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Original Article

Factors influencing compliance to treatment among people with chronic illness in an urban area of south india

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ABSTRACT

Introduction -From being predominant as the leading causes of morbidity and mortality communicable diseases are now being replaced by chronic non-communicable diseases as the major causes of public health concern. By the year 2020, 80% of the disease burden in the developing countries of the world is expected to come from chronic conditions. Compounding the problem is the fact that adherence to therapies for chronic conditions can be as low as 20%. This results in poor health outcomes at a very high cost to society, governments, and families. **Methods**- A cross sectional community based study was conducted in the urban field practice area of M S Ramaiah Medical College using modified cluster sampling technique. All persons who were ill or on long term medication or were hospitalized for a period more than three weeks in the last one year were interviewed. A semi-structured pre-tested questionnaire which contained questions regarding duration of treatment, regularity of treatment and reasons for irregularity/stopping of treatment was used for the purpose of collection of data which was carried out by interview method by house-to-house visits. **Results** -Prevalence of chronic illness was highest in the age group of >60 with 46.6% followed by 46-60 age group with a prevalence of 31.4%. The mean duration of illness was 58.44 months and mean duration of treatment was 54.58 months. (table 1). In the study population 60.4% were regular with their treatment. Regularity of treatment was significantly associated with social class, literacy level, and occupation. Symptomatic improvement was the most common reason (18.8%) for irregularity or stopping of treatment followed by cost considerations (11.5%). Multivariate analysis of 32 variables included in the study showed association of regularity of treatment with sex, social class and family income. **Conclusion** -Role of socio-demographic factors in ensuring treatment compliance as found in the present study calls for involvement of families of people suffering from chronic illnesses in ensuring compliance to treatment.

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1. Introduction

From being predominant as the leading causes of morbidity and mortality communicable diseases are now being replaced by chronic non-communicable diseases as the major causes of public health concern. By the year 2020, 80% of the disease burden in the developing countries of the world is expected to come from chronic conditions.

Compounding the problem is the fact that adherence to therapies for chronic conditions can be as low as 20%. This results in poor health outcomes at a very high cost to society, governments, and families [1].

Despite the clinical differences across these chronic conditions, each illness confronts patients and their families with the same spectrum of needs: to alter their behaviour; to deal with the social and emotional impacts of symptoms, disabilities, and approaching death; to take medicines; and to interact with medical care over time.

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In return, healthcare must ensure that patients receive the best treatment regimens to control disease and mitigate symptoms, as well as the information and support needed effectively to self manage their health and, in many instances, their death [2].

In this context it is essential to understand the role of various factors which influence compliance to treatment of chronic illness.

2. Materials and Methods

The study protocol was submitted for ethical clearance to the ethical committee of M S Ramaiah Medical College and clearance was obtained before the commencement of the study. This cross sectional community based study was conducted in the urban field practice area of M S Ramaiah Medical College using modified cluster sampling technique. All persons who were ill or on long term medication or were hospitalized for a period more than three weeks in the last one year were interviewed. A semi-structured pre-tested questionnaire which contained questions regarding duration of treatment ,regularity of treatment and reasons for irregularity/stopping of treatment was used for the purpose of collection of data which was carried out by interview method by house-to-house visits. Modified B.G.Prasad classification was used for classification of socio-economic status of the study population. Data was analysed using SPSS 11.0 .Descriptive statistics , chi-square test and factor analysis were used for the purpose of analysis of data.

3.Results

Prevalence of chronic illness in the study population was more among females 12.3% compared to males which was 7.8% . Prevalence of chronic illness was highest in the age group of >60 with 46.6% followed by 46-60 age group with a prevalence of 31.4%. . The mean duration of illness was 58.44 months and mean duration of treatment was 54.58 months. (table 1) . In the study population 60.4 % were regular with their treatment . Regularity of treatment was significantly associated with social class (p=0.002), literacy level(p=0.01), and occupation, p=0.05).Symptomatic improvement was the most common reason (18.8%) for irregularity or stopping of treatment followed by cost considerations (11.5%). Multivariate analysis of 32 variables included in the study showed association of regularity of treatment with sex, social class and family income.

Table 1. Distribution of study population according to Duration of illness and duration of treatment(n=417)

Duration of illness /duration of treatment	More than 2 years	More than 1 year	6 months -1year	3 weeks -6months	Total
Duration of illness	326(78.2)	37(8.9)	16(3.8)	38(9.1)	417(100.0)
Duration of treatment	307(73.6)	52(12.5)	17(4.1)	41(9.8)	417(100.0)

Table 2 Distribution of study population according to Regularity of treatment(n=404)

Regularity of treatment	Frequency	Percent
Completely stopped	22	5.44
Irregular	138	34.15
Regular	244	60.46
Total	404	100.0

excludes 13 cases where regular treatment was not required

Table 3 Distribution of study population according to Reason for stopping Or irregularity of treatment (n=404)

Reason for stopping /irregularity	Frequency	Percent
Improvement	79	18.9
Side effects	17	4.1
Cost	48	11.5
Any other#	15	3.6
Not applicable*	244	59.9
Total	404	100.0

*Regular with treatment

Other reasons like forgetting to take the medication, nobody to remind etc

TABLE 4. Socio-demographic factors and regularity of treatment

Variable	Factor loading	Communality
Need for a special diet	0.542	0.706
Regularity of treatment	0.483	0.684
Sex	0.480	0.721
Person preparing the special diet	0.476	0.597
Requires regular follow-up or not	0.455	0.713
Social class	-0.455	0.746
Family income	0.417	0.787
HDRS	-0.399	0.493

4. Discussion

In a study to assess patients' adherence to new medication for a chronic condition ,patients' problems with their medication, and their further information needs it was found that Sixty seven (30%) of 226 patients were still taking their medication at 10 days and 43 of 171 (25%) still taking their medication at 4 weeks were non-adherent. At 10 days 55% of the non-adherence was

unintentional and the remainder was intentional; these proportions were similar at 4 weeks. 138 of 208 (66%) participants still taking their new medication at 10 days reported at least one problem with it. 137 of 226 patients (61%) expressed a substantial and sustained need for further information at 10 days and 88 of 171 (51%) at 4 weeks. Several patients who were adherent or reported no problems at 10 days were non-adherent or had problems at 4 weeks.

Patients newly started on a medication for a chronic condition have a substantial unmet need for information and support 10 days after prescribing [3].

In the present study 11.5 % of the subjects discontinued or stopped treatment because of cost which is lower than as found by Piette John, D, Michele Heisler, Todd H. Wagner [4] who reported that 18% of respondents reported at least one episode of cost-related medication underuse in the previous year.

The majority of respondents taking each condition-specific medication reported cost-related under use of that specific treatment type, although many reported cutting back only on medications for other conditions. Cost-related adherence problems were most common for medications treating arthritis, depression, back pain, asthma, migraine headaches, and stomach ulcers (all treatment-specific restriction rates

5. Conclusion

Role of socio-demographic factors in ensuring treatment compliance as found in the present study calls for involvement of families of people suffering from chronic illnesses in ensuring compliance to treatment.

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