high blood pressure medicine* yielded a mean of 3.28. Although this shows some incidence of forgetting, it remains within a range that reflects generally acceptable adherence. Meanwhile, the statement: "*How often do you miss taking your high blood pressure pills when you are careless?*" recorded a mean of 3.56, suggesting that occasional lapses do occur, but they are minimal. Dietary behaviors, which also influence blood pressure control, presented moderate concerns. The mean score for the statement *How often do you eat salty food?* was 2.63, while *How often do you shake salt on your food before you eat it?* had a mean of 3.09. These findings suggest a moderate intake of salty foods, a factor known to contribute significantly to elevated blood pressure levels (World Health Organization, 2019).

Appointment adherence reflected mixed results. The statement: "How often do you make the next appointment before you leave the doctor's office?" recorded a mean of 2.44, indicating that while some respondents do schedule their next visits, consistent follow-up practices are not universally observed. However, *How often do you miss scheduled appointments?* recorded a higher mean of 3.59, suggesting that most respondents do attend their scheduled appointments. Studies show that regular attendance at medical appointments is critical to effective hypertension management, and missing appointments is associated with poorer health outcomes and increased hospitalization rates (Kautz et al., 2021). Furthermore, Mahmood et al. (2020) emphasized that consistent treatment follow-up visits allow healthcare providers to educate patients, optimize therapy, and monitor treatment outcomes effectively.

Section 3: Significant difference in the level of compliance with maintenance medicine among college faculty members at Saint Mary's University when grouped by their profile

Table 2

Significant Difference in the Level of Compliance When Grouped by Profile

Analysis	Profile	Groups	Mean	SD	QD	F-/t-value	p-value
T-test	Sex	Female	47.33	4.73		0.016 ^{ns}	0.902
		Male	47.57	6.09			
One-way Anova	Age	26-38	48.40	4.72		0.114 ^{ns}	0.892
		39-51	47.07	6.33			
		52-65	47.50	4.32			
T-test	Employment	Full-time	46.60	5.62		1.361 ^{ns}	0.253
		Part-time	48.83	4.51			
One-way anova	School	SAB	43.00	6.48		2.549 ^{ns}	0.076
		SHANS	49.25	4.39			
		STEH	46.78	4.49			
		SEAIT	49.60	4.83			

Regarding sex, female faculty members had a mean compliance score of 47.33. In contrast, male faculty members had a slightly higher mean of 47.57. However, the t-value of 0.016 and the p-value of 0.902, which exceed the threshold of 0.05, suggest no statistically significant difference. This suggests that male and female respondents' compliance is the same. This is in contrast to other studies, which state that gender, personality, and cultural factors have the potential to influence adherence-compliance rates. According to Praska et al. (2005), women may be better at adhering to their medication regimens than men. However, they specified that this may be the case for drugs that treat behavioral health conditions, such as antidepressant medications. Furthermore, other studies contradict this notion, saying that none of the common demographic factors, such as age, marital status, living alone, sex, race, income, occupation, number of dependents, intelligence, level of education, or type of personality, have been consistently related to noncompliance (Jimmy & Jose, 2011).

On the other hand, when grouped by age, faculty members aged 26-38 had the highest compliance mean of 48.40, followed by those aged 52-65 with a mean of 47.50, while those aged 39-51 had the lowest mean of 47.07. However, the F-value of 0.114 and the p-value of 0.892 indicate that these differences are not statistically significant, suggesting that faculty members' compliance levels are the same regardless of age. This is consistent with the findings of Jin et al. (2008), who emphasized that age alone does not determine medication adherence. While older

individuals are often assumed to be more compliant due to increased health awareness or experience with chronic conditions, the study highlights that adherence behavior is more significantly shaped by factors such as a patient's beliefs about their illness and medications, concerns about potential side effects, and the ease of access to healthcare services. These elements can override the expected influence of age, meaning that even older, health-literate individuals may exhibit poor compliance if they mistrust their medications, experience adverse reactions, or encounter barriers in obtaining consistent care.

Regarding employment status, part-time faculty members exhibited a slightly higher compliance mean of 48.83 compared to full-time faculty members, who had a mean of 46.60. Despite this difference, the computed T-value of 1.361 and p-value of 0.253 indicate that the variation is not significant, suggesting that the level of compliance among faculty members is the same regardless of their employment status. This finding contradicts the study by Nafradi et al. (2017), which found that work-related stress and time constraints often lead to lower adherence among full-time employees. Long working hours, high workload, and limited flexibility often leave individuals with little time or energy to focus on their health, which contributes to unintentional nonadherence.

Faculty members were also grouped by school, with SEAIT having the highest mean compliance score of 49.60, followed by SHANS with 49.25, STEH with 46.78, and SAB with the lowest mean of 43.00. The computed F-value of 2.549 and p-value of 0.076, while approaching significance, still suggest no statistically significant difference among schools.

The results highlight the importance of tailoring patient education and intervention strategies to individual needs rather than relying solely on demographic characteristics. This supports the nursing principle of providing holistic, patient-centered care that considers psychological, behavioral, and social factors influencing adherence. Ultimately, the World Health Organization (2003) also highlights the critical role of healthcare providers—including nurses—in supporting adherence through effective communication, routine follow-ups, and patient education.

Section 4. Infographics

The infographic includes implementing wellness programs, improving health services, and enhancing local healthcare collaboration to support better adherence. The infographic also provided a brief background about hypertension and its major risk factors. Moreover, it showed a demographic analysis, indicating that hypertension was more common among older, full-time faculty. However, compliance levels were not significantly affected by age, sex, employment status, or school affiliation.

CONCLUSION AND RECOMMENDATIONS

Conclusion

1. Overall, the demographic distribution suggests that hypertension among faculty members is more prevalent among older individuals and those with full-time employment, which is consistent with studies linking hypertension risk to age and occupational stress.
2. The level of compliance with hypertensive maintenance among faculty members is good, suggesting that intentional nonadherence is a major contributing factor.
3. The study investigated whether there is a significant difference in compliance levels when faculty members are grouped by sex, age, employment status, and school

affiliation. Results showed that faculty members' compliance levels are the same regardless of age, sex, employment status, or school affiliation.

Recommendations

For the university health services, enhance existing services by introducing monthly blood pressure monitoring schedules and maintaining a confidential tracking system for at-risk faculty. In addition, personalized counseling sessions focusing on medication adherence and lifestyle modifications should be offered. These can be evaluated by tracking attendance, changes in blood pressure readings, and self-reported improvements in adherence over time.

Faculty members are encouraged to actively participate in the university's existing programs that focus on the well-being of its faculty and community. For instance, participation in SIGLA week is highly encouraged for faculty members, as this initiative promotes physical activity, health screenings, and wellness education, all of which support hypertension prevention and management.

For future researchers, the researchers recommend conducting qualitative follow-up studies—such as focus group discussions or in-depth interviews—to explore the underlying reasons for noncompliance, including personal beliefs, cultural influences, and institutional barriers. These insights will provide a deeper understanding of behavioral factors that quantitative data alone may not fully capture.

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