

Original Research Article

A study of knowledge, attitude and behavior of patients towards their illness and their relation to sociodemographic factors

Arti Muley, Sona Mitra*, Juhi Ramnani, Priyal Patel, Kuldeep Viramgama

Department of Medicine, PIMSR, Parul University, Waghodia, Vadodara, Gujarat, India

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*Correspondence:

Dr. Sona Mitra,

E-mail: sonamitra22@gmail.com

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ABSTRACT

Background: This study was conducted to assess basic knowledge, attitudes, and practices of patients to their illness and find its correlation with various socio-demographic factors.

Method: This was a cross-sectional questionnaire-based analytical study. All patients over 18 years of age who attended the OPD or were admitted to the medical ward and who agreed to participate in the study were included. A questionnaire regarding the demographic characteristics of the study participants as well as the patient's knowledge, attitudes, and practices regarding their disease was administered regularly by experienced physicians dealing with OPD and IPD both type of patients.

Results: Out of total 100, only 38% patients came for regular follow up and only 57% brought old records. 36% were not taking medications regularly for various reasons (trying alternative medicine (22.2%), advice from others (11.1%), found medicines ineffective and stopped without reconsulting (8.3%), fear of adverse effects (8.3%), couldn't afford (8.3%), worsening of symptoms (5.6%) etc. 19.4% had no reasons. 67% patients got medicines prescribed from a qualified clinician while other sources were pharmacist (9%), relatives/friends (5%) and self-medication (6%). Significantly more females, educated and employed were aware about their medical condition and medications. Significantly more educated and employed brought old records and came for regular follow up ($p=0.0187$), Significantly more educated sought qualified doctor's advice as compared to uneducated. ($p=0.0002$).

Conclusion: There is a need to educate patients about the importance of medication awareness, adherence, regular follow up, disadvantages of unscientific and unreliable information to improve compliance to treatment.

Keywords: Compliance, Education, Medication adherence

INTRODUCTION

The prevalence of chronic conditions continues to increase globally. One out of every two adults in the US and about 21% of the elderly in India have at least one chronic disease.^{1,2} Chronic conditions are the main cause of poor health, disability and death and account for the majority of health care costs, so adherence to long-term therapies is critical. Outcome of any medical condition in patients not only depends on the medication prescribed but also on patient behavior towards his/her disease condition,

medication adherence, regular follow up etc. Medication adherence is defined as the extent to which the patient follows and strictly adheres to medical instructions of medication timing, dosage and frequency.³ It has been reported that 10% of hospitalizations in elderly may be attributed to medication non-adherence.⁶

According to World Health Organization (WHO), as high as 50% of patients do not follow their medicine prescription which leads to poor outcomes and increases health care service utilization and costs.^{4,5} Addressing and

closing the medication adherence gap would significantly improve the health outcomes and will reduce the economic healthcare burden associated with chronic illness.⁷ The WHO has classified factors affecting medication adherence into five dimensions; socioeconomic factors, factors associated with healthcare system and those related to disease, therapy and patient.^{7,8} The majority of research to date has focused on patient-related factors. Moreover, majority of studies were conducted about a decade back.

This study was performed to assess the basic knowledge, attitude and practice of the patients towards their illness and to find its correlation with various socio-demographic factors mainly gender, education and employment of the patients.

METHODS

This was a cross-sectional analytical study which was carried out at Parul Sevashram Hospital in Gujarat from 1st September 2023 to 30th September 2023 after getting permission from ethics committee. All patients more than 18 years in age coming to medicine OPD or admitted in medicine wards who gave informed consent for participation in the study were included. The patients admitted in ICU or those with altered mental status were excluded. A questionnaire was prepared by experienced physicians dealing with patients in both OPD and IPD on a routine basis. The questionnaire had questions regarding demographic characteristics of the study participants as well as regarding knowledge, attitude and practice of the patients towards their illness.

The knowledge part consisted of questions regarding name and complications of disease as well as name/function, dose and adverse effects of the medicine being taken by them. The attitude and practice part consisted of questions like the source of knowledge, prescriber, duration since last visit (in case of chronic disease), whether brought old records and medication adherence.

The questionnaire thus prepared was translated into two other languages Hindi and Gujarati as we get a mixture of Hindi and Gujarati speaking patients at our hospital. After preparing the questionnaire, it was validated by three experts before being used for the study. Four intern doctors were trained to fill the questionnaire to ensure proper delivery of questions to the patients and proper interpretation of their answers. Data so collected was entered in Microsoft excel sheet for analysis.

Results are presented as mean± standard deviation (SD) for continuous variables and as percentages for categorical variables. The demographic characters are presented as percentage. The questions regarding knowledge, attitude and practice are also presented as percentage of patients giving correct answers. The data was further analyzed using Chi square test to find out if there was any association of demographic factors like education, gender and occupation with responses of the patients.

RESULTS

Demographic characteristics

Total 100 patients were included in the study. 54% were males and 46% were females. The mean age was 46.4±15.03 years (Range-18 to 78 years). 88% were married and 73% were educated. Of the educated, 39.7% had completed primary school education, 30.1% had studied up to SSE (Senior secondary), 19.2% had studied up to HSE (Higher secondary) and 11% were Graduates. Considering the occupational background of the study group, 49% of them were employed, most of them were farmers (44.9%) followed by semiskilled workers (30.6%), skilled workers (10.2%), professionals (8.2%) and clerks (6.1%). 62% of patients had a monthly income of less than Rs. 10,000, while only 4% had income >1 lakh rupees per month. The most common medical condition reported was hypertension (20%), followed by diabetes (13%) and anemia (11%). Others included chronic kidney disease (8%), thyroid disease (8%), infection (8%), liver disease (6%), ischemic heart disease (5%) etc (Table 1).

Knowledge

In the study population, 83% of the patients had some idea about the medical condition they had, while 17% had no idea about it. Only 44% knew the complications of the disease that they had while 56% had no idea about it.

Regarding knowledge about medications, 72% patients were aware about the medications that they were taking while 28% had no idea about it. Of the 72% who were aware of the medicines, only 10% had knowledge about the adverse effects of medications. Of the patients who knew about the side effects, 71.4% got the information from their doctor, while the other sources were media and relatives (14.3% each).

Attitude

Out of the total study population only 38% patients came for regular follow up while 62% did not. 57% of patients had brought old records with them, while 43% did not. The most common reason for not bringing the old records given by patients was that they were unaware of the need to bring them (48.8%). Other reasons were-forgot (25.4%), thought (or were told by relatives or friends) that they will need new investigations (14.6%) and 11% thought old records are insignificant (Table 1).

Practice

Out of the total study population, 64% patients were taking medications regularly while 36% patients were not. The most common reason for non-adherence was the desire to try alternative medicine (22.2%). Other reasons for non adherence were patient experienced adverse effects which they thought were because of medicines (16.7%) but didn't report to their clinicians, advice from relatives/friends/

neighbors (11.1%), found medicines ineffective and stopped without reconsulting the doctor (8.3%), fear of adverse effects of medicines (8.3%), couldn't afford (8.3%) and worsening of symptoms (5.6%). 19.4% said

they had no specific reasons. 67% patients got medicines prescribed from a qualified clinician. Other sources of prescription were pharmacist (9%), relatives/friends (5%) and self-medication (6%).

Table 1: Demographic and clinical characteristics of the study population.

	Mean±SD/N	%
Age (mean±SD) in years	46.44±15.03	
Gender		
Male	54	54
Female	46	46
Education		
Educated	73	73
Primary	29	39.7
SSE	22	30.1
HSE	14	19.2
Graduate	8	11
Uneducated	27	27
Marital status		
Married	88	88
Unmarried	12	12
Occupation		
Employed	49	49
Professional	4	8.2
Clerical	3	6.1
Farmer	22	44.9
Skilled worker	5	10.2
Semiskilled worker	15	30.6
Unemployed	51	51
Monthly income		
<10000	62	62
10k-30k	23	23
30k=1lakh	11	11
>1 lakh	4	4
Brought old records		
Yes	57	57
No	43	43
If no, reasons (n=43)		
Forgot	11	25.6
Did not know	21	48.8
Not effective	5	11.6
New investigations needed	6	14
Taken medicines regularly		
Yes	64	64
No	36	36
If no, reason (n=36)		
Ineffective	3	8.3
Worsened	2	5.6
Tried alternate medicine	8	22.2
Afraid of side effects	3	8.3
Can not afford	3	8.3
Felt side effects	6	16.7
Advised by others	4	11.1
No reason	7	19.4

Continued.

	Mean±SD/N	%
Medication prescribed by		
Medical doctor	67	67
Alternate medicine	13	13
Pharmacist		
Relatives/friends	5	5
Self	6	6
Regular follow up		
Yes	38	38
No	62	62
Has knowledge about current medical condition		
Yes	83	83
No	17	17
Medical conditions		
Diabetes mellitus	13	13
Hypertension	20	20
Ishchemic heart disease	5	5
Congestive heart failure	2	2
Stroke	3	3
Chronic kidney disease	8	8
Thyroid disease	8	8
Anemia	11	11
Infection	8	8
Liver disease	6	6
Migraine	3	3
Gastritis	1	1
Arthritis	2	2
Others	23	23
Knows about complications		
Yes	44	44
No	56	56
Aware about medications he/she is taking		
Yes	72	72
No	28	28
If yes side effects known		
Yes	7	10
No	65	90
If yes, source of information (n=7)		
Media	1	14.3
Relatives	1	14.3
Doctor	5	71.4

13% were taking alternative medicines for which none were given any written advice (Table 1).

Association between socio-demographic factors and knowledge, attitude and practice

On analyzing association of gender with knowledge, attitude and practice towards their illness, it was observed that significantly more females were aware about their

medical condition (93.4% vs 71.4% males; p=0.0166) and about the medications they were taking (84.8% vs 61.1%; p=0.0108). Similarly, significantly more females came regularly for follow up (50% vs 27.8%, p=0.024). However, there was no statistically significant difference between the two genders with regards to knowledge about complications of disease and adverse effects of medication, medication adherence, bringing of old records and advisor of medications (Table 2).

Table 2: Effect of gender on knowledge, attitude and practice

Knowledge	Total (100)	Male (54)	Female (46)	P value
Knows about current medical condition	83 (83%)	40 (71.4%)	43 (93.4%)	0.0166*
Knows about complications	44 (44%)	20 (37.03%)	23 (50%)	0.1933
Aware about medications he/she is taking	72 (72%)	33 (61.1%)	39 (84.8%)	0.0108*
Knows about side effects of medication	7 (7%)	2 (3.7%)	5 (10.9%)	0.1808
Attitude				
Brought old records	57 (57%)	29 (53.7%)	28 (60.9%)	0.4711
Regular follow up	38 (38%)	15 (27.8%)	23 (50%)	0.024*
Took medication on doctors advise only	67 (67%)	37 (68.5%)	30 (65.2%)	0.7265
Practice				
Compliance	64 (64%)	30 (55.6%)	34 (73.9%)	0.059

*P≤0.05 was considered to be statistically significant.

Table 3: Effect of education on knowledge, attitude and practice.

Knowledge	Total (100)	Educated (73)	Uneducated (27)	P value
Knows about current medical condition	83 (83%)	67 (91.8%)	16 (59.3%)	0.004*
Knows about complications	44 (44%)	33 (45.2%)	11 (40.7%)	0.6898
Aware about medications he/she is taking	72 (72%)	62 (84.9%)	10 (37%)	<0.0001*
Knows about side effects of medication	7 (7%)	6 (8.2%)	1 (3.7%)	0.442
Attitude				
Brought old records	57 (57%)	46 (63%)	11(40.7%)	0.048*
Regular follow up	38 (38%)	33 (45.2%)	5 (18.5%)	0.0187*
Took medication on doctors advise only	67 (67%)	57 (78.1%)	10 (37.04%)	0.0002*
Practice				
Compliance	64 (64%)	52 (71.2%)	12 (44.4%)	0.0153*

*P≤0.05 was considered to be statistically significant.

Table 4: Effect of occupation on knowledge, attitude and practice.

Knowledge	Total (100)	Employed (49)	Unemployed (51)	P value
Knows about current medical condition	83 (83%)	45 (91.8%)	38 (74.5%)	0.0278*
Knows about complications	44 (44%)	23 (46.9%)	21 (41.2%)	0.5619
Aware about medications he/she is taking	72 (72%)	36 (73.5%)	36 (70.6%)	0.7485
Knows about side effects of medication	7 (7%)	6 (12.2%)	1 (2%)	0.0774
Attitude				
Brought old records	57 (57%)	38 (77.6%)	19 (37.3%)	0.0001*
Regular follow up	38 (38%)	22 (44.9%)	16 (31.4%)	0.1653
Took medication on doctors advise only	67 (67%)	37(75.5%)	30 (58.8%)	0.0786
Practice				
Compliance	64 (64%)	33 (67.3%)	31(60.8%)	0.4948

*P≤0.05 was considered to be statistically significant.

DISCUSSION

Medication adherence has become a big concern to clinicians and healthcare systems worldwide because of

growing evidence associating nonadherence causing adverse outcomes and higher costs of care.^{9,10} The management of chronic illnesses require a long-term

pharmacological approach. Although these medications effectively control disease, their full benefits are often not realized due to medication non-adherence. In our study, 64% patients were taking medications regularly while 36% patients were not. In a study performed by Prabhakar et al reported that only 76.44% patients were taking medications regularly and forgetting to take medication (55.3%) was the most common cause for non-adherence.¹¹ In another study done in Saudi Arabia, having no specific reason for medication non-adherence was the most common cause for non-adherence.¹² Other reasons included failure to understand the instructions, experiencing side effects or were afraid of getting used to the drug, forgetting to take medications and others were too busy to take them.

This study aimed at better understanding of basic knowledge, attitude and practice of the patients towards their illness, in Western part of India. Knowledge of the disease involves a range of beliefs based on the information (regarding the etiology and exacerbating factors of the disease, identification of symptoms and associated complications, available methods of treatments and possible outcomes) that the patient has collected over his/her life, both before and after the diagnosis.¹³

In our study population, the percentage of persons who had some knowledge of their disease and medication was similar to the percentage of educated persons in the study population. Thus, as in other previous studies significantly more educated persons were aware about their disease and medications.^{14,15} Similarly, significantly more educated persons adhered to medicines and follow up. However, very less percentage of the same educated people knew about complications of the disease or adverse effects of the medication. Almost one third of the patients got information regarding their disease not from qualified clinicians but from media and relatives/friends and their knowledge was based not on scientific facts but on common beliefs. Surprisingly, significantly more females were aware about their medical condition and the medications they were taking. Also, significantly more females as compared to males came for regular follow up. Similar findings were reported by Shen et al.¹⁶ They studied gender differences in knowledge, attitude and practices towards cardiovascular disease and its treatment among Asian patients and found females had greater knowledge of disease conditions. Attarchi et al also showed higher mean knowledge scores in women compared to men in Iranian population.¹⁷ However, knowledge about complications of disease, side effects of medications, advisor of medications, adherence to medications and follow up were found to be similar in the two genders. Much less than half of the patients came for regular follow up and almost half of the patients did not bring old records with them for various reasons (forgot, advised by others, did not realize significance of old records) despite history of long duration of disease. More than one third of the patients did not take medicines regularly for various reasons (trying alternative medicines,

anticipating/experiencing adverse effects, advice from others and no response to medicines). For almost one third of the patients, source of advice of medicines was not qualified doctor but pharmacist, relatives/friends, alternative medicines, and self-medication. It has been shown earlier also that those patients who are better educated and who have more accurate knowledge of their disease comply better with the treatment whereas incomplete or inaccurate knowledge of one's disease may be a limiting factor in treatment.^{18,19} Patients can have poor awareness about the need to take medication as prescribed, and they tend to adjust their doses according to their understanding which may be based on incorrect or erroneous beliefs about medication.

Poor health literacy increases the adherence problem, and there can also be difficulties in understanding written language, especially if it is not written in a patient's mother tongue. We also found that awareness about disease was significantly more in patients who were employed when compared to unemployed patients. Education could have been an important factor in these patients. (78.1% of employed were educated whereas only 37.7% of unemployed patients were educated). Thus, it was observed that patients derive the knowledge of their disease from various sources, for example, information from physicians or other health care professionals, from other patients with similar health condition, relatives, information available in mass media, or the internet. The accuracy of this information may vary and some of them may actually be false leading to nonadherence, progression of disease and development of complications even in diseases like hypertension and diabetes in which progression and complications can be easily avoided with proper and regular treatment. Improving the knowledge regarding the disease, its complications and adverse effects and that they are mostly irreversible which can be easily handled. Patient education can play a very crucial role in facilitating patients' acceptance of their disease condition and understanding the behavioral changes required for active participation in treatment. Chronic diseases such as hypertension, dyslipidemia, diabetes etc. require patient education to achieve adequate control and prevent adverse health outcomes.²⁰⁻²²

The limitations of the study were a single centre study, however a multicentric study would have given a better idea about population dynamics and variations due to differences in geographical areas or cultural differences. Also, it has a smaller sample size. A larger sample would have given a better insight in view of the global diseases in consideration.

CONCLUSION

To improve medication adherence, better communication and information on the disease and its medication appeared to be the important concepts for patients. Many patients derive the knowledge of their disease from other patients with similar health condition, relatives, friends,

information available in mass media, or the internet. The accuracy of this information may vary and may also be false. There is a need of educating the patients about disadvantages of unscientific, unreliable information and shifting the source of information to scientific facts and qualified personnels to improve adherence and limit progression to debilitating complications.

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