

TREATMENT COMPLIANCE AND ITS CORRELATES IN ADULTS ASTHMA PATIENTS ATTENDING COLOMBO SOUTH TEACHING HOSPITAL

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INTRODUCTION

Asthma is a significant health problem affecting millions of people worldwide (Ministry of Healthcare & Nutrition, 2001). It affects quality of life and leads to missed work days, missed social and recreational opportunities, repeated hospitalizations and emergency room visits of patients with asthma for urgent care even affecting economy of the individual and the country (Canadian institute for Health Information, 2001 as cited in Klomp *et al.*, 2008).

The aim of asthma management is to achieve and maintain asthma control level, requiring pharmacotherapy along with strict adherence to environmental control measures (Ministry of Healthcare & Nutrition, 2001). Patients' compliance is of paramount importance in achieving this goal (Fitzgerald, 2001 as cited in Tavesoli *et al.*, 2006).

This study was carried out to determine the factors affecting treatment compliance among asthma patients attending the asthma clinic in Colombo South Teaching Hospital (CSTH).

METHODOLOGY

Descriptive cross sectional study design was used to assess a sample of 60 asthma patients attending asthma clinic in Colombo South Teaching Hospital (CSTH) during March 2009 to June 2009. The sample consisted of adults of 18 years or above. All participants had been diagnosed as asthmatics for 6 months or more and were on anti asthma medications. Patients with heart diseases and other chronic lung diseases were excluded.

An interviewer administered structured questionnaire was used to collect data. The questionnaire was pilot pre-tested for understandability and clarity.

Compliance was assessed using the scoring system of World Health Organization (2004). Higher the score, higher was the patient's compliance (Table 01).

The associations between the compliance and the factors suspected to be associated were determined by using two sample *t* test after dividing the sample into two groups as indicated in Table 02.

Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medical Sciences of the University of Sri Jayewardenepura and the Ethics Committee of the CSTH. Informed voluntary written consent was obtained from participants. Minitab14 statistical package was used for all calculations.

RESULTS AND DISCUSSION

Table 01 shows the summary statistics of the compliance scores. The possible scores ranged from 4 to 20.

	Mean	Median	Minimum	Maximum	SD
Compliance	14.85	15	8	18	2.06

Table 01 Overall Treatment Compliance

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Factors	Group	No	Mean	SD	t-value*	p-value
Sex	female	40	14.80	2.21	-0.28	0.779
	Male	20	14.95	1.79		
Marital status	Ever married	51	14.80	1.99	-0.34	0.741
	Never married	9	15.11	2.57		
Educational level	=/> O/L	21	15.14	1.62	-0.89	0.379
	<O/L	39	14.69	2.27		
Type of family	Extended	27	15.04	2.12	0.63	0.532
	Nuclear	33	14.70	2.04		
Income level	=/> Rs.5000	44	14.77	2.16	-0.51	0.611
	< Rs.5000	16	15.06	1.84		
Family history of asthma	Absent	43	14.98	1.81	0.64	0.529
	Present	17	14.53	2.65		
History of chronic diseases	Present	24	14.67	1.74	-0.59	0.558
	Absent	36	14.97	2.27		
Duration asthma	1-5 years	17	15.0	1.54	-0.41	0.682
	>5 years	43	14.79	2.25		
Asthma control level	Controlled	20	16.00	1.62	3.56	0.001**
	Poorly controlled	40	14.28	2.04		
Perception of asthma and its treatments	Positive	35	15.54	1.75	-3.23	0.002**
	Negative	23				
Side effects						
Bad taste in mouth	Yes	19	1.58	0.51	-0.13	0.899
	No	41	1.56	0.50		
Dry mouth	Yes	35	1.57	0.50	-0.09	0.931
	No	25	1.56	0.51		
Body weakness	Yes	25	1.72	0.46	-2.10	0.041**
	No	35	1.46	0.50		
Voice changes	Yes	13	1.62	0.51	-0.39	0.699
	No	47	1.55	0.50		

*Two sample t test

** Difference in compliance means significant at $p = 0.05$ level

Table 02 Association of compliance with personal and disease related factors N = 60

The effect of asthma symptom control level on treatment compliance showed a significant association similar to study done by Tavesoli *et al.* (2006). The current study showed a significant association between patients' perception of asthma and its treatments and their compliance, similar to Horn and Weinman (2002).

The effect of positive family history had no significant association on treatment compliance in the current study while Tavesoli *et al.* (2006) had reported deferent results. In the current study, the effect of the marital status, type of family, income level, educational level, and history of having other chronic diseases had no significant association with the treatment compliance similar to the study by Clark *et al.* (1999) and Tavesoli *et al.* (2006).

A significant association was seen between perceived side effect of body weakness after taking asthma medications and treatment compliance in the current study. Horne and Weinman (2002) suggested the side effects as negative contributing factors of treatment compliance.

With regard to quality of life; out of 60 patients participated, 23% were hospitalized, 27% were undergone emergency treatments and 33% were unable to participate in their social events while 28% (5 out of 18 employees) unable to report for work during previous 6 months of the study due to asthma.

CONCLUSION/RECOMMENDATIONS

The main factors which contributed to treatment compliance were asthma control level, side effect of body weakness and perception of asthma and its treatments.

Since this study was confined to a small sample of asthma patients attending Csth, the results cannot be generalized to all asthma patients in Sri Lanka. Nevertheless, exploration of factors affecting asthma treatment compliance would be useful to make hospital staff aware to take necessary actions to motivate and encourage patients on compliance. As the patients' perception was an affecting factor for compliance, provision of adequate information regarding asthma management is the possible strategy to achieve optimum patient compliance. Further qualitative studies are encouraged to explore patients' perception regarding asthma and its management.

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