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# **Original Research Article**

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# A study on non-utilization of healthcare services among known diabetic and hypertensive patients at RHTC in Krishna district, Andhra Pradesh

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### **ABSTRACT**

**Background:** Low uptake of health services for the management of hypertension and diabetes may reflect barriers related to individuals, health personnel, health systems, programs and health policies. Regularly on day to day basis, various services are available at the RHTC but it was found that less numbers diabetes and hypertensive patients are utilizing the health services at RHTC. With the above background the present study was planned and conducted to assess their health seeking behavior and to know the reasons of the non-utilization of health services at RHTC of Medical College.

**Methods:** This community based descriptive study was conducted at RHTC of a Medical College in Krishna District of Andhra Pradesh. In depth interview was conducted for 508 known hypertensive and diabetic patients who were diagnosed at least one year back by physician and or on anti-diabetic or antihypertensive medications (self-reported) for more than one year.

**Results:** 36% study participants were utilizing the services at RHTC. 21% study participants were utilizing services of Local RMP. 12% study participants were utilizing 104 services. 19% study participants said that RHTC was away from their home so they were not utilizing RHTC services. 28% agreed that doctors were inexperienced. 48% had opinion that prescribed drugs are costly. 21% said that transport facilities are not available.

**Conclusions:** This study identified a wide range of barriers facing by patients pursing health services indicating the need for targeted multi-faceted interventions. To improve hypertension and diabetes control, intervention should overcome capability barriers, intension barriers and more specifically discussed health system barriers.

Keywords: Health services, Non-utilization of services, Non communicable diseases, Health seeking behavior

### INTRODUCTION

Health Care is an expression of concern for fellow human beings. It is defined as a "multitude of services rendered to individuals, families or communities by the agents of the health services or professions for the purpose of promoting, maintaining, monitoring or restoring health." Such services might be staffed, organized, administered and financed in every imaginable way, but they all have

one thing in common; people are being "served", that is diagnosed, helped, cured, educated and rehabilitated by health personnel.<sup>2</sup> Medical care is a subset of a health care system. Health care has many characteristics; they include; appropriateness, comprehensiveness, adequate, availability, accessibility, affordability and feasibility.<sup>3</sup>

Hypertension is a major risk factor & powerful predictor of cardio-vascular morbidity and mortality. Improved

control of hypertension in turn has contributed to reduction in incidence rate for stroke and ischemic heart disease. Diabetes mellitus is modifiable risk factor for CVS. Diabetes mellitus has long term complications such as Diabetic retinopathy, neuropathy and nephropathy. To prevent these complications, diabetic patients needs to take anti- diabetic medications regularly. Attendance of health care is a necessary first step to get appropriate health care for hypertension and diabetes treatment.

Low uptake of health services for the management of hypertension and diabetes may reflect barriers related to individuals(e.g., lack of awareness on hypertension and diabetes, low priority given to asymptomatic conditions, competing priorities, costs, cultural factors, etc.); health personnel (e.g. skills to adequately treat noncommunicable diseases and underlying training); health inadequate structures, inefficient systems (e.g. organization, insufficient resources for health care of chronic conditions); and more generally, a restricted focus on blood pressure lowering programs and health policies in countries facing a double burden of communicable and non-communicable diseases. 4,5 At the Rural Health and Training Centre, Veleru, for the diabetes and hypertensive patients following services are available- such as blood investigations, medications, health education, exercise sessions. Regularly on day to day basis these services are available at the RHTC but it was found that less number diabetes and hypertensive patients are utilizing the health services at RHTC. Despite knowing that hypertension and diabetes has long term side effects, they are not utilizing services at RHTC. With the above background the present study was planned and conducted to assess the socio-economic status of study participants, to know the health seeking behavior and to know the reasons of the non-utilization of health services at RHTC of Medical College of Krishna district (AP), India.

### **METHODS**

# Study design and setting

This community based descriptive study was done at RHTC Veleru of a Medical College in Krishna District of Andhra Pradesh in India. The study area, with a population of approximately 34000 is the field practice area of Department of Community Medicine, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation. The study area is having both public and private health facilities available apart from traditional healers.

### Sample size and sampling

Assuming that 50% hypertensive and diabetic patients are utilizing health care facilities at RHTC for follow up as well as treatment for acute symptoms, the sample size was 400. But actual study subjects were 508 to get more valid result (n= 508). The RHTC caters health services to

9 villages among them 2 villages (Remalle and Veleru) were selected randomly. The population of 2 villages (Remalle-3423 & Veleru-3800) is 7223. The households of these hypertensive and diabetic patients were visited for data collection.

## Study tools

In depth interview was conducted for known hypertensive and diabetic patients who were diagnosed at least one year back by physician and or on anti-diabetic or antihypertensive medications (self-reported) for more than one year and willing to participate in study were included. Data was collected on socio-demographic profile, health seeking behaviors' and reasons for non-utilization of services which were provided at RHTC.

### Data collection

A prior permission from Institutional Ethic Committee was taken to conduct the study. A house to house survey was done during July to September 2015 and trained interviewers visited the selected households as per the record available at RHTC. If any household was found locked, it was visited once again. Informed written consent was taken from all the study participants before the interview. All available diabetes mellitus and hypertensive adults in the household were interviewed. The information regarding health seeking behaviors and non-utilization services of RHTC, were collected. The semi structured questionnaire was prepared to assess health seeking behavior amongst diabetic and hypertensive adults. Using closed ended questionnaires, the respondents were asked why they did not utilized facilities at RHTC. The socio-economic status was assessed using modified BG Prasad scale 2015. Thus the relevant data in accordance with objectives was collected, checked for completeness, compiled and analyzed using SPSS - version 20. Statistical tools applied were percentages and confidence interval.

# **RESULTS**

The Table 1 depicts that in Veleru village, out of 305 participants, 31 males & 98 females were suffering with only HTN, 50 males & 51 females were suffering with only DM and 33 males & 42 females were suffering with both the HTN & DM. In Remalle village, out of 203 participants, 36 males & 46 females were suffering with only HTN, 28 males & 29 females were suffering with only DM and 30 males & 34 females were suffering with both the HTN & DM.

Table 2 shows that 70% hypertensive patients were above 60 years of age, 22% were in the age group of 41-60 years and 8% belonged to below 40 years of age. In case of diabetes mellitus, 76% DM participants were above 60 years of age, 20% were in the age group of 41-60 years and only 4% belonged to below 40 years of age.

Table 3 depicts that 38% study participants were belonged to middle socio-economic status group, 25% belonged to upper middle, 21% belonged to upper lower,

9% belonged to lower and only 7% belonged to upper class.

Table 1: Socio- demographic profile of participants.

Sr. No.	Name of the village	HTN	HTN only		DM Only		& DM	ТОТАІ
		M	F	M	F	M	F	TOTAL
1.	Veleru	31	98	50	51	33	42	305
2.	Remalle	36	46	28	29	30	34	203
Total		67	144	78	80	63	76	508

Table 2: Age-wise distribution of study participant.

A go in rooms	Known cases of hypertension		Known cases of	Known cases of diabetes mellitus		
Age in years	Frequency	Percentage (%)	Frequency	Percentage (%)		
21-40	28	8	12	4		
41-60	77	22	59	20		
61-80	126	36	143	48		
>80	119	34	83	28		

Table 3: Socio- economic status of study participants.

Socio-economic class	Frequency	Percentage
Upper	35	7%
Upper middle	127	25%
Middle	193	38%
Upper lower	107	21%
Lower	46	9%
Total	508	100%

Table 4: Health seeking behavior of study participants.

Sr. No.	Health seeking behavior	Frequency	Percentage (%)	Interval estimation (95% confidence)
1.	Local RMP	107	21	18 to 25
2.	Railway Hospital, District Head quarters	15	3	2 to 4
3.	Private hospital, District level	46	9	7 to 12
4.	Private hospital, Block level	56	11	8 to 14
5.	PHC	20	4	2 to 6
6.	ESI hospital, District head quarters	5	1	1 to 2
7.	104 Services Utilization	61	12	9 to 15
8.	Dr. PSIMS & RF/ RHTC	183	36*	32 to 40
9.	Not going anywhere/ not taking any treatment	15	3	2 to 4

<sup>\*</sup>means 50% of them coming for lab investigations only and later on going to private practitioner for medication.

Table 4 points that only 36% study participants were utilizing the services at RHTC, but interestingly 50% of them coming for lab investigations only and later on going to private practitioner for medication. 21% study participants were utilizing services of Local RMP. 11% study participants were going to private hospital at Block level, 9% study participants were utilizing services at private hospital, District level. 3% study participants were going to railway hospital, District HQ, 4% were utilizing services at PHC. 12% study participants were utilizing 104 services. Interestingly, 3% study

participants were not utilizing any services at any health facilities.

Table 5 depicts that 4% study participants did not knew about RHTC. 19% study participants said that RHTC was away from their home so they were not utilizing RHTC services. 4% participants did not have any symptoms so they were not visiting RHTC. 7% study participants agreed that the hospital time and their working hours do not match, so they were not coming to RHTC. 28% agreed that doctors were inexperienced, studying and non-specialized so they had distrust for them so were not

utilizing health services at RHTC. 48% had opinion that prescribed drugs are costly. 21% said that transport facilities are not available. 28% were of the view that doctors are not co-operative, gives short duration for consultation and they have disrespect for poor patients. 12% were utilizing 104 services and were satisfied with

their services. 39% participants were of the view that branded medicines prescribed by their private physician were not available at RHTC, so were not utilizing health services at RHTC. 4% participants had fear of side effects of medicines so were not utilizing health services at RHTC.

Table 5: Reasons for non-utilization of RHTC services.

S.N.	Reason	Frequency	Percentage (%)	Interval estimation (95% Confidence)
1.	Not aware of RHTC	20	4	2 to 6
2.	Too far from home	97	19	16 to 23
3.	I have no symptoms	19	4	2 to 5
4.	Inappropriate hours for screening services that conflict with working hours	38	7	5 to 10
5.	Staff is inexperienced, studying, non-specialized so distrust	142	28	24 to 32
6.	Prescribed drugs are costly	244	48	44 to 52
7.	No transport facility available	107	21	18 to 25
8.	Doctors and staff are not cooperative, gives short duration of consultation, disrespect for poor patients	142	28	24 to 32
9.	I am utilizing 104 services & satisfied with their services	61	12	9 to 15
10.	Branded anti-hypertensive & anti diabetic drugs as prescribed by practitioners is not available at RHTC	198	39	35 to 43
11.	Because of side-effects of medication	18	4	2 to 5

### **DISCUSSION**

In the present study, it was observed that 36% study participants were utilizing the services at RHTC. Only 4% were utilizing services at PHC. 12% study participants were utilizing 104 services. Interestingly, 3% study participants were not utilizing any services at any health facilities.

The first point of contact for curative services in India is typically in the private sector and often with medical practitioners without a formal medical degree in modern medicine.<sup>6-8</sup> Prasanth et al, even in cases where patients obtain outpatient care in government hospitals, they often have to purchase medicine from private pharmacies, either due to frequent stock out of medicines at primary health centers or poor procurement and distribution of drugs at higher level Prasanth et al.<sup>9,10</sup>

In a study done by Bigdeli et al, it was revealed that 59% diabetic and hypertensive patients were diagnosed in the private sector and only 56% were on allopathic treatment that was mainly sought in the private sector (49%) in rural Cambodia. In a study done by Bovet et al, it was found that among the 161 hypertensive patients advised to seek health care, 34% reported to have attended a formal health care provider during the 12 month interval (63% public facility; 30% private; 7% both.) 12

In the present study regarding non-utilization of health services at RHTC, reasons being-- A study by Pascal Bovet et al, it was found that antihypertensive treatment was taken by 34% subjects at some point of time (suggesting poor uptake of health service) and 3% at the end of the 12 month follow up ( suggesting poor long term compliance). Health services utilization tended to be associated with older age, previous history of high BP, being overweight and non-smoking but not with education or wealth, lack of symptoms and cost of treatment were the reasons reported most often for not attending health care. 12 Participants believed that they did not need anti-hypertensive medication because they have no symptoms. <sup>13,14</sup> In the present study also 4% study participants said that they did not had any symptoms so not coming for follow up visit and treatment. In terms of availability, patients reported difficulties transportation, absence of or inaccessible health care facilities, short duration of physician consultation and inappropriate hours for screening services that conflict with working hours. 15-18 In the present study also. 19% subjects said that facility is too far from their home, 21% had difficulties and non-availability of transportation and 7% had problems due to working pattern that conflict with screening services. Affordability of care barrier included high cost of treatment. 19,14,20 Acceptability of provider-patient available care included poor communication, patient's distrust in the services provided. 13,17,21 Medication related barriers mainly

included side effects experienced due to anti-HT medications. <sup>13,22</sup> In the present study also, 28% subjects had distrust for the health care providers at RHTC, 28% subjects said that doctors are not co-operative and gives less time for consultation. 4% subjects said that they suffered from side-effects of drugs because of which not accessing medications at RHTC.

### **CONCLUSION**

This study identified a wide range of barriers facing by patients pursing health services indicating the need for targeted multi-faceted interventions. The perception of the people has to be changed to attract them more to government hospitals and health centers though improving the quality of care, proper maintenance of facilities and also by inculcating a caring and sympathetic attitude in health professionals while dealing the patients.

### Limitations

Though the literature acknowledges that poor hypertension and diabetes control is determined not only by patient barriers but also provider barriers, the large no of patient studies suggest that research still focused on accessing barrier at the patient level, rather looking at other stakeholders. So provider barriers studies also necessary to study barriers for compliance to improve the quality of life of patients.

### **Implication**

To improve hypertension and diabetes control, intervention should overcome capability barriers, intension barriers and more specifically discussed health system barriers. These barriers should be targeted at the patient level and provider level.

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