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A Cross Sectional Study To Assess The Knowledge, Attitude and Practice on Adherence To Anti-Hypertensive Drugs Among Hypertensive Patients in A Selected Hospital, Shillong, Meghalaya

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Abstract

Hypertension has been recognized a common cardiovascular disease and a major risk factor for congestive heart failure, ischemic heart disease, chronic renal failure and stroke. In the developing countries, hypertension has become a significant problem in the epidemiological transition from communicable to non-communicable diseases. According to a research study conducted by Ahmed Abdalla Mohammed Gali in 2016, out of 385 participants, 353 (91.7%) had high knowledge score. On the other hand, 325 (84.4%) demonstrated good adherence to the medication. The study showed that there was positive correlation between knowledge and drug adherence.

A cross sectional study was conducted in North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences(NEIGRIHMS), Shillong from 25th march – 6th April 2024 using a semi structured knowledge- based questionnaire. Data was collected from 120 participants who were selected by using consecutive sampling technique. Data samples were analyzed by using descriptive statistics and inferential statistics (Fisher's Exact test).

The study reveals that out of the 120 participants, 76(63.3%) have good knowledge, 114 (95.0%) have favorable attitude and 81(67.5%) have good practice towards adherence to Anti-hypertensive drugs.

The study also reveals that there is a significant association between Gender and Educational status with

total knowledge score, and educational status with total practice score of the participants.

This cross- sectional study shows that most of the respondents have adequate knowledge, favorable attitude and good practice on adherence to anti-hypertensive drugs.

Keywords: Adherence, Attitude, Anti-hypertensive drugs, Hypertension, knowledge, Practice

Introduction

Background of the study

Hypertension is a non-communicable disease and one of the most prominent modifiable risk factors for cardiovascular diseases. Poor compliance with prescribed drugs is a common and important problem in clinical practice which can result in treatment failure, poor outcome and increased incidence. According to NFHS-5 elevated blood pressure (systolic ≥ 140 mm Hg and/or diastolic≥ 90 mm Hg) or taking medicine to control blood pressure is reported in 24.0% of men and 21.3% of women in India, while in Meghalaya the prevalence is 21.4% in men and 18.75% in women.

Need of the study

Lack of adequate knowledge about anti-hypertensive drugs may directly lead to bad outcomes such as overuse or non-compliance to treatment programs. Adherence to anti- hypertensive medications is a key component to control blood pressure levels. And poor adherence to these medications may lead to the development of hypertensive complications and increase risk of cardiovascular events which, in turn, reduces the ultimate clinical outcome. Therefore, this study was conducted to assess the knowledge, attitude and practice regarding adherence to anti-hypertensive drugs among hypertensive patient in selected hospital in Shillong, Meghalaya.

Objectives of the study

Primary objectives

1. To assess the knowledge on adherence to anti-hypertensive drugs among hypertensive patients in a selected hospital, Shillong Meghalaya.
2. To assess the attitude on adherence to anti-hypertensive drugs among hypertensive patients in a selected hospital, Shillong Meghalaya.
3. To assess the practice on adherence to anti-hypertensive drugs among hypertensive patients in selected hospital, Shillong Meghalaya.

Secondary objective

4. To find an association between knowledge, attitude and practice with the selected demographic variables.

Operational definition

Assessment: It refers to the evaluation and estimation of the knowledge, attitude and practice of the patients towards adherence to anti-hypertensive drugs.

Knowledge: It refers to the information acquired from the patient about what they know regarding adherence to anti -hypertensive drugs.

Attitude: it refers to the tendency of the patient to response either positively or negatively towards adherence to anti -hypertensive drugs.

Practice: it refers how the patient are practicing with regards to adherence to anti-hypertensive drugs.

Adherence: medication adherence is the extent to which a hypertensive patient takes prescribed drugs according to the doses and frequency recommended by the doctor.

Anti–hypertensive drug: Drug which are used to treat hypertension. Different anti-hypertensive agents work in different ways to lower blood pressure.

Assumptions

- Hypertensive patients may have some knowledge on adherence to Anti-hypertensive drugs.

- Hypertensive patients may have a positive attitude towards adherence to Anti-hypertensive drugs.
- Hypertensive patients may have a good practice towards adherence to Anti-hypertensive drugs.

Methodology

Research approach

In this study, Quantitative research approach design was finalized to assess the knowledge attitude and practice on adherence to anti- hypertensive drugs.

Research design

In our study the research design used is non-experimental cross sectional study design.

Variables

A) Independent variables: Socio-demographic variables (Age, Gender, Education, Occupation, Duration of treatment)

A) Outcome variables: Knowledge attitude and practice of hypertensive adults on adherence to anti-hypertensive drugs.

C) Confounding and interacting variables: Not Applicable

Study settings

The pilot study was conducted in Civil Hospital Shillong, Meghalaya.

The final study was conducted in NEIGRIHMS Hospital Shillong, Meghalaya.

Ethical considerations

In our study permission was obtained from:

1. Principal College of Nursing, NEIGRIHMS
2. Research Committee, College of Nursing, NEIGRIHMS
3. NEIGRIHMS Scientific Advisory Committee (NSAC)
4. Institutional Ethics Committee (IEC)
5. Permission from Medical Superintendent (MS)
6. Informed Consent from Participants.

Population study

The population study is the entire set of individual or objects having some characteristic(s) selected for research study, sometimes referred to as the universe of the study.

In this study, the population comprises: Adult hypertensive patients, in a selected hospital, Meghalaya.

Sampling technique

In our study, sampling technique is non- probability consecutive sampling technique.

Sample size

The sample size of the study is 120.

Criteria for sample selection

A) Inclusion criteria

1) Known Hypertensive adult patients.

2) Hypertensive patient who are willing to participate.

B) Exclusion criteria

1) Clients who are differently abled.

2) Clients who are suffering from gestational hypertension

Data collection procedure

The final data collection was carried out from 25th March 2024 to 05th April, 2024 in in-patient ward and outpatient department of medicine, urology, cardiology in North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong, Meghalaya. Prior permission was taken from Medical Superintendent of NEIGRIHMS hospital, Shillong, Meghalaya.

After the permission was obtained the study was conducted. Prior to the data collection, informed consent was taken from the participants and in form consent document was also given to the participants in order to acquaint them with the procedure and purpose of the study. It also states the confidentiality and anonymity of the results.

Subsequently, the self-administered questionnaire was given to the participants which was validated by various experts. An approximate time of 15-20 minutes was given to the participants to complete the questionnaire.

Scoring of the tool

Section A: It consist of socio-demographic characteristics and was not scored.

Section B: It consists of 8 knowledge-based questions to assess the level of knowledge on adherence to anti-hypertensive drugs, in such a way that for each correct response 1 mark is given. There is no negative mark given for a negative response. The maximum score is 8 and the minimum score is zero.

Section C: It consists of 10 attitude-based statement on adherence to anti-hypertensive drugs on a five-point Likert scale. There are 6 positive and 6 negative statements. For positive statement score of 5, 4, 3, 2, 1 is given to strongly agree, agree, neutral, disagree, strongly disagree respectively and for negative statement score of 1, 2, 3, 4, 5 is given to strongly agree, agree, neutral, disagree, strongly disagree respectively. The maximum score is 50 and the minimum score is 10.

Section D: It consist of 6 practice-based questions to assess the level of practice on adherence to anti-hypertensive drugs, in such a way that for each correct response 1 mark is given. There is no negative mark given for a negative a negative response. The maximum score is 6 and the minimum score is zero. The maximum score is 6 and the minimum score is zero.

Interpretation of score

Section B

Category	Score	Percentage %
Good knowledge	≥ 6	75-100%
Average knowledge	4-5	50- 74%
Poor Knowledge	≤ 3	≤ 49%

Section C

Category	Score
Favourable attitude	≥30
Unfavourable attitude	<30

Section D

Category	Score	Percentage
Good practice	≥ 5	75-100%
Average practice	3-4	50- 74%
Poor practice	≤ 2	≤ 49%

Analysis and Interpretation of the Study

This chapter deals with the statistical analysis of the collected data. The data collected from the participants was analyzed by using descriptive statistics and inferential statistics (Fisher's exact test). The data are presented in the form of tables and bar diagrams.

Organization of findings

The data are presented under the following headings:

Section I: Findings related to socio-demographic data of participants.

Section II: Findings related to the knowledge score of participants regarding adherence to anti- hypertensive drug.

Section III: Findings related to the attitude score of the participants regarding adherence to anti- hypertensive drug.

Section IV: Findings related to the practice score of the participants regarding adherence to anti- hypertensive drug.

Section V: Findings related to association of knowledge, attitude and practice of the participants with selected demographic variables.

Section I

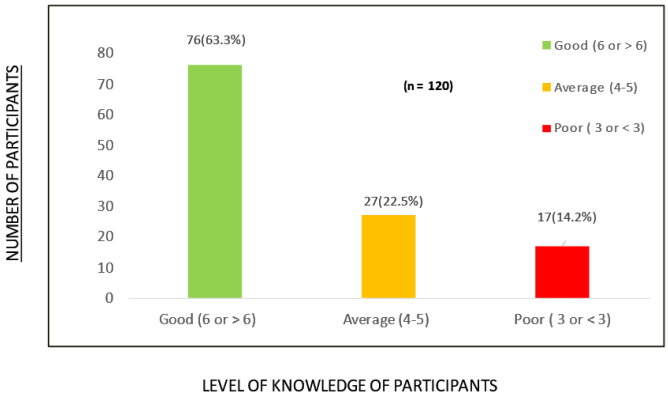
Table 1: frequency and percentage distribution of the participants according to the socio-demographic data (n=120)

Demographic characteristics	Frequency (f)	Percentage (%)
AGE (in years)		
18-38	13	10.8%
39-59	79	65.8%
Above 59	28	23.4%
GENDER		
Male	66	55.4%
Female	54	44.6%
EDUCATION		
Primary school (1-5)	26	22.2%
Middle school (6-8)	25	20.7%
High school (9-10)	29	24.0%
Diploma/Intermediate (11-12)	13	10.7%
Graduate	25	20.7%
Professional degree	02	1.7%
OCCUPATION		
Home maker	28	24.0%
Agriculture	12	9.9%
Self employed	28	23.1%
Government sector	19	15.7%
Private sector	10	8.3%
Retired	23	19.0%
DURATION OF TREATMENT		
≤ 5 Years	70	58.7%
≥6 Years	50	41.3%

Table 1 shows that out of 120 participants, 79 (65.8%) were from the age group of 39-59 years, 66(55.4%) participants were male, 29(24.0%) participants 28(24.0%) and 28(23.1%) participants were homemaker and self-employed respectively,70(58.7%) participants have undergone treatment more than 5 years.

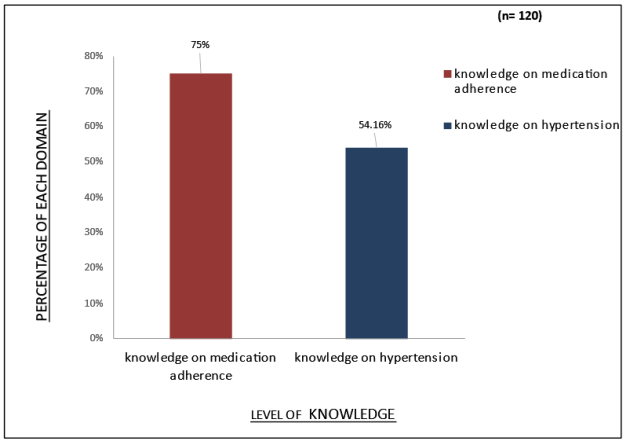
Section II

Figure 1: frequency and percentage distribution of knowledge score obtained by the participants



*The data presented in the above figure reveals that out of 120 participants majority of them i.e. 76 (63.3%) have good knowledge, 27(22.5%) have average knowledge and 17(14.2%) have poor knowledge regarding adherence to anti-hypertensive

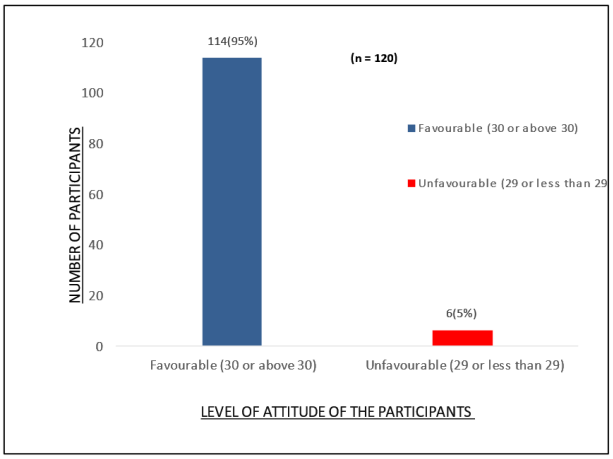
Figure 2: knowledge of participants in each domain



*The data presented in above figure shows that out of 120 participants, (54.1%) have knowledge on hypertension and (75%) participants have knowledge on medication adherence.

Section III

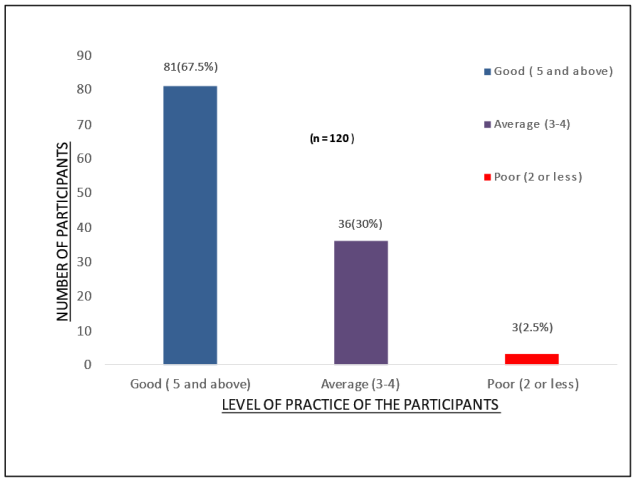
Figure 3: frequency and percentage distribution of attitude score obtained by the participants



*The data presented in above figure shows that out of 120 participants, majority of them i.e.,114 (95%) participants have favourable attitude while only 6(5%) participants have unfavourable attitude

Section IV

Figure 4: frequency and percentage distribution of practice score obtained by the participants



*The data presented in above figure shows that out of 120 participants majority of them i.e., 81 participants (67.5%) have good practice, 36 participants (30%) have average practice and 3 participants(2.5%) have poor practice on adherence to antihypertensive medication

Section V

Findings related to association between knowledge, attitude, practice towards adherence to anti-hypertensive drugs

Table 2: association between knowledge on adherence to anti -hypertensive drugs with the selected demographic variables (n=120)

Demographic variables	**level of knowledge**			**Fishers exact test value**
	Good	**Average**	**Poor**	
GENDER				
Male	46(69.69)	09(13.63)	11(16.66)	
Female	30(55.56)	18(33.33)	06(11.11)	0.037
EDUCATION				
Primary school (1-5)	10(38.46)	10(38.46)	06(23.07)	
Middle school (6-8)	14(56)	06(24)	05(20)	
High school (9-10)	17(58.62)	08(27.59)	04(13.79)	0.022
Diploma / Intermediate	10(76.92)	02(15.38)	01(7.69)	
Graduate Professional degree	23(92)02(100)	01(4)00	01(4)00	
OCCUPATION				
Home maker	12(44.44)	10(37.04)	05(18.52)	
Agriculture	08(66.67)	02(16.67)	02(16.67)	0.664
Self employed	19(66.63)	06(20)	05(16.67)	
Government sector	13(68.42)	04(21.05)	02(10.53)	
Private sector	06(75)	02(25)	00	
Retired	18(75)	03(12.5)	03(12.5)	
DURATION OF TREATMENT				
≤5 years	41(59.42)	18(26.09)	10(14.49)	
≥6 years	35(68.63)	09(17.65)	07(13.73)	0.531

*Significant at $P \leq 0.05$ level

The data in Table 2 shows that there is an association between gender and educational status with total knowledge score of the participants as the calculated p value is 0.037 and 0.022 respectively, which is less than 0.05 level of significance

In relation to occupation and duration of treatment of the participants, there is no association with knowledge of

the participants. However, it can be concluded that the knowledge of the participants is dependent on their gender and educational status

Table 3: association between attitude on adherence to anti-hypertensive drugs with the selected demographic variables (n=120)

Demographic characteristics	Level of attitude		Fishers exact test value
	Favorable	Unfavorable	
GENDER			
Male	62(93.94)	04(6.06)	0.439
Female	52(96.30)	02(3.70)	
EDUCATION			
Primary school(1-5)	24(92.31)	02(7.69)	
Middle school(6-8)	22(88)	03(12)	
High school(9-10)	28(96.55)	01(3.44)	0.416
Diploma /	13(100)	00	
Intermediate	25(100)	00	
Graduate	02(100)	00	
Professional degree			
OCCUPATION			
Home maker	26(96.30)	01(3.70)	
Agriculture	12(100)	00	
Self employed	27(90)	03(10)	0.902
Government sector	18(94.74)	01(5.26)	
Private sector	08(100)	00	
Retired	23(95.83)	01(4.17)	
DURATION OF TREATMENT			
≤5 YEARS	64(92.75)	05(7.25)	0.190
≥6 YEARS	50(98.04)	01(1.96)	

***** Significant at $P \leq 0.05$ level.

The data in Table 3 shows that there is no statistically significant association of gender, educational status, occupation and duration of treatment with level of attitude of the participants as the calculated p value is more than 0.05 level of significance

Table 4: association between practice on adherence to anti-hypertensive drugs with selected demographic variables (n=120)

Demographic characteristics	level of practice			Fishers exact test value
	Good	Fair	Poor	
GENDER				
Male	47(71.21)	17(25.76)	02(30.3)	0.105
Female	34(62.96)	19(35.19)	01(1.85)	
EDUCATION				
Primary school (1-5)	14(53.85)	11(42.31)	01(3.85)	
Middle school (6-8)	13(52)	12(48)	00	
High school (9-10)	16(55.17)	12(41.38)	01(3.45)	
Diploma / Intermediate	11(84.62)	01(7.69)	01(7.69)	0.012
Graduate	25(100)	00	00	
Professional degree	02(100)	00	00	
OCCUPATION				
Home maker	13(48.15)	14(51.85)	00	
Agriculture	07(58.33)	05(41.67)	00	0.074
Self employed	20(66.67)	07(23.33)	03(10)	
Government sector	15(78.95)	04(21.05)	00	
Private sector	07(87.5)	01(12.5)	00	
Retired	19(79.17)	05(20.83)	00	
DURATION OF TREATMENT				
≤5 YEARS	45(65.22)	21(30.43)	03(4.85)	0.424
≥6 YEARS	36(70.59)	15(29.41)	00	

*Significant at $P \leq 0.05$ level

The data in Table 4 shows that there is an association between educational status with total practice score of the participants as the calculated p value is 0.012 which is less than 0.05 level of significance. In relation to gender, occupation and duration of treatment of the participants, there is no association with practice of the participants. Therefore, it can be concluded that the practice of the participants is dependent on their educational status

Discussion

A non-experimental cross-sectional study was conducted on "Assessment of knowledge, attitude and practice on adherence to Anti-Hypertensive drugs among hypertensive patients in a selected hospital, Shillong, Meghalaya".

Major findings related to demographic variables

The study shows that out of 120 participants, 10.8% participants belonged to the age group 20-40 years, 65.8% belonged to the age group of 41-60 years and 23.4% participants were above the age of 66 years. Out of the total number of participants, 55.4%were male and 44.6% were female. Furthermore, 22.2% out of the total had educational qualification up to primary school, 20.7% participants up to middle school, 24.0% participants up to high school, 10.7% participants up to diploma/intermediate, 20.7% participants were graduate and 1.7% participants had a professional degree. A total of 24.0% participants were homemaker, 9.9% participants worked as farmer, 23.1% participants were self-employed, 15.7% worked in government sector, 8.3% participants worked in private sector and 19.0% participants were retired. A total of 58.7% participants were under treatment for less than 5 years and 41.3% participants for more than 6 years.

Major findings related to knowledge

The finding of the study reveals that out of 120 participants, 63.3% participants had good knowledge, 22.5% participants had average knowledge and 14.2% participants had poor knowledge on hypertension.

Out of 120 participants, 75.00% participants had knowledge on medication adherence and 54.16% participants had basic knowledge on hypertension.

Major findings related to attitude

The findings of the study reveals that 95% of the participants has a favourable attitude towards adherence to anti-hypertensive drugs and 5% of the participants had unfavourable attitude towards adherence to anti-hypertensive drugs.

Major findings related to practice

The findings of the study reveals that 67.5% of the participants had good practice, 30% of the participants had average practice and 2.5% participants had poor practice on adherence to anti-hypertensive drugs.

Conclusion

Based on the findings of the study it can be concluded that the majority of the participants i.e., 63.3% (76) have good knowledge on adherence to anti-hypertensive drug, 95% (114) participants have favourable attitude and 67.5% (81) participants had good practice towards adherence to anti-hypertensive drugs. The present study also reveals that there is an association between knowledge with selected demographic variables- Gender, education and in practice, there is an association with selected demographic variable- occupation. Whereas in attitude there is no association with selected demographic variables.

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