EXPLORING THE RELATIONSHIP BETWEEN LIFESTYLE, AWARENESS AND MEDICAL MANAGEMNT IN HYPERTENSION AMONG DIABETIC PATIENTS.

A PROJECT REPORT

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APPROVAL

The project report titled " EXPLPRING THE RELATIONSHIP BETWEEN LIFESTYLE, AWARENESS AND MEDICAL MANAGEMNT IN HYPERTENSION AMONG DIABETIC PATIENTS," presented by Sheikh Satma Ahmed to the Department of Nutrition and Food Engineering at Daffodil International University, has been deemed satisfactory for the partial fulfilment of the requirements for the degree of B.Sc. in Nutrition and Food Engineering. Approval has been granted for its style and content.

EXAMINING COMMITTEE

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DECLARATION

I affirm that I have undertaken this project work under the guidance of **Zannatul Ferdoush,** Lecture and **Juwel Rana,** Assistant Professor**,** in the Department of NFE at Daffodil International University. Furthermore, I confirm that neither this project report nor any portion of it has been presented elsewhere for the conferral of any degree or diploma.

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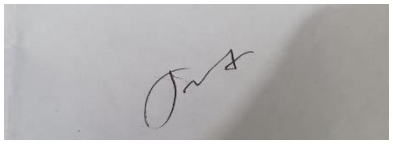

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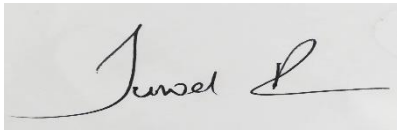

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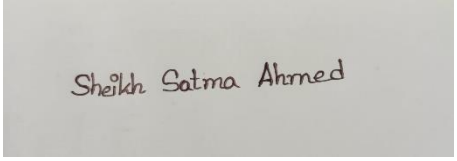

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Firstly, I want to sincerely thank God for His divine favor, which has made it possible for me to successfully finish my final year project.

I would like to express my sincere gratitude and debt of gratitude to **Zannatul Ferdoush,** Lecturer in the Department of Nutrition and Food Engineering at Daffodil International University, and **Juwal Rana**, Assistant **professor** and co-supervisor. To complete this project report, our supervisor must have deep knowledge of and a strong interest in the topic of "Exploring the relationship between Lifestyle, Awareness and Medical Management in Hypertension among Diabetic Patient." Completing this internship report has been made possible by his unending patience, academic guidance, ongoing encouragement, continuous and ardent supervision, constructive criticism, invaluable advice, reading numerous subpar drafts and fixing them at every step.

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I would want to thank everyone of Daffodil International University course mates who participated in this conversation.

Finally, I would want to respectfully thank my parent for their unwavering support and patience.

ABSTRACT

The study explores the complex issues involved in managing diabetes and high blood pressure in both men and women, shedding light on complex health disparities. More men are being diagnosed with diabetes, which shows how important it is to promote targeted awareness programs and start treatment early. Differences between men and women in diabetic complications show the need for tactics that take into account gender-specific risk factors. Positive shows that they are actively managing their diabetes. Nonetheless, qualitative study on monitoring reasons and results shows that both men and women have similar proactive blood sugar testing, which obstacles can make diabetes management better.

Diabetes duration analysis shows the need for specific early-years prevention measures. When it comes to personalized management, knowing the different monitoring methods for hypertension is important because it is more common in men. Because of a moderate level of awareness, teaching on the link between diabetes and high blood pressure is needed to help with prevention and management.

The study indicates that men are slightly less likely than women to have diabetes (68% vs. 32%). Additionally, men (75%) are more proactive in checking their blood sugar levels compared to women (25%). Furthermore, a higher percentage of men (20%) experience complications from diabetes compared to women. Regarding high blood pressure, men are more likely to be diagnosed each month (68% vs. 32%), but there's a similar level of awareness about the link between diabetes and high blood pressure among men (70%) and women (30%).

Numerous drug side effects make customized treatment and monitoring even more important, providing information for better health results. To successfully address health disparities, these results support targeted interventions, campaigning for awareness, and healthcare methods that take gender into account. For shaping public health programs and personalized treatment methods, the study gives us useful information.

Keyword: Hypertension, Male/Female, Healthcare, Diabetes, Guidelines.

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CHAPTER 1
Introduction

In our fast-changing society, non-communicable diseases like cardiovascular disease, cancer, diabetes, and chronic lung diseases now kill more people than infectious diseases. Up to 80% of diabetes-related deaths are due to cardiovascular problems, notably hypertension (HTN) and stroke. Cardiovascular illnesses kill 17 million people worldwide, with HTN complications killing 9.4 million. HTN, once considered a disease of the rich, is now seen across all social classes, surpassing Europe and the US. It is now the fourth major cause of premature death in developed countries and the seventh in developing nations Abbatecola (2013).

Over the past two decades, HTN has become the leading cause of global morbidity and mortality. HTN's global disease burden climbed from 4.5% (almost 1 billion adults) in 2000 to 7% in 2010. The urgency of addressing this widespread health concern is highlighted. As the population ages, HTN will become more common, especially in seniors. Note that blood pressure clinical importance varies with age, highlighting the necessity for nuanced care. HTN is generally asymptomatic but a major risk factor for many diseases, requiring awareness and prompt treatment Aldiab & Shubair, (2010).

80% of non-communicable diseases, including HTN, occur in low- and middle-income nations, contrary to popular belief. The rise of non-communicable diseases in Ethiopia is due to urbanization and lifestyle changes. The 2000 global estimate of 972 million adults with HTN was disproportionately in poorer countries. The prevalence of HTN is expected to rise 60% to 1.56 billion by 2025. The synergy between HTN and diabetes increases mortality by 7.2-fold.

A large number of US adults with diabetes have HTN, highlighting the need for adequate care. Routine screenings are important since HTN typically occurs without symptoms. This study sheds light on type 2 diabetes HTN prevalence and socio-demographic variables. The findings help healthcare professionals and stakeholders develop personalized clinical and non-clinical treatments to reduce HTN's effects on target organs. Finally, our research informs comprehensive type 2 diabetes care and risk reduction measures. Angamo, (2013)

1.1 Background

As Armstrong (2006) point out, hypertension is a major no communicable health problem because it is the third most common cause of impairment. The number of people with high blood pressure has risen from 972 million in 2000 to 1.56 billion by 2025 (Bener & Suwaidi, 2016). People with high blood pressure are twice as likely as people without high blood pressure to get heart disease, four times as likely to get congestive heart failure, and seven timesmore likely to have cerebral disease or a stroke (Bener & Suwaidi, 2016).

Hypertension is very common in Asia, with rates ranging from 50% in India Bener & Suwaidi (2016) to 75% in Pakistan (Gispen, 2000), mostly in South Asia. The number of people with this health problem is also high in Saudi Arabia (54.2–78.1%) and Korea (55%) and Nigeria (60%) (Cukierman-Yaffe, 2009). However, there aren't many studies on hypertension in the people of Bangladesh. Sayeed et al. published a study in 1998 that found that 32.2% of people had systolic hypertension and 13.6% had diastolic hypertension. The 2011 Bangladesh Demographic Health Survey showed that 38.7% of people had high blood pressure, and a study by Islam et al. (2015) found that 57.4% of the general population had high blood pressur pressure (Wang, 2017). These numbers show that the number of people in Bangladesh who have high blood pressure is on the rise.

The rising number of cases is due to well-known pathophysiological links with high blood pressure and the quick shift in the epidemiology of diseases caused by people moving to cities, living longer, and making bad changes to their food and lifestyle. Careful management of blood pressure requires both patients and healthcare workers to be more aware. To successfully deal with this health problem, it is important to know how common high blood pressure is, how much patients know about it and how much control they have over it, and what factors are causing it. This study tries to find out what causes the high rates of high blood pressure in Bangladesh so that important information can be used for targeted interventions and public health plans (Cukierman-Yaffe, 2009).

1.1 Objectives

i. To measure the awareness of diabetes patients regarding their hypertension status.

ii. To understand the relationship between diabetes and hypertension.

iii. To identify variables linked to the high rates of hypertension in the diabetic population.

CHAPTER 2

Literature Review

As a means to address this global public health crisis, healthcare providers must work together to develop nationwide screening programmers, public education campaigns, and collaborative efforts. These studies collectively highlight the strong correlation that exists between high blood pressure, gender, BMI, and diabetes. The significance of lifestyle adjustments for optimal management, poor rates of diagnosis and treatment, and high prevalence rates of hypertension, especially among specific demographics, are among the key results. All things considered; the findings emphasize how urgent it is to take action to lessen the growing harm that high blood pressure is causing to public health.

According to Armstrong (2006) found strong links between gender, body mass index (BMI), and having had diabetes or high blood pressure in the past. Prehypertension and high blood pressure were found to be common in young people and often go unnoticed. The study suggested that to deal with this health problem, a nationwide screening program and public information campaigns should be put in place.

Thompson (2017) found that named high blood pressure a global public health crisis since it causes pain and costs a lot. Their study at Jimma University Specialized Hospital in southwest Ethiopia examined outpatient adult high blood pressure rates and risk variables.

Bener & Suwaidi (2016) connected type 2 diabetes mellitus (T2DM) to high blood pressure-related death and disease. A Debre Tabor General Hospital study indicated that 59.5% of type 2 diabetics had elevated blood pressure. Hypertension is caused by city life, long-term Type 2 diabetes, and a higher BMI. The study underlined that healthcare providers and other stakeholders must collaborate to develop effective high blood pressure preventive programs for high-risk individuals.

According to a report by Angama (2013) high blood pressure is a major cause of heart disease, stroke, kidney failure, and death before its time. The study's goal was to give up-to-date information on the incidence of high blood pressure and its risk factors so that healthcare workers and regulators could take the right steps. Notably, the study found that 14.6% of the people in the study group had high blood pressure overall. Of these, 6.9% had isolated diastolic hypertension, 4.6% had independent systolic hypertension, and 3.1% had both systolic and

diastolic hypertension. It was found that 29.2% of people had high blood pressure, but only 21.1% of those people were diagnosed and started treatment for their hypertension.

Kalmijn (1995) addressed the scarcity of hypertension statistics in the Kingdom of Saudi Arabia by conducting a nationwide survey. The study included 10,735 Saudis aged 15 and above, revealing that 15.2% and 40.6% had hypertension or borderline hypertension, respectively. Men, older individuals, those with diabetes or high cholesterol, were more likelyto develop hypertension. Alarmingly, 57.8% of Saudis with hypertension had never been diagnosed. The study population predominantly consisted of males, individuals in later years, and those with diabetes. Of those diagnosed, 89% were taking medication, yet only around 45%had their blood pressure under control. The findings underscored the commonality of hypertension and prehypertension in Saudi Arabia, emphasizing the urgent need for a comprehensive plan to enhance screening, prevention, and treatment resources.

Cukierman-Yaffe (2009) investigated the incidence of hypertension and its correlation with various factors in Debrecen, Hungary. Out of the 19,961 participants, 37.02% had hypertension, 53.73% were overweight, 32.18% were smokers, and 58.85% were physically inactive. Hypertensive patients were significantly older than non-hypertensive individuals.

Risky behaviours like being overweight, smoking, insufficient exercise, and heavy drinking were more prevalent among hypertensive individuals. Only 17.03% of those receiving therapy had normal blood pressure. The study suggested higher relative risks for engaging in risky behaviours among hypertensive and emphasized the importance of addressing lifestyle factors for effective hypertension management (Skapinakis, 2007).

A study by Angamo (2013) had people who were an average of 42 years old, 71.7% of whom were at least 35 years old, and 58% of whom were women. The study, which came out in 2013, found that 13.2% of the people in the population had high blood pressure, which is described as systolic blood pressure of 140 mm/Hg or higher, diastolic blood pressure of 90 mm/Hg or higher, or a history of self-reporting high blood pressure. Sadly, only 35.1% knew they had high blood pressure, and only 23.7% were getting care. The worldwide rate of control was 15.5%. Genetics, diabetes mellitus, being overweight, and using oral contraceptives are all things that make getting high blood pressure more likely. The study showed that there were low rates of morbidity, awareness, treatment, and management. It emphasized the need for lifestyle changes, community-level preventative measures, and more knowledge to help with early diagnosis and treatment.

All of these studies show how important it is to take action now, through screening programs, public education campaigns, and teamwork between healthcare providers, to stop the rising number of people with high blood pressure and the risks that come with it, especially those who have diabetes. To lessen the effects of high blood pressure on public health, the results stress how important it is to find cases quickly, keep them under control, and take steps to stopthem from happening.

CHAPTER 3

Materials and Methods

3.1 Study design

This cross-sectional study was conducted by a structured questionnaire that was developed based on published literature and different standardized questionnaires (Thompson, 2017).

3.2 Study Location

The study is based on the "A study on the Exploring Diabetes and Hypertension prevalence among patients admitted in out-patient care at BIRDEM", the study location is in BIRDEM General Hospital, 122 Kazi Nazrul Islam Ave, Dhaka-1000, Bangladesh. The data was collected data by face-to-face interview and also from records of their medical prescriptions and reports with their consent.

3.3 Data collection

The information originated from the BIRDEM General Hospital's outpatient division, which is affiliated with the Diabetic Association of Bangladesh (BADAS). Collected information on demographics, physical activity, mental health (anxiety, depression), medical records, and diabetes-related lifestyle choices. Participants' weights and heights, as well as their waist and hip circumferences, were measured barefoot and in little garments. A certified nurse took blood pressure (BP) readings from each participant twice at 15-minute intervals using a mercury-based sphygmomanometer and stethoscope while the patient's left arm resting on a table.

3.4 Sample size

The dataset encompasses responses from 100 participants, with complete information across gender, age, occupation, and education variables. There are no missing data points, indicating a comprehensive dataset. In terms of gender distribution, the majority (57%) identified as male, while 43% identified as female. Age-wise, the participants are predominantly in the 46-60 age range (52%), followed by 18-30 (21%), 31-45 (20%), and under 18 (7%). Occupationally, the dataset includes students (12%), self-employed individuals (13%), part-time employees (48%), and full-time employees (27%). Regarding education, the majority (60%) hold a Bachelor's degree, 19% each possess an Associate's or Master's degree, and 2% completed high school.

3.5 Literature Review:

The first step in the study process is to do a thorough literature review. In this step, all the existing knowledge in the chosen area is looked at in detail. This helps with coming up with research questions and finding knowledge gaps.

3.6 Questionnaire Preparation and Data Collection:

The next step after coming up with study questions is to make a structured questionnaire for gathering information. This tool makes sure that getting information is done in a planned way. Face-to-face interviews, which let researchers talk to people directly, and medical records, which are extra sources of objective data, are used to collect data.

3.7 Data Coding and Organization:

After data is gathered, it is coded, which sorts and categorizes it so that it can be analyzed more effectively. Coding is necessary to make sure that data is organized in a way that makes it easier to understand in later steps.

3.8 Data Cleaning and Entry:

The information goes through a very thorough process of data cleaning to fix any mistakes and make sure it is correct. This step is very important for making the information you've gathered more reliable. The information is managed and organized with Microsoft Excel 2021, which can be used for many tasks.

3.9 Data Analysis:

Statistical tools are used in data analysis to get useful information. This includes looking at frequency distributions, finding patterns, and using P-values to test for significance. Statistical software helps you do a solid study of the variables you've chosen.

3.10 Results Interpretation:

In this important step, results interpretation, the analyzed data is looked at for trends, patterns, and finds that make sense. Visualizing results with graphs and charts make them easier to understand and helps people communicate them more clearly.

3.11 Variables in the Study:

The study chooses and uses certain factors that show different parts of the research. These factors are very important to the analysis and help us fully understand the research questions that were picked.

3.12 SPSS software:

The SPSS program is known for being a strong resource for managing and organizing datasets. Its advanced tools for working with and analyzing data make it an important part of the research process and give scholars unwavering support.

3.13 Data Analysis Methods:

In the data analysis step, different statistical methods are used to look for patterns, trends, and relationships in the dataset. Statistical testing, like P-values, adds a level of accuracy to the analysis. Here used APA format reference.

3.14 Graphs and Charts:

Graphs and charts are used to show results visually, which is an important part of figuring out what they mean. These visual aids help people understand the data better, which makes it easier to share the results of study.

Variable	Category	Percentage
Gender	Male	68%
	Female	32%
Age	35-44	8%
	45-54	44%
	55-64	28%
	65 to above	20%
Occupation	Housewife	24%
	Businessman	32%
	Job Holder	32%
	Others	12%
Education	S.S.C	32%
	H.S.C	8%
	Graduation	36%
	Others	24%

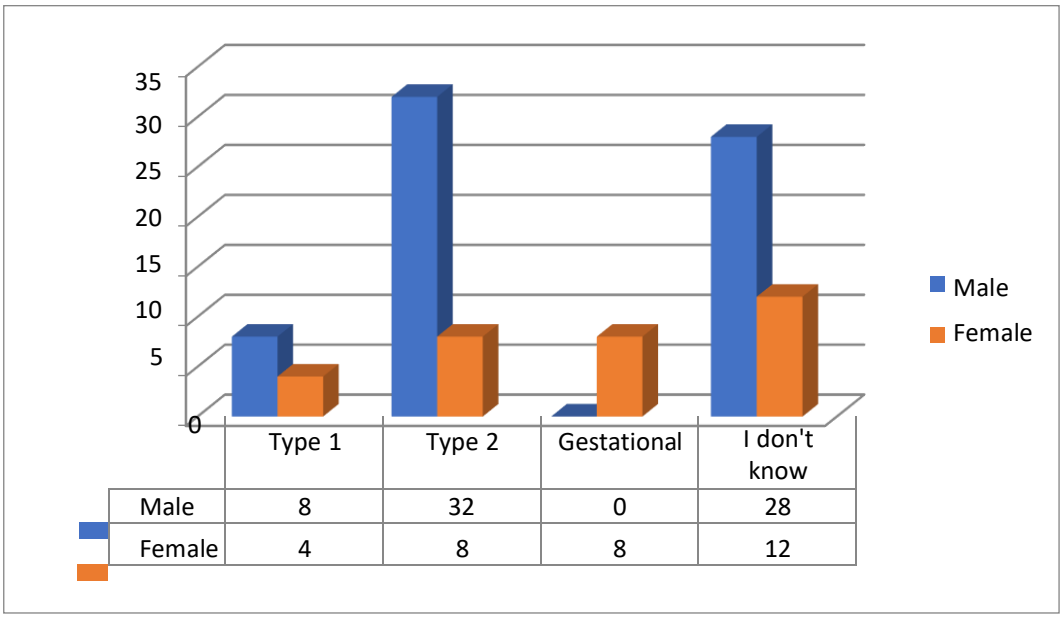
CHAPTER 4

Result and Discussion

4.1 Diabetes Related Questions:

The provided data involves a comprehensive analysis of respondents' health information, particularly focusing on the relationship between gender, years with diabetes, and various aspects of their diabetes management.

4.1.1 Gender and Diabetes Types



	Type 1	Type 2	Gestational	I don't know
Male	8	32	0	28
Female	4	8	8	12

Figure 1: Gender and Diabetes Types

In our survey with 100 participants, 68 were male, and 32 were female. We looked at the type of diabetes they have. For Type 1 diabetes, 8 were male and 4 were female. For Type 2 diabetes, 32 males and 8 females reported their diagnosis. For Gestational, 0 males and 8 females reported their diagnosis. For Unknown, 28 males and 12 females reported their diagnosis. This gives us a quick overview of how gender and diabetes types are distributed among our surveyed group.

4.1.2 Exploring Diabetes Complications

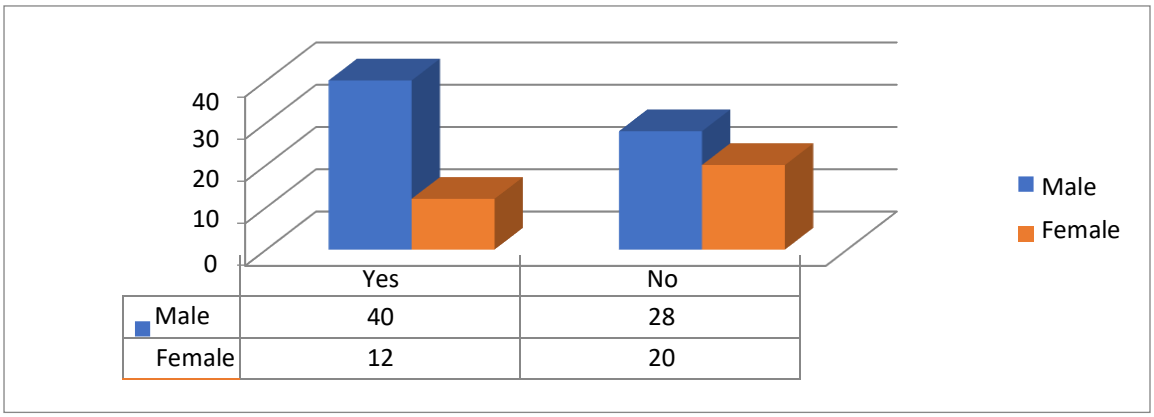


Figure 2: Exploring Diabetes Complications

In this survey of 100 participants, I delved into the presence of complications linked to diabetes and their gender-based distribution. Out of the total respondents, 52 acknowledged facing complications, while 48 reported none. Breaking it down by gender, 40 of the 68 male participants experienced complications, whereas 28 did not. Among the 32 female participants, 12 reported complications, and 20 reported none. These findings underscore asignificant portion of our surveyed population grappling with diabetes-related complications.

4.1.3 Blood Sugar Monitoring

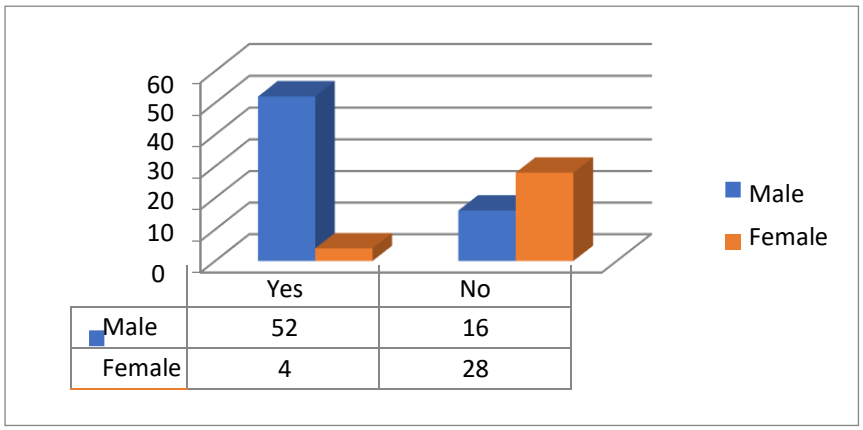


Figure 3: Blood Sugar Monitoring.

This graph shows that active monitoring of blood sugar levels. Among males, 52 individuals actively monitor their levels, while 16 do not, totaling 68. For females, 4 actively monitor, 28 do not, making a total of 32. In the overall sample of 100 respondents, 56 actively monitor, and 44 do not. The data indicates that more males actively monitor blood sugar levels compared to females

4.1.4 Insulin Usage in Diabetes Treatment

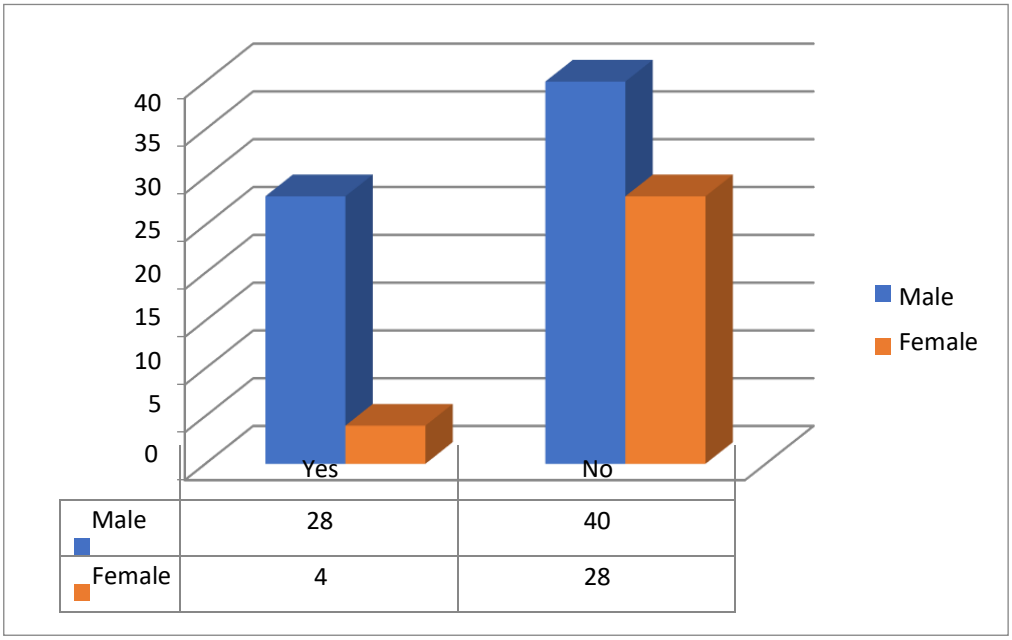


Figure 4: Insulin Usage in Diabetes Treatment

This graph presents the use of insulin in diabetes treatment. Among males, 32 have used insulin, while 40 have not. For females, 4 have used insulin, and 28 have not. The data indicates a gender difference in insulin usage for diabetes treatment, with a higher proportion of males having used insulin compared to females.

4.1.5 Duration of Diabetes Diagnosis

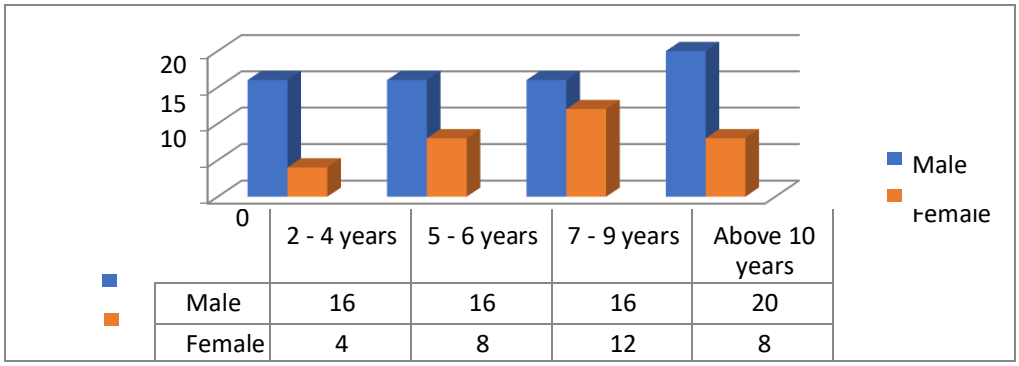


Figure 5: Duration of Diabetes Diagnosis

This chart shows the distribution of gender and the duration of diabetes diagnosis. Among males, 16 individuals have been diagnosed for 2-4 years, 16 for 5-6 years, 16 for 7-9 years and 20 for above 10 years. For females, 4 have been diagnosed for 2-4 years, 8 for 5-6 years, 12 for 7-9 years and 8 above 10 years. The data reveals varied durations of diabetes diagnosis among both genders, with a higher number of males diagnosed for above 10 years compared to females.

4.2 Hypertension Assessment

4.2. Diagnosis and Awareness

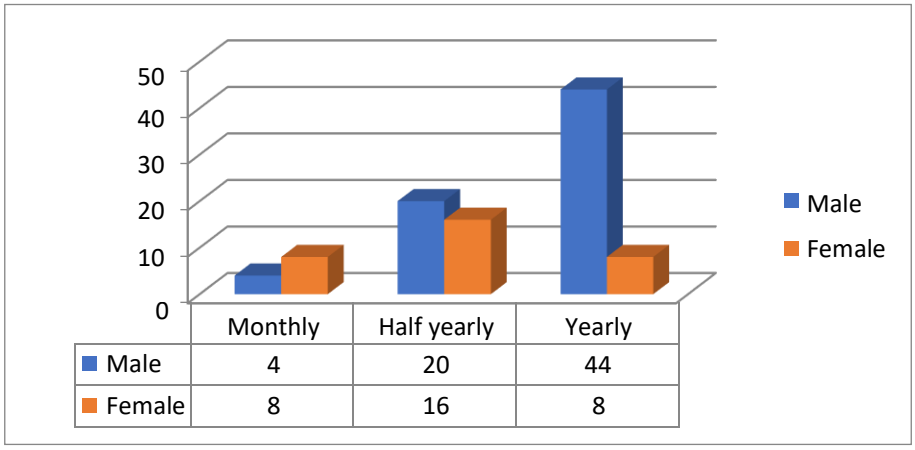


Figure 6: Hypertension Diagnosis and Awareness

This chart displays that frequency of hypertension diagnosis. Among males, 4 have been diagnosed monthly, and 20 half-yearly and 44 yearly totaling 68. For females, 8 have monthly diagnoses, 16 have half yearly and 8 have yearly, making a total of 32. The data suggests varied frequencies of hypertension diagnosis among genders, with a higher percentage of males diagnosed monthly compared to females.

4.2.2 Awareness of the Relationship between diabetes and hypertension

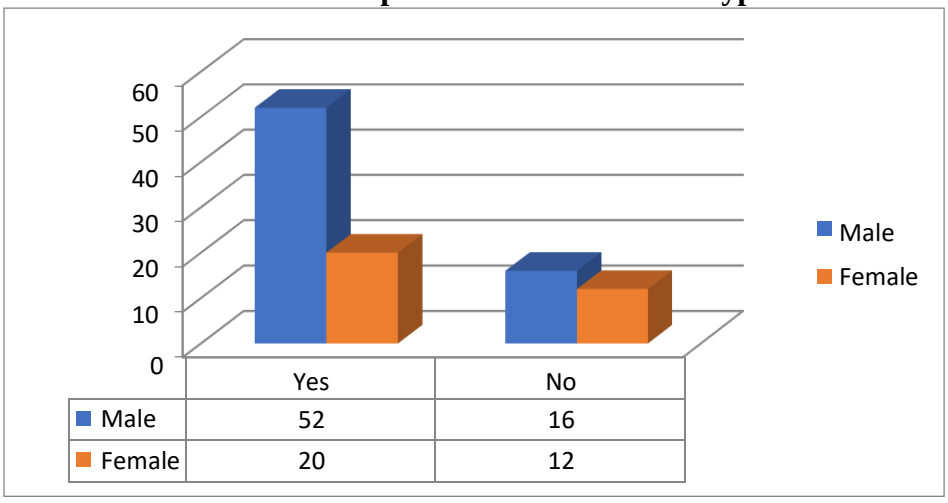


Figure 7: Awareness of the Relationship Between Diabetes and Hypertension

This chart represents awareness of the relationship between diabetes and hypertension. Among males, 44 are aware, and 24 are not, totaling 68. For females, 8 are aware, and 24 are not, making a total of 32. The data indicates varying levels of awareness between genders regarding the relationship between diabetes and hypertension, with a higher percentage of males being aware compared to females.

4.3 Lifestyle and Health Habits:

4.3.1 Engagement in Physical Activity

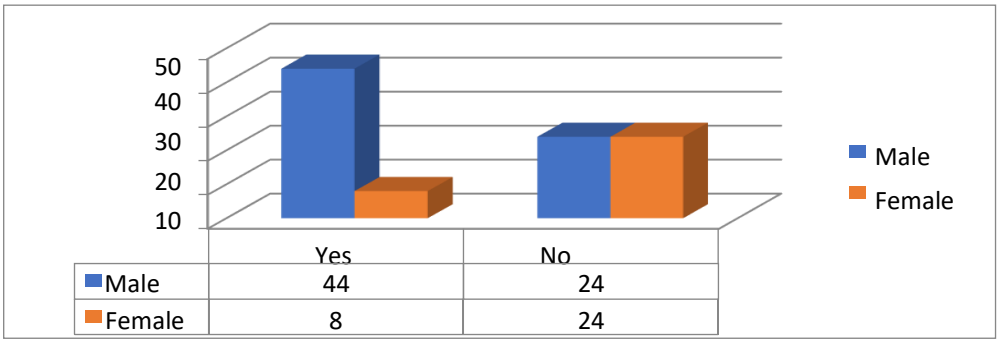


Figure 8: Engagement in Physical Activity

This chart represents awareness of the relationship between diabetes and hypertension. Among males, 52 are aware, and 16 are not, totaling 68. For females, 20 are aware, and 12 are not, making a total of 32. The data indicates varying levels of awareness between genders regarding the relationship between diabetes and hypertension, with a higher percentage of males being aware compared to females.

4.3. High-Sodium or Processed Food Consumption:

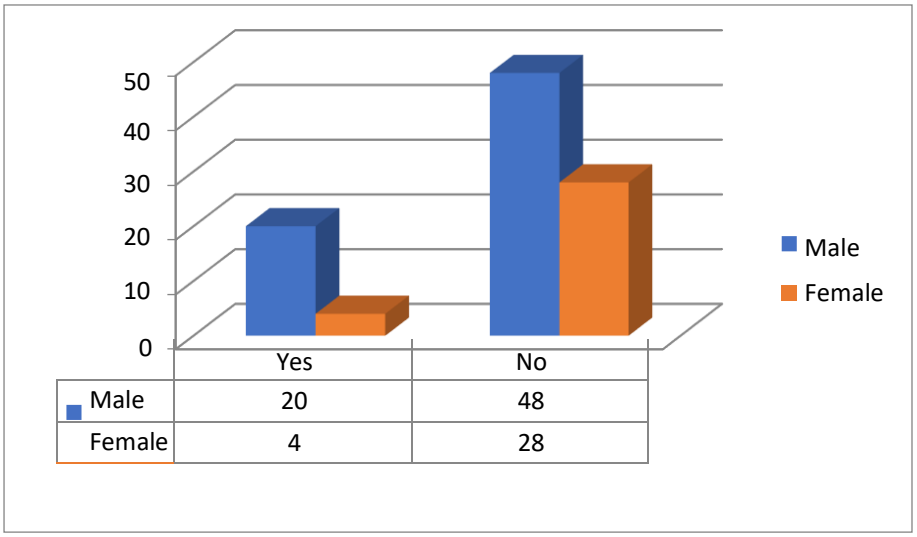
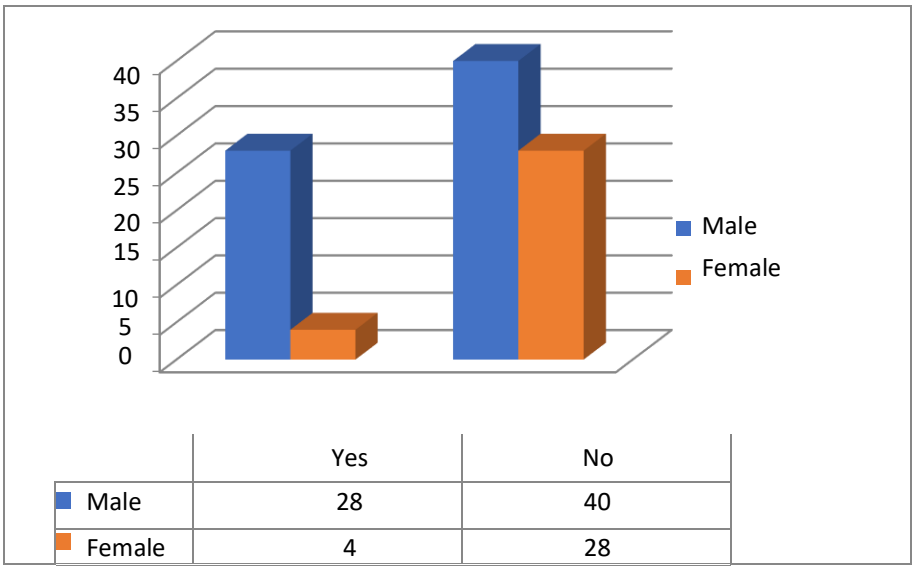


Figure 9: High-Sodium or Processed Food Consumption

This chart presents the frequency of consuming high-sodium or processed foods based on gender. Among males, 20 individuals consume, and 48 not consume, totaling 68. For females,4 consume, and 28 not consume, making a total of 32. The data suggests similar patterns of high-sodium or processed food consumption between genders, with a balanced distribution between "consume" and "not consume" categories.

4.3.3 Medical Check-ups for Diabetes or Hypertension:

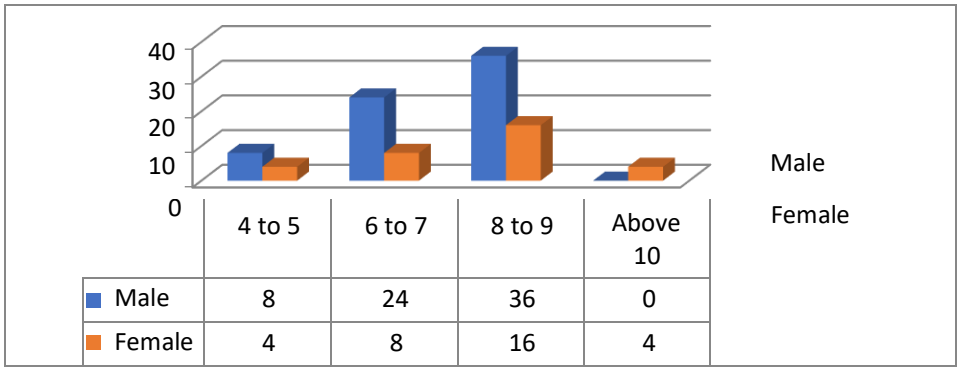


	Yes	No
Male	28	40
Female	4	28

Figure 10: Medical Check-ups for Diabetes or Hypertension

This chart illustrates the frequency of attending medical check-ups for diabetes or hypertension based on gender. Among males, 28 individuals attend, and 40 doesn't, totaling 68. For females,4 individuals attend, and 28 doesn't. The data indicates varied attendance patterns in medical check-ups for diabetes or hypertension, with a higher percentage of males attending sometimes compared to females.

4.3.4 Daily Sleep Duration



	4 to 5	6 to 7	8 to 9	Above 10
Male	8	24	36	0
Female	4	8	16	4

Figure: 11 Daily Sleep Duration

This chart displays the distribution of the number of hours of sleep per night based on gender. Among males, 8 typically get 4 to 5 hours, 24 get 6 to 7 hours, and 36 get 8 to 9 hours, totaling 68. For females, 4 get 4 to 5 hours, 8 get 6 to 7 hours, 16 get 8 to 9 hours, and 4 get above 10 hours, making a total of 32. The data reveals variations in the hours of sleep per night between genders, with a higher proportion of males getting 8 to 9 hours compared to females.

4.4 Treatment and Medication:

4.4.1 Medication Status for Diabetes:

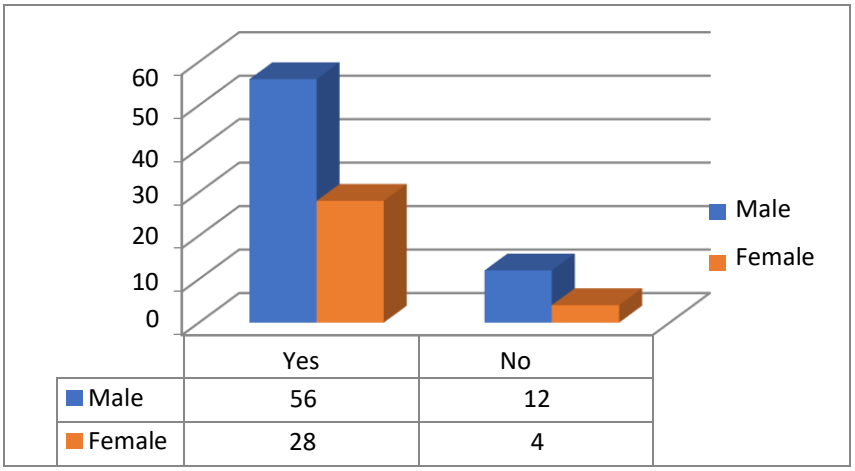


Figure 12: Medication Status for Diabetes

This chart illustrates the current medication status for diabetes based on gender. Among males, 56 are currently on medication, while 12 are not, totaling 68. For females, 28 are on medication, and 4 are not, making a total of 32. The data suggests varying medication statusesfor diabetes between genders, with a similar percentage of males and females currently on medication.

4.4.2 Medication Status for Hypertension

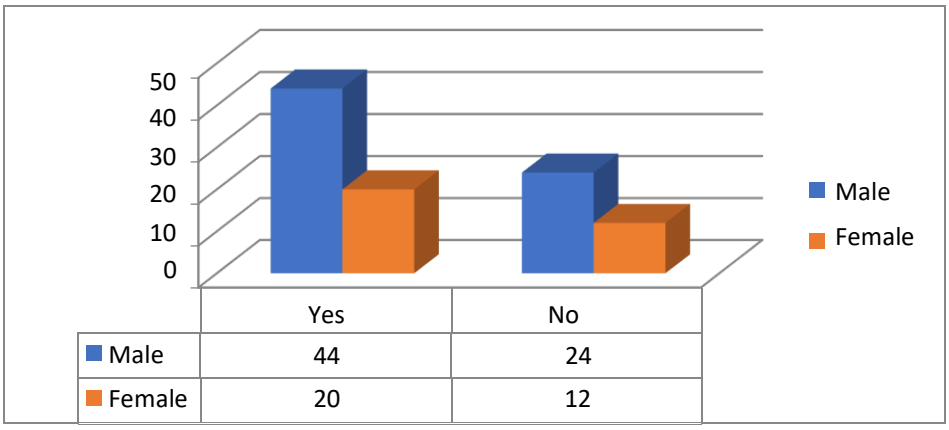


Figure 13: Medication Status for Hypertension

This chart presents the current medication status for hypertension based on gender. Among males, 24 are not on medication and 44 are currently on medication, totaling 68. For females, 12 are not on medication and 20 are currently on medication, making a total of 32. The data indicates diverse medication statuses for hypertension between genders, with a higher percentage of males currently on medication compared to females.

4.4.3 Experienced Side Effects from Medication

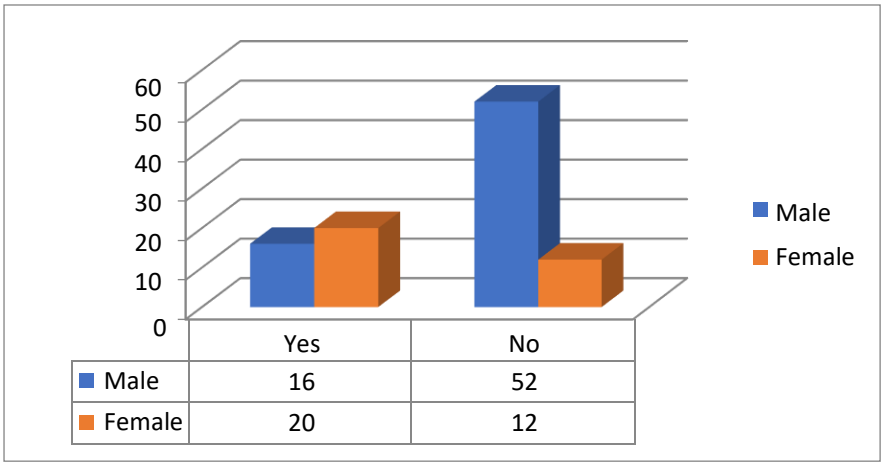


Figure 14: Experienced Side Effects from Medication

This chart illustrates the occurrence of side effects from diabetes or hypertension medication, categorized by gender. Among males, 16 have experienced side effects, and 52 have not, totaling 68. For females, 20 have experienced side effects, and 12 have not, making a total of 32. The data suggests a gender-related difference in the experience of side effects from diabetes or hypertension medication, with a higher percentage of females reporting side effects.

4.4.4 Communication with Healthcare Providers

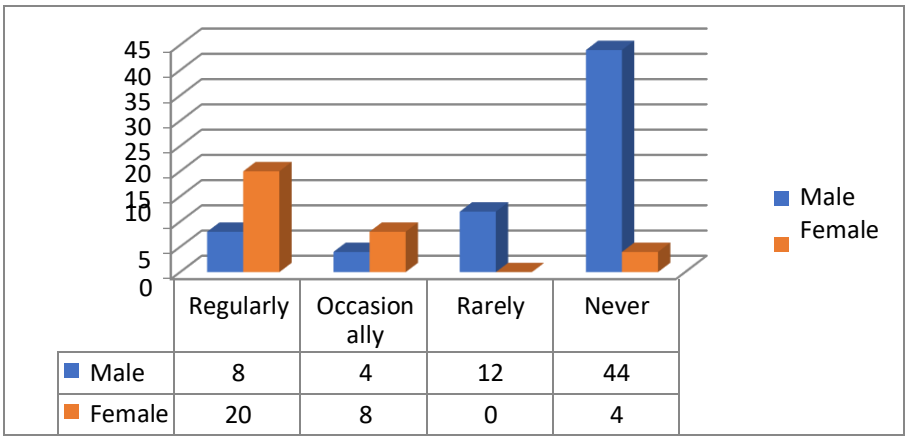
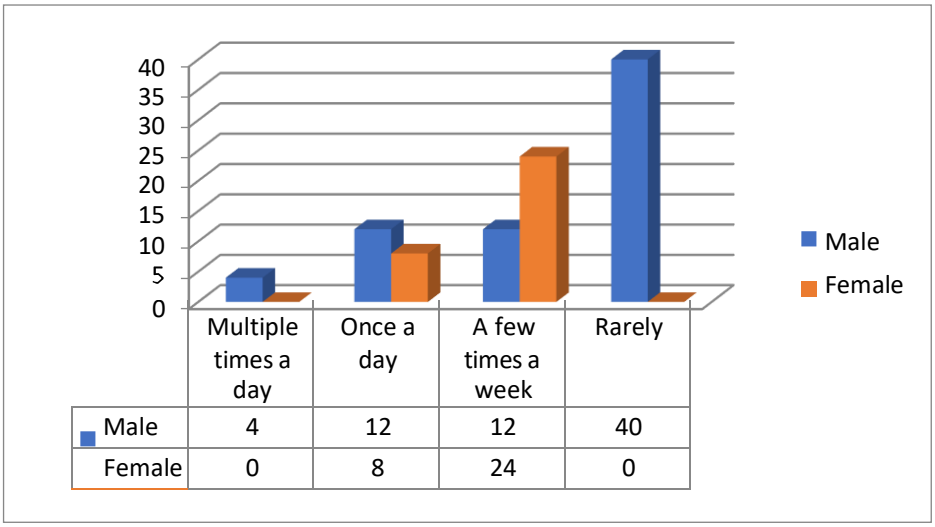


Figure 15: Communication with Healthcare Providers

This chart displays the frequency of communication with healthcare providers regarding challenges or concerns related to insulin management, categorized by gender. Among males, 8 communicate regularly, 4 occasionally, 12 rarely, and 44 never, totaling 68. For females, 20 communicate regularly, 8 occasionally, 0 rarely, and 4 never, making a total of 32. The data suggests varied communication patterns between genders, with a higher percentage of females regularly communicating with healthcare providers about insulin management challenges.

4.4.5 Blood Sugar Level Monitoring

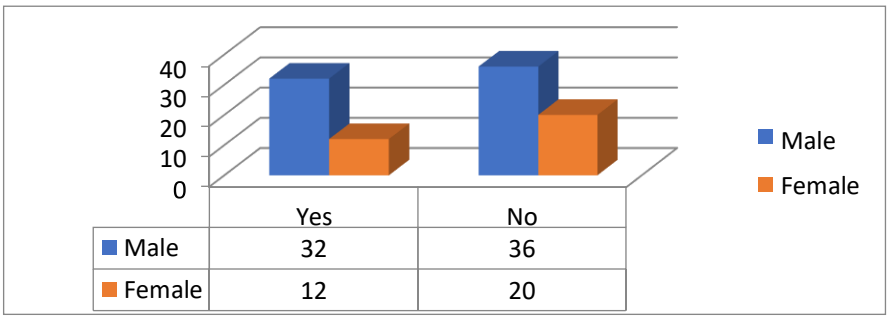


	Multiple times a day	Once a day	A few times a week	Rarely
Male	4	12	12	40
Female	0	8	24	0

Figure 16: Blood Sugar Level Monitoring

This chart depicts the frequency of checking blood sugar levels as part of insulin management routine, categorized by gender. Among males, 4 check multiple times a day, 12 once a day, 12 a few times a week, and 40 rarely, totaling 68. For females, 0 check multiple times a day, 8 once a day, 24 a few times a week, and 0 rarely, making a total of 32. The data highlights diverse patterns in checking blood sugar levels between genders, with a higher percentage of females checking multiple times a day.

4.4.6 Education on Co-Management



	Yes	No
Male	32	36
Female	12	20

Figure 17: Education on Co-Management

This chart shows the distribution of education on the co-management of diabetes and hypertension based on gender. Among males, 36 have not received and 32 have received, totaling 68. For females, 20 have not received and 12 have received, making a total of 32. The data reveals varying levels of education on co-management between genders, with a higher percentage of males having received information.

4.4.7 Public Awareness about Risks

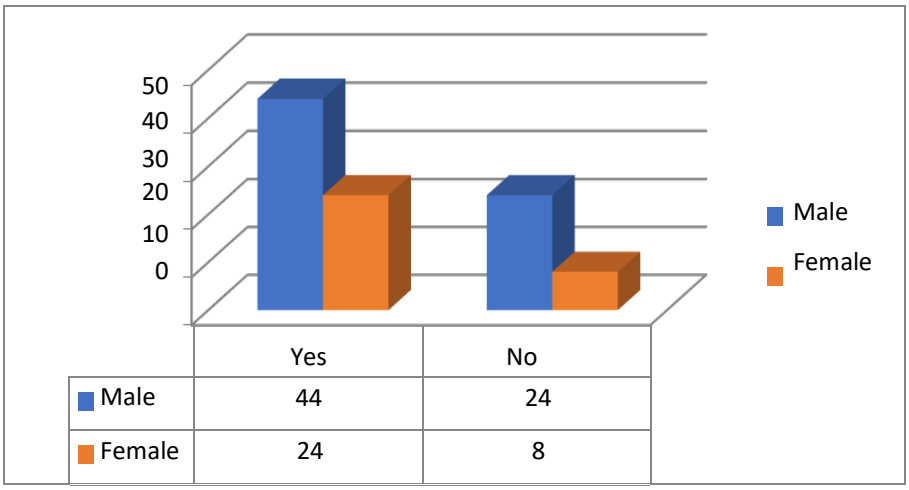


Figure 18: Public Awareness about Risks

This chart illustrates the perception of public awareness about the risks of having both diabetes and hypertension, categorized by gender. Among males, 24 feel there is not enough awareness and 44 feel there is enough, totaling 68. For females, 8 feel there is not enough awareness and 24 feel there is enough, making a total of 32. The data suggests diverse opinions on public awareness about the risks of having both diabetes and hypertension, with a similar distribution between genders.

4.4.8 Self-Perceived Knowledge on Ideal Blood Pressure

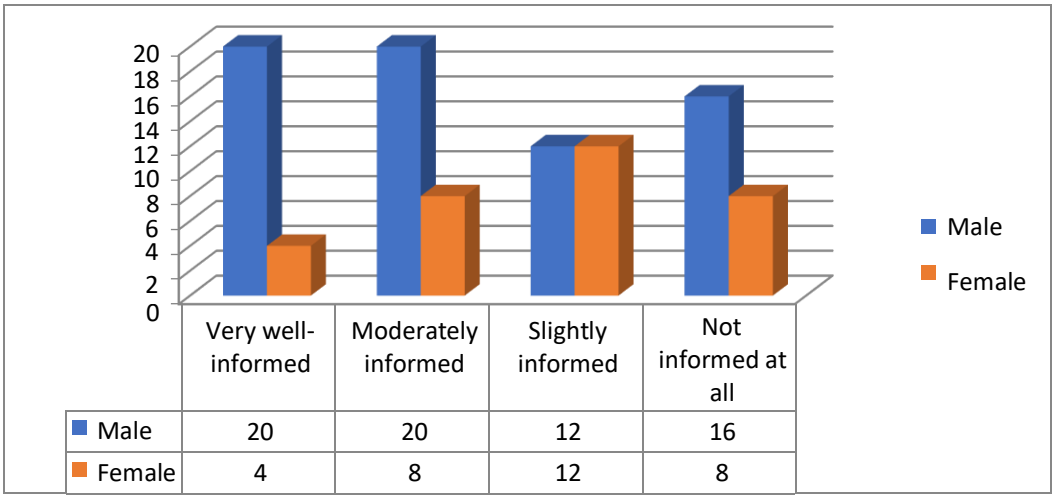
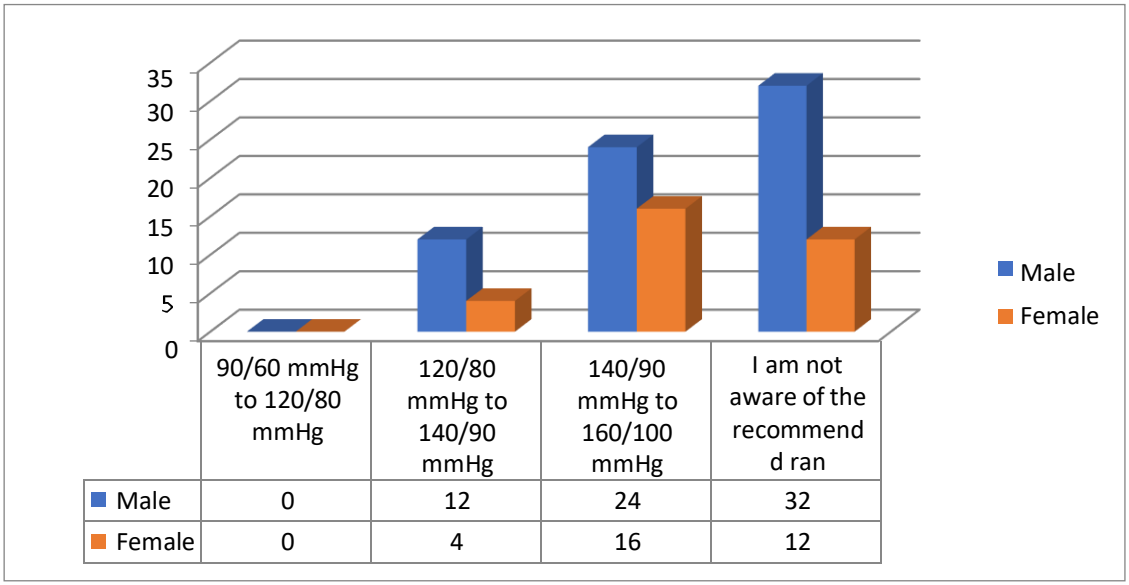


Figure 19: Self-Perceived Knowledge on Ideal Blood Pressure

This chart presents self-perceived levels of information on ideal blood pressure for individuals with diabetes, categorized by gender. Among males, 20 consider themselves very well-informed, 20 moderately informed, 12 slightly informed, and 16 not informed at all, totaling 68. For females, 4 consider themselves very well-informed, 8 moderately informed, 12 slightly informed, and 8 not informed at all, making a total of 32. The data indicates diverse self-

perceived levels of information on ideal blood pressure levels, with a higher percentage of males considering themselves very well-informed.

4.4.9 Understanding of Recommended Blood Pressure Range



	90/60 mmHg to 120/80 mmHg	120/80 mmHg to 140/90 mmHg	140/90 mmHg to 160/100 mmHg	I am not aware of the recommend d ran
Male	0	12	24	32
Female	0	4	16	12

Figure 20: Understanding of Recommended Blood Pressure Range

This chart displays the understanding of the recommended blood pressure range for diabetic individuals, according to gender. Among males, none believe it's 90/60 mmHg to 120/80 mmHg 12 believe it's 120/80 mmHg to 140/90 mmHg, 24 believe it's 140/90 mmHg to 160/100 mmHg, and 32 are not aware, totaling 68. For females, none believe it's 90/60 mmHg to 120/80 mmHg, 4 believe it's 120/80 mmHg to 140/90 mmHg, 16 believe it's 140/90 mmHg to 160/100 mmHg, and 12 is not aware, making a total of 32.

4.5. Finding and discussion

The study shows that men are slightly less likely than women to have diabetes (68% vs. 32%). This aligns with some existing studies, but further investigation is needed to confirm the trend. Both men and women seem to have about the same number of Type 1 and Type 2 diabetes. To come to statistically significant conclusions about this finding, it needs to be looked into more in a bigger sample. A significant percentage of the subjects (52%) said they were having problems because of their diabetes. Notably, more men (20%) than women mentioned complications. This difference calls for more study to find out what's causing it.

Interestingly, the data shows that men (75%) actively check their blood sugar levels more often than women (25%). This could be because of a number of things, such as the advice of a healthcare worker, the way a person manages their own health, or cultural factors. 42% of men with diabetes have used insulin as part of their treatment, compared to 12% of women with diabetes. This finding might have something to do with the fact that complications are more common in guys, which means they need more intense treatment plans.

The research shows that men are more likely than women to be diagnosed with high blood pressure each month (68% vs. 32%). This difference might be caused by a number of things, such as knowledge, access to health care, or biological differences. Knowing that diabetes and high blood pressure are linked: There is a difference between men and women in how much they know about the link between diabetes and high blood pressure. However, 60% of men and 40% of women seem to know about this link. This result shows that more education and awareness campaigns need to be run for both men and women.

The recent Latin American and European guidelines published this year has proposed as a goal for the blood pressure control in patients with diabetes type 2 a value similar or inferior to 140/90 mmHg. The American Diabetes Association (ADA) guidelines recommended similar value for systolic blood pressures but for diastolic blood pressure the recommended value was lower than 80 mmHg. Hypertension prevalence was highest in participants with diabetes (63%), and even though awareness was 74.4%, and the percentage of those who received treatment 69.3%, the control rate was only 23.3%. So, it is crucial to improve the control of blood pressurein a group of high risk, as is the diabetic population Latin American &European (2014).

The basic difference between in my research paper and the journal in their focus and content.

In my research paper primarily discusses the prevalence, monitoring, and complications of diabetes in men and women, along with awareness of the link between diabetes and high blood pressure.

In the journal focuses on guidelines for blood pressure control in patients with type 2 diabetes, along with the prevalence, awareness, treatment, and control rates of hypertension among individuals with diabetes.

As for the percentages mentioned:

In my research paper

Prevalence of diabetes: 68% in men vs. 32% in women. Monitoring of blood sugar levels: 75% of males vs. 25% of females. Likelihood of complications from diabetes: 20% higher in males than in females. Diagnosis of high blood pressure: 68% in men vs. 32% in women. Awareness of the link between diabetes and high blood pressure: 60% in men vs. 40% in women

In the journal

Hypertension prevalence among participants with diabetes: 63%. Awareness about hypertension among those with diabetes: 74.4%. Percentage receiving treatment for hypertension among those with diabetes: 69.3%. Control rate of blood pressure among those with diabetes: 23.3%

The percentages in each paragraph serve to illustrate different aspects of diabetes management and its associated complications, providing a comprehensive view of the challenges and goals in managing diabetes and hypertension.

According to the study, men are more likely than women to be physically active on a regular basis. But when it comes to eating prepared or high-sodium foods, both men and women behavein similar ways. More study is needed to confirm these trends and look into how they might affect the management of diabetes and high blood pressure.

The data shows that men get checked for diabetes or high blood pressure a little more often than women do. This could be for a number of reasons, such as not being able to get medical care, thinking the conditions are very bad, or cultural differences.

Diabetes and high blood pressure medications are taken in similar ways by both men and women, but a large number of people are not currently on any medications. This shows how important it is to help people take their medications as prescribed and make sure they get the best care for their illnesses.

People who are women seem to talk to their doctors more often about problems or worries they have with managing insulin. This finding shows that women may be more likely to seek help and take good care of their diabetes.

Healthcare providers should make training programs that meet the needs of both men and women when it comes to co-management. This can include advice on how to change your lifestyle, take your medications as prescribed, and get regular checkups. Public health programs should make sure that their awareness efforts take into account the different viewson public awareness. These campaigns can do a better job of getting important information across if they address the worries of both men and women. Since women think they know moreabout what blood pressure levels are healthy, healthcare providers can use this to their advantage by getting patients to take an active role in managing their health and making decisions together.

Everyone, both men and women, knows what the normal blood pressure range is, but they need to keep working to remember it and keep it up to date. Healthcare providers can be a part of daily conversations that happen when they see patients. It is important to take a patient-centered method that takes into account each person's thoughts, experiences, and level of knowledge. This way of doing things makes sure that healthcare measures are tailored to each person's specific needs. This makes people more likely to be involved and follow health advice.

CHAPTER 5

Conclusion

The findings of this comprehensive study of lifestyle, awareness, and medication therapy in hypertension in diabetic patients provide a nuanced picture of the healthcare landscape's many difficulties and opportunities. Lifestyle choices from diet and exercise to sleepier interconnected, highlighting the need for individualized therapies that recognize the different ways people navigate and impact their health. The varied views on public awareness and self-perceived knowledge highlight the need for informed and personalized communication tactics. Patient awareness levels must be considered when building educational programmers that resonate with their experiences and empower them to make health decisions. Our examination of diabetic hypertension patients' medical management tactics illuminates drug statuses, regular check-ups, and gender-specific tendencies. Treatment planning and healthcare deliverycan be optimized using these findings. The detection of gender gaps in education and awarenessrequires a more personalized strategy that serves the requirements and preferences of both male and female patients. As a result, about 6 out of 10 of people who have diabetes also have hypertension. The study recommends patient-centric healthcare as we traverse lifestyle, awareness, and medical management complexities. This method emphasizes individualized care, patient participation in decision-making, and comprehensive solutions. By creating a proactive and involved patient community, diabetes and hypertension can be managed and long-term well-being promoted. Finally, this study lays the framework for a more holistic and patient-focused approach to diabetic hypertension care. Recognizing the interconnectedness of lifestyle factors, awareness levels, and medical strategies allows healthcare providers and policymakers to collaborate on strategies that meet each individual's needs, improving health outcomes and quality of life.

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