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OF CURRENT RESEARCH**

## RESEARCH ARTICLE

### EVALUATION OF COGNITION, BELIEF & HABIT OF CLIENTS WITH HYPERTENSION IN RELATION WITH HANDLING HYPERTENSION AMONG CLIENTS SEEKING CARE AT DESSIEREFERRAL HOSPITAL. A HOSPITAL BASED CROSS SECTIONAL STUDY

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#### ABSTRACT

Globally, 600 million people affected with high blood pressure. From Africa around 20 million people suffered with hypertension. In Ethiopia health care reports are incomplete and little is known on its impact. The main purpose of the paper is to Evaluate Cognition, Belief & Habit of clients with hypertension in relation with handling hypertension among Clients Seeking Care in Dessie Referral Hospital. **Methods:** Institution based cross-sectional study design was carried out. Information collected through interviewer administered questionnaire. Data was analysed manually through Microsoft excel. Findings displayed through tables and graphs. **Results:** A total of 117 clients were included. 110 (94%) of them reported as heard of hypertension, whereas 67(57.3%) respondents know the complication of hypertension. 94(80.3%) of the clients received information during the first visit of hypertension. Different types of complication were identified by 67 (57.3%). out of these 24(36%) has the complication or occurred to their families. Use of physical activity were not considered as an important protection of hypertension and a risk by 76(65%) of respondents. 64(54.7%) of the urban living respondents and those with high family income utilized reduction of salt in their diet. **Conclusion:** This study confirmed the need to improve the clients' belief toward adherence of treatment to prevent the complication, and the importance of life style changes.

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#### INTRODUCTION

Hypertension is a significant public health problem. Globally, 600 million people affected with hypertension. From those of age greater than 65, 40% of whites and 50% of African Americans have increased blood pressure. The higher blood pressure, the higher cardio vascular disorder (Fauc, 2008; Gordon, 1971; Anu Molarius, 1998). Hypertension is an important public problem in both developing and developed states. A lot number of individuals do not aware their hypertension also among those diagnosed and treated was inadequate (Zeinahmedzein, 1973). Finding at Cameroon on hypertension revealed magnitude varying from 12 to 22% from those above 25yrs. Unlikely, findings in Sub Saharan African resulted as knowledge, detection and prevention of hypertension are inadequate (Zein Ahmed, 1991).

From African 20 million people suffered from hypertension. Study from Butagirarevealed that the prevalence of high blood pressure was 23.9% in males and 13.7% in women (Tesfaye, 2004). Study from TikurAnbessa Hospital, Ethiopia showed that most common risk factor for cardiovascular disorderis hypertension which accounts 50% of admission. Acute myocardial infarction were the third mentioned causes of admission after malaria and diabetic keto acidosis in intensive care unit (Akine Kugbe, 1972). Cardiovascular disases are the prominent public health problem in developing and developed states. Hypertension associated in 60% of all cardiovascular disases seen in developing states (Lester, 1973; Parry, 1969) Evaluation of Cognition, Belief & Habit of clients with hypertension is a cruital element of hypertension prevention, however little information is gotten from developing states where hypertension lately identified as a big issue (Akine Kugbe, 1972). In Ethiopia health care reports are incomplete and lack of national information on cause of complication of hypertension hiddens impact of the problem.

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**OBJECTIVES:**

- J To determine level of Attitude of hypertension among victims attending healthcare at Dessie Referral Hospital.
- J To describe the attitude of hypertension with regard to handling hypertension at Dessie Referral Hospital.
- J To investigate the utilization of treatment of victims with hypertension in relation with controlling hypertension at Dessie Referral Hospital.

**METHODOLOGY**

**Research approach:** Quantitative research approach was used for the present study

**Research Design:** An institution based cross-sectional study was used for this study from December to June 2013.

**Setting:** A government, Dessie Referral Hospital was considered as a setting

**Population:** Selected Hypertensive clients visiting Dessie referral Hospital during the study period were study subjects.

**Sample:** All hypertensive clients with age above 15, consciously oriented and those not critically sick or in severe pain were included in the study. Health professionals with hypertension, children <15/ were excluded.

**Sample Size:** The sample size was determined using a single population proportion formula was 117 study subjects.

**Sampling Technique:** Simple random sampling was used

**Data Collection Tool:** Data was collected by using structured questionnaire after taking history and doing physical examination. Data was collected from May 08- June 12/2013 by five clinical nurses.

**Quality Assurance:** To assure quality of data, from the very beginning, a through training of data collectors and supervisors were undertaken and got common understanding. Also pretest was taken on 5% of the final sample size. The completeness and consistency of data was checked regularly by principal investigators and supervisor.

**Data Analysis:** After all the necessary data was collected, data were analysed, coded, entered and analyzed using SPSS statistics v.20. Descriptive statistics performed by using frequencies and tabulation. As well findings displayed with tables and graph.

**RESULTS**

26(22.2%) were in age group of 15- 39 and 91 (77.8%) were 40 years and above. Male were more in number than female. There were 65(55.6%) males and 52 (44.4%) females. The urban population were more than the rural with urban 80(68.4%) and rural 37(31.6%). related to marital status, majority 62(53.0%) were married and the remaining 27(23.1%) were divorced, 17(14.5%) were widowed and 11(9.4%) were single.

**Table 1. Socio-demographic Characteristics of victims of hypertension among those attending health care at Referral Hospital**

Variable	Frequency	Percent (%)
Age		
15-39	26	22.2
40-59	30	25.6
60-74	35	30
75-80	17	14.5
>81	9	7.7
Total	117	100
Sex		
Male	65	55.6
Female	52	44.4
Total	117	100
Address		
Urban	80	68.4
Rural	37	31.6
Total	117	100
Marital Status		
Single	11	9.4
Married	62	53
Divorced	27	23.1
Widowed	17	14.5
Others Specify	-	-
Total	117	100
Educational Level		
Illiterate	19	16.2
1-6 grade	14	12
1-12 grade	38	32.5
12+ grade	42	35.9
Others	4	3.4
Total	117	100
Religion		
Muslim	44	37.6
Orthodox	56	47.9
Protestant	10	8.5
Catholic	5	4.3
Others	2	1.7
Total	117	100
Occupation		
House wife	21	17.9
Government employer	29	24.8
Farmer	19	16.2
Merchant	43	36.8
Others	5	4.3
Total	117	100
Income		
Low	31	26.5
Medium	61	52.1
High	25	21.4
Total	117	100

Educational status revealed that 98(83.8%) were from primary to tertiary level and 19 (16.2%) were illiterate. Occupational status revealed that merchant 43(36.8%), Government employer 29(24.8%), house wife 21(17.9%), farmer 19(16.2%) and others 5(4.3%). The monthly family income showed 61(52.1%) were medium, 31(26.5%) were low and 25(21.4%) were high in income(Table 1). Those who heard about hypertension disease were 110 (94.0%). Most of the respondents had obtained the information from the health worker 73(66.4%), others got from and other friends 14(12.7%), Neighbors 10(9.1%), families 7(6.4%) and others 6(5.4%). The study subject who received the information during the 1<sup>st</sup> visit of clinic were 94(80.3%). Out of these 33(35.1%) get information about their treatment, 34(36.2%) about their diet, 16(17.0%) about physical exercise and 11(11.7%) about weight reduction.

**Table 2. Knowledge about hypertension treatment among victims attending health care in the respective health institution**

Variable	Frequency	Percent (%)
<b>Have you heard about HTN?</b>		
Yes	110	94
No	7	6
Total	117	100
<b>From where do you hear about HTN?</b>		
Health Worker	73	66.4
Friends	14	12.7
Families	7	6.4
Neighbors	10	9.1
Others Specify	6	5.4
Total	110	100
<b>Who assess your BP during your 1<sup>st</sup> visit?</b>		
Specialist	7	6
General Practitioner	69	59
Nurse	41	35
Other Specify	-	-
Total	117	100
<b>During your 1<sup>st</sup> visit do you receive any advice?</b>		
Yes	94	80.3
No	23	19.7
Total	117	100
<b>The information given during HTN clinic</b>		
About treatment	33	35.1
About diet	34	36.2
About exercise	16	17
About weight reduction	11	11.7
Other specify	-	-
Total	94	100
<b>Do you know the complication of HTN?</b>		
Yes	97	57.3
No	50	42.7
Total	117	100
<b>Identify the different types of HTN complications</b>		
Blindness	16	24
CVD	17	25.3
Paralysis	21	31.3
Death	13	19.4
Total	117	100
<b>Do the complications happen to you /families?</b>		
Yes	24	36
No	43	64
Total	67	100
<b>Which type of complication happen?</b>		
Blindness	3	12.5
CVD	6	25
Paralysis	10	41.7
Death	5	20.8
Total	24	100

Those who heard hypertension were 110(94.0%). 67(57.3%) complications. The complications identified were paralysis CVA, blindness, & sudden death with 21(31.3%) 17(25.3%), 16(24.0%) and 13(19.4%) respectively. 24(36.0%) of the participants had the complications happened to their families (Table 2). The response of clients' intention to check their blood pressure was 102 (87.2%). 4(57.2%) of clients explained that they don't know where to get it and 3(42.8%) they don't believe it will help them. The client who agreed to have regular follow up was 105(89.7%). Most of the clients stated that they need educational support from health personnel by 71(60.7%). Among the study subjects 105(89.8%) appreciated the use of hypertension treatment where as others disagreed 8(6.8%) and the rest were uncertain 4(3.4%). 107(91.4%) had willing to recommend hypertension treatment for relatives and friends in the future (Table 3).

**Table 3. Hypertension attitude of patients attending health care at Dessie referral hospital**

Variable	Frequency	Percent %
<b>Intention /plan to check blood pressure</b>		
Strongly agree	71	60.7
Agree	31	26.5
Uncertain	8	6.8
Disagree	4	3.4
Strongly disagree	3	2.6
Total	117	100
<b>The reason not to check blood pressure</b>		
I don't know where to get it	4	57.2
I don't believe it will help me	3	42.8
Carelessness	-	-
No need of checking	-	-
Others specify	-	-
Total	7	100
<b>Intention /plan to have regular follow up</b>		
Strongly agree	68	58.1
Agree	37	31.6
Uncertain	3	2.6
Disagree	5	4.6
Strongly disagree	4	3.1
Total	117	100
<b>The reason not to have regular follow up</b>		
It is not necessary	-	-
I don't know it is needed	2	22.2
I'm taking treatment so not important	4	44.4
I'm not comfortable with health professionals	3	33.4
Others specify	-	-
Total	9	100
<b>The support needed from health personnel</b>		
Teaching	71	60.7
Psychological support	33	28.2
Home care	11	9.4
Others specify	2	1.7
Total	117	100
<b>Accepting the use HTN treatment</b>		
Strongly agree	57	48.8
Agree	48	41
Uncertain	4	3.4
Disagree	4	3.4
Strongly disagree	4	3.4
Total	117	100
<b>Recommending HTN treatment to others</b>		
Strongly agree	60	51.2
Agree	47	40.2
Uncertain	4	3.4
Disagree	3	2.6
Strongly disagree	3	2.6
Total	117	100

81(69.2%) had positive belief in preventing and treating hypertension. The rest 36(30.8%) had negative perception in continuing the treatment and preventing the disease (Fig. 2). The respondents who used to check their BP regularly were 113(96.6%) and others were not. The clients who used to take their medication regularly were 110(94.0%) and 7(6%) were not taking the medication regularly. Out of these, most of them 94(85.5%) prefer drugs ordered by physician. 81(69.2%) had continuous follow up to clinic.

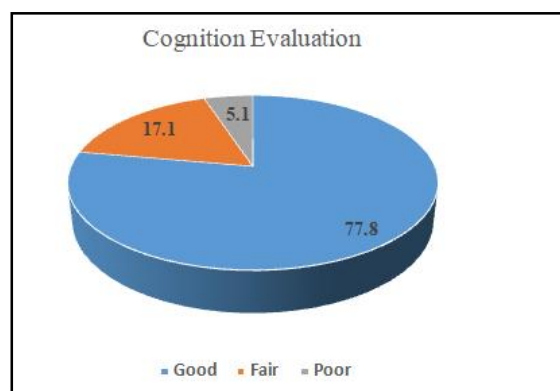
The clients who were able to reduce salt in their diet were 94(80.3%) and only 41(35%) used physical exercise as control and prevention of HTN complication. Out of these 17(41.5%) did on exercise for at least 10 minutes. Most respondents took their treatment twice per day 56(60.2%), 23(24.7%) three times per day 8(8.6%) took every day & 3(3.2%) took every other day (Table 4). From the given fourteen questions of habit who correctly answered eight and above had good habit {70(59.8%)}, where as the respondents who gave less than eight were considered as poor phabit {47(40.2%)}(Fig. 3)

**Table 4. Level of utilization of treatment of Hypertension in at referral hospital**

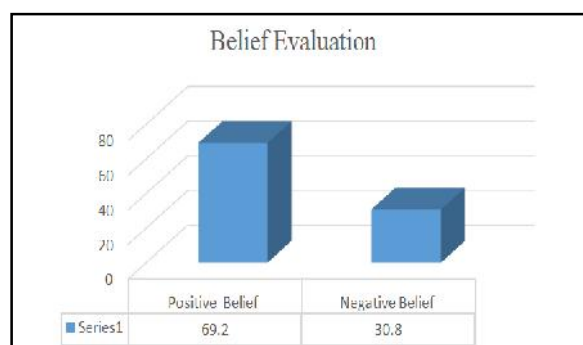
Variable	Frequency	Percent (%)
<b>Do you check your BP?</b>		
Yes	113	96.6
No	4	3.4
Total	117	100
<b>Do you take the medication of HTN?</b>		
Yes	110	94
No	7	6
Total	117	100
<b>What is the reason of not taking treatment?</b>		
Carelessness	-	-
Frustration	-	-
I don't know it's seriousness	1	14.3
I don't feel any problem	2	28.6
Others specify	4	57.1
Total	7	100
<b>What type of treatment do you take?</b>		
Ordered by physician	94	85.5
Traditional	16	14.5
Only salt reduction	-	-
Others specify	-	-
Total	110	100
<b>Do you attend a regular HTN clinic?</b>		
Yes	81	69.2
No	36	30.8
Total	17	100
<b>The reason not attending a regular HTN clinic</b>		
It is not necessary	10	27.8
I don't know it is needed	14	38
I'm taking medication, so it is not important	-	-
I'm not comfortable with health personals	12	33.3
Others specify	-	-
Total	36	100
<b>Do you practice to reduce salt in your diet?</b>		
Yes	94	80.3
No	23	19.7
Total	117	100
<b>Do you make your regular exercise?</b>		
Yes	41	35
No	76	65
Total	117	100
<b>When do you exercise regularly?</b>		
Early in the morning	24	58.5
Afternoon	-	-
Late evening	14	34.2
Night	-	-
Other specify	3	7.3
Total	41	100
<b>For how long do you practice exercise?</b>		
For 10 minutes	17	41.5
For 30 minutes	14	34.1
For 1 hr	3	7.3
Others specify	7	17.1
Total	41	100
<b>Do you ever stopped HTN treatment?</b>		
Yes	24	20.5
No	93	79.5
Total	117	100
<b>What is the reason behind to stop hypertension treatment?</b>		
I don't feel any problem	4	16.7
To use traditional ones	8	33.3
Carelessness	3	12.5
Others specify	9	37.5
Total	24	100
<b>How many times do you take HTN treatment per day?</b>		
Every other day	3	3.2
every day	8	8.6
Two times a day	56	60.2
Three times a day	23	24.7
Others specify	3	3.2
Total	93	100
<b>The time of starting treatment after diagnosis is</b>		
At time of diagnosis	117	100
After one year	-	-
After 3-5 years	-	-
After 5-10 years	-	-
>10 years	-	-
Others specify	-	-
Total	117	100

## DISCUSSION

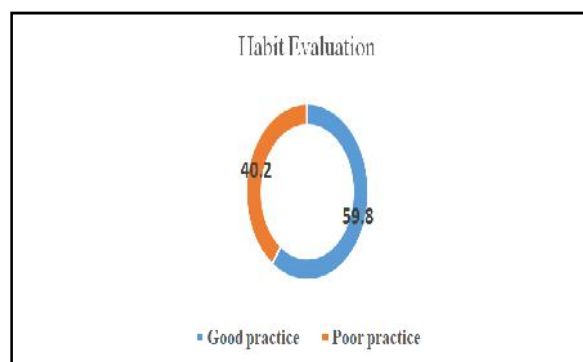
Based on this study a proportion of 77.8% of individual with high blood pressure were aware of being hypertensive and this is somewhat similar with other studies done in Seychelles



**Fig. 1. The Rating of knowledge of hypertension**



**Fig. 2. The rating of hypertension attitude**



**Fig. 3. The rating of utilization of treatment in hypertension controlling**

Island by American heart association which was 50%. But it was greater from others studies done in Zaire revealed that 31% or in the Eastern Mediterranean in 1990 which was 20%. This is because most of the clients of this study came from the town, where there is better information access about hypertension (Buyamba, 1987). There were significant difference associated with gender a higher proportion of males with 55.6% saying they had ever told they had hypertension than females with 44.4% which is not similar to the literature revealed that was 29% females were told compared to males (25%) (Tesfaye, 1987). 79.5% of of study subjects continue their treatment and 20.5% discontinued their treatment which is less to another study in Seychelles (28%). The study revealed that 80.3% received information during their first clinic visit.

This is similar with hypertensive clients who were likely to have exposed to different information from health care & personal experience study in London. Reduction of salt and weight reduction practiced in 80.3% of the study subjects which are similar with other information from the literature (Mpaul Anand, 1990; Gordan, 1976; Selby, 1989). From educated people 80% of them developed hypertension complication which is different from stated in literature that people with less cognition develop more complications than knowledgeable individuals (Mpaul Anand, 1990). The Cognition of the respondent was high (77.8%), the habit of taking and continuing their medication was poor (59.8%) this is different from other study where cognition was low and habit was high (Selby, 1989). The finding of 60.7% revealed they need educational support from health personnel, this supports with the role of nurses to give comprehensive health care, educating patients about healthy life style changes including maintaining a healthy diet and being physically active (Bernard, 1991).

### Conclusion

As a conclusion, despite high level of cognition about hypertension ever used, the treatment utilization was poor. This clarifies that cognition does not always lead to proper use of treatment. Most clients stopping treatment due to fed up of taking treatment and as they perceive as they did not feel any problem. Low level of utilizing regular physical exercise indicates a need of change of life style, information about restriction of salt and weight reduction. The study clearly indicated the presence of adequate cognition but low utilization of treatment with the availability of the service. Therefore the health care provider should educate clients to make cognitive to control hypertension & its complication.

### Recommendations

Policy makers should consider the disease as becoming a big problem and affecting the productive man power and Economy of the country. Also give attention to design public health strategy to control chronic diseases like hypertension and training the health care providers on prevention & control. Should increase awareness of clients about the importance of follow up and treatment adherences and also life style and diet modification. In addition there clients should be supported in both educationally & morally.

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**Competing interests:** Author declared as there is no conflict of interest.

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