



Research Article

A CROSS-SECTIONAL STUDY ON SELF CARE PRACTICES AMONG HYPERTENSIVE PATIENTS IN TERTIARY CARE CENTRE, KURNOOL, ANDHRA PRADESH

Sai Sandeep Dudekonda and Vijaya Kumari Sathri

Department of Community Medicine, Govt. Medical College, Nandyal, Andhra Pradesh

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ABSTRACT

Background: Hypertension or high blood pressure is a global public health concern. It is a leading risk factor for stroke, ischemic heart disease, and other vascular diseases and it accounts for a large proportion of cardiovascular deaths. self-care is one important element of non-pharmacotherapeutic intervention for all hypertension patients. The study aims to determine the pattern of self-care practices and to estimate the factors associated with it, among hypertensive patients in the outpatient department.

Methods: A hospital-based, observational, cross-sectional study was conducted at the tertiary care center, Kurnool. 104 hypertensive participants were selected by simple random sampling. A Pre-tested semi-structured questionnaire to assess self-care practices was administered. Data was entered and analyzed by using MS Excel 2007 and SPSS 23. Chi-square was used as a test of significance; with a p-value < 0.05 considered significant.

Results: Among 104 hypertensive patients 61.5 % were practicing good self-care. There was a statistically significant association with gender (0.002), living in urban (0.02), and with high socioeconomic status (0.003).

Conclusions: The findings revealed that the self-care practices among hypertensive patients were unsatisfactory in rural areas and those below the poverty line. These groups must be better educated and further monitored during routine healthcare delivery services.

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INTRODUCTION

Hypertension or high blood pressure is defined as having persistent, elevated systolic blood pressure of 140 mm Hg or above and/or diastolic blood pressure of 90 mm Hg¹ Hypertension is seen in about 1.13 billion people worldwide. 1 out of 4 men and 1 out of 5 women were known to have hypertension in 2015. There is an increasing burden of hypertension in low and middle-income countries.² It is estimated that the trend of hypertension projects from 118 million in 2000 to 214 million in 2025.³ High blood pressure is directly linked to the deaths of more than 8.5 million people each year worldwide, and it's the leading risk factor for stroke, ischemic heart disease, other vascular diseases, and renal disease.^{4,5}

Hypertension is a serious disease, so to be diagnosed as hypertensive it is important to practice certain good self-care practices because practices like smoking cessation, low sodium diet, physical activity, and weight reduction can substantially control blood pressure.^{6,7} According to NFHS-5, Andhra Pradesh is one of the leading states concerning the prevalence of hypertension.⁸

Hypertension is an iceberg disease that follows the "rule of halves" which is being silent i.e. asymptomatic in the incipient stage, so many people remain not diagnosed. Those who are diagnosed may not have access to treatment and those who

had access, may not be able to sustain the control over illness. Late detection of hypertension has a significant economic and social impact at individual, family, community, and national levels due to premature death, disability, loss of income, and healthcare expenditure⁹

Self-care is considered primary care for patients with chronic conditions to have a better quality of life by refraining from the possibilities of disabilities and reducing the rising healthcare expenditure. It has shown that it reduces primary care visits, outpatient visits by 17%, and emergency department visits by up to 50%.¹⁰

Most of the studies emphasize the benefits of medication adherence alone, but very few studies have thrown light on the importance of a healthy lifestyle that is essential in controlling hypertension. With this background, an attempt was made in the present study to assess the pattern of self-care practices and the factors associated with it, among hypertensive patients who attended to tertiary care center in Kurnool, Andhra Pradesh.

Objectives

To determine self-care practices among hypertensive adults and the association between self-care practices and socio-demographic factors.

*Corresponding author: Vijaya kumari Sathri

Department of Community Medicine, Govt. Medical College, Nandyal, Andhra Pradesh

MATERIALS AND METHODS

A hospital-based cross-sectional study was conducted among hypertensive patients who attended the Outpatient Department (OPD) of the Medicine Department, in Kurnool Medical College, Kurnool, during July and August of 2021.

Sample size and Sampling procedure - Sample size Calculated by using formula $n=4pq/l^2$, where “p” is Unfavourable self-care practices taken as 63% and “q” is Allowable error taken as 15% of “p” (Dasgupta. A. *et al*)¹¹ and the sample size obtained was 104.

By using the Simple random sampling method Hypertensive patients above 30 years of age, diagnosed at least 6 months earlier with Hypertension and who gave consent, were selected till the required sample was obtained. Patients who were not willing to participate were excluded from the study.

Data collection - Data was obtained by using a pre-tested, semi-structured questionnaire. The questionnaire consists of 3 parts. The first part contains questions regarding Socio-demographic data like age, gender, literacy status, area of residence, and socio-economic status. For the classification of socio-economic status subjects who had white cards issued by the Government of India were considered as BPL (Below Poverty line), and subjects who had pink cards and who had no card were considered as APL (Above Poverty line).

The second part contains questions regarding self-care practices. Three-point Likert scale was used to score each question. Score 2 was given for the response Frequent, score 1 for occasional, and 0 for never for all the questions except the questions 1) How often do you consume alcohol? 2) How often do you smoke?, 3)How often do you miss the dose of your medication? For these questions, the score was given as 2 for never, 1 for occasional, and 0 for frequent. Regarding self-care practices, a score of >9 was considered good self-care practices, and a score of <9 was considered poor self-care practices.

After getting informed written consent from literate participants and informed oral consent from illiterates by explaining the study to them, data was collected by interview method using the questionnaire.

Statistical analysis - Data was analyzed by using Microsoft Excel 2007 and SPSS 23. Descriptive data was presented in terms of percentages and a chi-square test was performed to identify those factors associated with unfavorable self-care practices among hypertensive patients with significant levels ($p<0.05$).

Ethical approval - The study was approved by the Institutional Ethics Committee (47/2021).

RESULTS

The study included a sample of 104 hypertensive patients attending the medicine OPD during the study period. Most of the study participants are above 60 years old, with a mean age of 56.5 ± 14.9 years. There was a male preponderance with 67.3% compared to 32.7% of females, 53.8% of participants were illiterate, 51% of participants belonged to rural areas and 51% of participants were below the poverty line (Table 1).

Table 1 Distribution of study participants based on socio-demographic characteristics (n=104)

Characteristics	Frequency	%	
Age	Up to 45	30	28.8
	46-60	30	28.8
	>60	44	42.4
Gender	Female	34	32.7
	Male	70	67.3
Literacy status	Illiterate	56	53.8
	Primary school	7	6.8
	High school	27	25.9
	Intermediate	5	4.8
Residence	Degree & above	9	8.7
	Rural	53	51.0
	Urban	51	49.0
SES	APL	51	49.0
	BPL	53	51.0

In the present study, it was found that 61.5% of the participants practiced good self-care practices (Figure 1).

34.6% of participants were frequently checking their BP, while 47.1 % were occasionally checking their BP. Most of the participants (64.4%) frequently moderated their salt intake and more than half of the participants (55.8%) avoided fatty food consumption. Only 14.4% of participants frequently performed physical exercise, while 25% checked their weight frequently. 26.9% of participants had the habit of smoking frequently, while 39.4% of participants smoked occasionally. It was terrible to note that 30.8% of participants frequently missed taking their dose of medication. 30.8% of participants consulted their healthcare provider frequently while 20.2% consulted their providers occasionally (Table 2).

Table 2 Self-care practices among the study participants (n=104)

Self-care practices	Frequent (%)	Occasional (%)	Never (%)
How often do you measure your BP	36 (34.6)	49 (47.1)	19 (18.3)
How often do you moderate your salt intake	67 (64.4)	31 (29.8)	6 (5.8)
How often do you avoid fatty food consumption	58 (55.8)	41 (39.4)	5 (4.8)
How often do you consume alcohol	12 (11.5)	21 (20.2)	71 (68.3)
How often do you perform physical exercise	15 (14.4)	25 (24.0)	64 (61.5)
How often do you check your body weight	26 (25.0)	6 (5.8)	72(69.2)
How often do you smoke	28 (26.9)	41 (39.4)	35 (33.7)
How often do you miss the dose of your medication	32 (30.8)	51 (49.0)	21 (20.2)
How often do you consult your healthcare provider	32 (30.8)	21 (20.2)	51 (49.0)

Self care Practices(%)

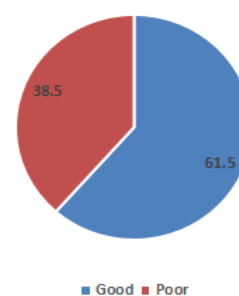


Figure 1 Distribution of study participants according to self-care practices

The proportion of participants practicing good self-care practices was higher among the below 45 years age group (63.3%), while the proportion of participants practicing poor self-care practices was higher among the age group 45-60 years (40%). The association between age and self-care practices was not significant statistically ($p=0.96$). Good self-care practices were being practiced more among females (82.3%) compared to males (51.4%) and the association was statistically significant ($p=0.002$). Among literates good self-care practices were being practiced more effectively (70.8%) compared to illiterates (29.2%) which is statistically insignificant. Participants living in urban areas were practicing good self-care practices (72.5%) compared to those living in rural areas (51%) and the association was statistically significant ($p=0.023$). Participants whose socioeconomic status was above the poverty line (72.5%) had good self-care practices compared to those below the poverty line (51%) and the association was significant statistically ($p=0.0003$) (Table 3).

Table 3 Sociodemographic factors and their association with self-care practices (n=104)

Factors	Poor self-care practices Frequency (%)	Good self-care practices Frequency (%)	Total Number (%)	Chi-square	P value
Age(in years)					
Upto 45	11(36.7)	19(63.3)	30(28.8)	0.07	0.96
46-60	12 (40)	18 (60)	30(28.8)		
Above 60	17 (38.7)	27 (61.3)	44(42.4)		
Gender					
Female	6 (17.7)	28 (82.3)	34(32.7)	9.246	0.002
Male	34 (48.6)	36 (51.4)	70(67.3)		
Literacy status					
Illiterate	26 (46.4)	30 (53.6)	56(53.9)	4.94	0.29
Primary school	2 (28.5)	5 (71.5)	7(6.7)		
High school	9 (33.33)	18 (66.66)	27(26)		
Intermediate	2 (40)	3 (60)	5(4.8)		
Degree & above	1 (11.11)	8(88.88)	9(8.6)		
Residence					
Rural	26 (49)	27 (51)	53(51)	5.125	0.023
Urban	14 (27.5)	37 (72.5)	51(49)		
Socio-economic status					
APL	14 (27.5)	37 (72.5)	51(49)	12.74	0.0003
BPL	26 (49)	27 (51)	53(51)		

DISCUSSION

In the present study, good self-care practices toward hypertension were seen among 61.5% of the participants, which nearly corresponds with studies done in Debre Tabor. (54.1%), Northwest Ethiopia⁽¹²⁾ and Addis Ababa (51%), Ethiopia⁽¹³⁾. In contrast to this study, self-care practices in the studies conducted in Harar Town (29%), and Eastern Ethiopia⁽¹⁴⁾ were very poor.

In this study, good self-care practices were being practiced more among the age group <45 years(63.3%) compared to the age group 46-60 years (60%) and age group >60 years (61.3%). The association between age and self-care practices was statistically not significant. Similar to this study, a study done by Ademe *et al.* (2019)⁽¹⁵⁾ in Ethiopia showed that good self-care practices were found in the age group <40 years, where the association between age and self-care practices was found statistically not significant.

In contrast to this study, in a study done by Shegaw Gelaw *et al.* in Debre Tabor, Northwest Ethiopia(2020)⁽¹²⁾; good self-

care practices were found more among the age group 40-64 years (57.1%) which was statistically significant. Similar results were seen in studies conducted by F.M. Huseen *et al.* (2019) in Harar town, Eastern Ethiopia⁽¹⁴⁾, where good self-care practices were seen among the age group > 60 years. The reason for this might be better knowledge of self-care practices among the elderly by conducting camps for them and regular visits to hospitals compared to the age group <45 years. However further investigation is needed to understand the effect of age on self-care practices.

In this study, the association between gender and self-care practices was found statistically significant. Females (82.3%) were found to have good self-care practices compared to males (17.7%). Similar to this study, a study done by F.M.Huseen *et al.* (2019) in Harar town, Eastern Ethiopia⁽¹⁴⁾, showed good self-care practices in females(35.1%) compared to males(25.8%). In contrast to this study, a study done by Ademe *et al.* (2019)⁽¹⁵⁾ in Ethiopia found that males practiced good self care practices compared to females. A study conducted by Anwar Abdulwahed *et al* in Southwest Ethiopia (2020)⁽¹⁶⁾ found that good self care practices were found almost equally among both males(44.88%) and females (44.52%).

In the present study, good self-care practices were found more among people who studied a degree and above(88.9%) and there was no significant association. Similar to this study, a study done by Shegaw Gelaw *et al* in Debre tabor, Northwest Ethiopia(2020)⁽¹²⁾; found that good self-care practices were found more among the group whose literacy status was college and above (64.5%), which was statistically not significant. In a study conducted by Sindew Mahmud Ahmed *et al* in Addis Ababa Ethiopia (2016)⁽¹³⁾ good self-care practices were more among groups whose literacy status was Secondary school and above (64.9%) which was statistically significant. Similar results were seen in studies conducted by F.M.Huseen *et al* (2019) in Harar town, Eastern Ethiopia⁽¹⁴⁾; where people who had formal education(38.6%) showed good self-care practices compared to people who had no formal education(17.8%).

In the present study, the association between residence and self-care practices was statistically significant. Participants living in urban areas (72.5%) were found to have good self-care practices compared to those living in rural areas (51%). Similar results were found in a study done by, Shegaw Gelaw *et al.* in Debre tabor, Northwest Ethiopia (2020)⁽¹²⁾; where urban subjects(60.8%) showed good self-care practices compared to rural subjects (35.6%), which statistically significant. Contrasting results were seen in Sindew Mahmud Ahmed *et al* in Addis Ababa Ethiopia (2016)⁽¹³⁾; where good self-care practices were seen more among rural subjects(79.2%) compared to urban subjects(20.8%), which was statistically significant. This may be because of the sedentary lifestyle of the urban population.

In this study, the association between socioeconomic status and self-care practices was statistically significant. participants whose socioeconomic status was above the poverty line (72.5%) had good self-care practices compared to those below the poverty line(51%). In a study conducted by Shegaw Gelaw *et al.* in Debre Tabor, Northwest Ethiopia (2020)⁽¹²⁾; where subjects who were rich (57%) had good self-care practices compared to poor(51.3%), which was statistically insignificant. In a study conducted by M. Huseen *et al.* (2019)

in Harar town, Eastern Ethiopia⁽¹⁴⁾; good self-care practices were seen more among subjects who were employed(34.9%) compared to unemployed(22.6%).

CONCLUSIONS

Self-care practices among hypertensives were satisfactory. Nearly two-thirds practiced good self-care. But poor self-care practices were found among males, residing in rural and with a lower economic status. These groups must be better counselled and further monitored during routine health care delivery services.

Limitations

This study was a cross-sectional and hospital-based study so the sample might not exactly reflect the community because people who come to the hospital are in a way having good self-care practices, as they came for check-ups. Good self-care practices should be strictly followed continuously for a very long time.

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Conflict of interest: None declared

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