

A study of attitude toward medication and medical help-seeking among medical and pharmacy students

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ABSTRACT

Background: Attitude toward medication and medical help-seeking varies among students and has a bearing on keeping optimum health. There is a paucity of studies examining these variables among medical and pharmacy students.

Aims: To know the attitude toward medication and medical help-seeking and its relationship in medical and pharmacy students.

Materials and methods: Three hundred and six students (Pharmacy = 162, Medical = 144) were assessed with socio-demographic and clinical proforma, Hogan Drug Attitude Inventory (DAI), and the action/intention sub-scale of attitudes toward medical help-seeking scale (ATMHSS).

Results: Mean score on DAI score and ATMHSS were 14.02 and 26.29, respectively. Pharmacy group had statistically significant lower score ($MU = 1.012$, $Z = -2.012$, $p = 0.044$) on DAI. There was a statistically significant group difference between poor and partial drug attitude ($MU = 6570.500$, $Z = -2.425$, $p = 0.015$), and poor and good drug attitude ($MU = 1532.000$, $Z = -2.686$, $p = 0.007$) on the score of ATMHSS.

Conclusion: Pharmacy students tend to have negative attitude toward medication use as compared to medical students. There is negative association between poor attitude toward medication and medical help-seeking.

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Introduction

Attitude is an enduring organization of beliefs, feelings, and behavioral tendencies toward socially significant objects, groups, events, or symbols [1]. Attitude varies with personal relevance, knowledge about the object, and direct experience. Medication is an important tool of treatment, and medication use is often accompanied by different attitudes [2]. An attitude toward medication also varies with a number of factors like education, socio-economic status, self-care orientation, medication knowledge, and state of health [3]. Understanding these attitudes can help explain the variations in health care utilization [4].

Patients' attitude toward medication play an important role on medication adherence and is shaped by medication-related factors like present

and previous experience of side effects, environmental factors like attitude of family members and their knowledge regarding patients' illness and some personal characteristics such as attitudes toward health and illness[5,6]. WHO also acknowledged the reasons for non-acceptance of medication to be due to lack of information about rational use of drug, incorrect or incomplete knowledge given by physician or incomplete counseling by pharmacist [7]. Attitudes toward drugs have been investigated in European countries and it has been found that better doctor-patient relationship and specific interventions to change the attitude enhance medication acceptance [8]. Observation among American population had similar results and attitude was also influenced by the current health status and past use of treatments [9].

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Health seeking is approaching the healthcare facilities for some form of physical or psychological health problem. Health seeking is predominantly shaped by attitude and belief. Studies indicate that attitudes are at the basis of medical help-seeking [10,11]. People fearing medical tests or who are skeptical of modern medicine have negative attitude toward health seeking. Attitudes influence both, curative and preventive medical help-seeking [12]. Personality, interpersonal factors and social factors may also mediate these attitudes and influence help-seeking.

Accurate measurement of medical health seeking is challenging. There is no comprehensive scale to measure the attitudes toward medical help-seeking. Earlier, attitudes toward help-seeking were measured with several different scales [13–15]. Such scales have few items and little evidence of adequate reliability. We have used action/intention sub-scale of attitudes toward medical help-seeking scale (ATMHSS) to overcome these issues [16].

Pharmacy curriculum often emphasizes on the identification and reporting of number of side effects, and focus is more on safety monitoring associated with medication use [17,18]. This may mediate in developing negative attitudes (that medication is not safe) toward medication. Indirect evidence suggests that pharmacy students are often less attentive to health care needs and do not visit physicians [19]. They often experience poor psychological health and suffer from anxiety and depressive disorders leading to poor quality of life [20–22].

On the other hand, medical curriculum emphasizes more on use of medication to improve a medical condition. Thus, focus involves more on rigorous use of medication than focusing on side effects. Medical students also have higher levels of physical and psychological health problems and often tend to self-medicate [15,22–25].

Attitudes toward seeking medical help and medication have preventive and therapeutic implications. Delay or avoidance in seeking professional attention for symptoms of potentially serious medical problems are costly in terms of human suffering and worsening of conditions when such symptoms are ignored or misinterpreted.

There is indirect evidence that attitude mediates as barrier in seeking medical help among medical and pharmacy students. Avoiding medical services in this group is much more common than general population. More than 50% of them do not utilize health services and instead self-medicate. Common reason of avoiding health services is the belief that

availing health care services is a burden to health care providers [26–28]. Such behavior not only increases the chances of inappropriate treatment, but it also predisposes them to face consequences of worsening of ongoing illness. There is a knowledge gap in the literature as little attempt has been made to explore the attitude of medical and pharmacy students toward medical help-seeking and medication, and therefore, there is a need to study these variables in this population, as they face more health issues than general population requiring medication. We have conducted this study to examine the attitude of medical and pharmacy students toward medical help-seeking and medication. Objectives of our study were to know the degree of medical help-seeking, attitude toward medication and their relationship. We hypothesized that pharmacy students will have poor attitude toward medication as compared to medical students, and it will be inversely related with medical help-seeking.

Methods

This cross-sectional study was conducted amongst students of two constituent teaching institutions of Jagadguru Sri Shivarathreeswara (JSS) University-Mysore (Karnataka, India)—JSS Medical College and JSS Pharmacy Colleges. Both colleges conduct undergraduate and post graduate course in the respective fields. A total of 345 students were approached to participate in the study over a period of 1 month. Three hundred and six students met the selection criteria (students from JSS Pharmacy Colleges = 162, students from JSS Medical college = 144), and were included in this study after obtaining informed consent. Inclusion criteria was pursuing a graduate course in pharmacy or medicine for at least two year duration. Those with severe physical illness requiring hospitalization were excluded from the study as their perception about medication may be influenced by the distress of illness.

Participants were given a socio-demographic proforma designed for this study. Attitudes toward drugs were assessed with Hogan Drug Attitude Inventory (DAI). The DAI was developed by Hogan et al. [2] to measure attitudes toward medications in adults. It is a self-administered scale consists of 30 items (no domains or sub-group), with true or false response. True response is scored 1 while false response is scored –1. It mainly assesses awareness of the need for medication, awareness of the effects of psychotropic drugs, impression of medication, etc. Depending upon the total DAI score, patients

are divided into 3 groups—from 0 to 10: having poor attitude; from 10 to 20: with partial attitude; and from 20 to 30: with good attitude. The study of internal consistency between the 30 items is rated good ($\alpha = 0.88$). The test-retest reliability is satisfactory ($r = 0.99, p < 10^{-3}$), as well as inter-rater reliability (ICC = 0.99) [29].

The original DAI was validated in a sample of 150 outpatient adults diagnosed with schizophrenia and taking typical antipsychotic medications [29].

Attitudes toward medical help-seeking were assessed using the action/intention sub-scale of ATMHSS [16]. Original scale was developed by Fischer et al. [16] and consists of 35-item likert scale, however, a factor analytically derived 12-item action/intention subscale was used in the present study. The items on this scale have possible responses of agree, partly agree, partly disagree, and disagree, and responses are awarded a score of 3–2–1–0 correspondingly, except for item 4 and 11 (reversal items) for that responses are awarded as 0–1–2–3. In initial validation study that was conducted among college students, the 12-item attitudes toward seeking medical help action/intention subscale was internally consistent, alpha $r = 0.82$, it had strong test-retest reliability ($r = 0.91$) and was predictive of medical contacts and appointments both at immediate ($r = 0.52$) and later ($r = 0.45$) time points [16]. Strengths of this scale include adequate validation and psychometric properties, short form, and it assesses a health-risk attitude scale instead of a general risk attitude scale.

The data was analyzed using SPSS version 16.0. Analysis of demographic variables and explanatory models were done with descriptive statistics. Since normal distribution was not established in analysis of data distribution, Mann–Whitney U (two groups) and Kruskal–Wallis Test (three or more group) was conducted to find out the group difference of demographic variables, ATMHSS and DAI. The level of statistical significance was kept at $p < 0.05$ for all tests.

Results

Demographic characteristics were characterized by more number of female participants, belonging to pharmacy course, not suffering from illness or family history of chronic illness, have better attitude toward medical help-seeking, and had partial attitude toward medication (Table 1).

Study sample had a mean age of 20.6 years and mean education of 2.5 years. Mean scores on DAI

Table 1. Demographic and clinical characteristics.

Variables		Frequency	Percent
Sex	Male	113	36.9
	Female	193	63.1
Course	Pharmacy	162	52.9
	MBBS	144	47.1
Currently having in chronic illness	Present	14	4.6
	Absent	292	95.4
Any significant illness in last 6 month	Present	59	19.3
	Absent	247	80.7
Chronic illness in family member	Present	49	16.0
	Absent	257	84.0
Death of near and dear one in past 6 month due to illness	Present	29	9.5
	Absent	277	90.5
ATMHSS Score	Low	5	1.6
	Moderate	87	28.4
	High	214	69.9
DAI Score	Poor	97	31.7
	Partial	165	53.9
	Good	44	14.4

ATMHSS = Attitudes toward medical help-seeking scale, DAI = Hogan Drug Attitude Inventory.

Table 2. Demographic and clinical characteristics.

Variables (N = 306)	Minimum	Maximum	Mean	SD
Age	16	29	20.66	2.13
Education	2	9	2.58	1.44
Total DAI score	0.00	30.00	14.02	6.01
Total ATMHSS score	11.00	36.00	26.29	4.57

ATMHSS = Attitudes toward medical help-seeking scale, DAI = Hogan Drug Attitude Inventory.

Table 3. Group difference of courses in the score of ATMHSS and DAI in Mann–Whitney U test.

Variables	Course	N	Median	MU	Z	p
ATMHSS score	Pharmacy	162	27.00	1.151	—	0.839
	MBBS	144	14.00			
DAI score	Pharmacy	162	14.00	1.012	—	0.044
	MBBS	144	27.00			

ATMHSS = Attitudes toward medical help-seeking scale, DAI = Hogan Drug Attitude Inventory.

was 14.02 out of 36 maximum score, and a mean scores on ATMHSS was 26.29 out of maximum 30 score (Table 2).

Based upon the course of participants, there was no group difference on the score of ATMHSS (MU = 1.151, $Z = -0.203, p = 0.839$) between pharmacy and medical student, while pharmacy group had a statistically significantly lower score (MU = 1.012, $Z = -2.012, p = 0.044$) on DAI compared to medical student (Table 3).

Table 4. Group difference of DAI on the score of ATMHSS in Mann–Whitney *U* test.

Variables		N	Median	MU	Z	p
ATMHSS score · DAI	Poor attitude	97	25	6570.500	—	0.015
	Partial attitude	165	27			
ATMHSS score · DAI	Partial attitude	165	27	3339.500	-0.819	0.413
	Good attitude	44	28			
ATMHSS score · DAI	Poor attitude	97	25	1532.000	—	0.007
	Good attitude	44	28			

ATMHSS = Attitudes toward medical help-seeking scale, DAI = Hogan Drug Attitude Inventory.

In Mann–Whitney *U* test, the analysis of DAI as categorical variable and ATMHSS score as continuous variable, there were significant group difference on score of ATMHSS between poor and partial attitude (MU = 6570.500, $Z = -2.425$, $p = 0.015$); and poor and good attitude (MU = 1532.000, $Z = -2.686$, $p = 0.007$) (Table 4).

Discussion

In this study, majority of participants had higher score on attitude toward medical help-seeking scale. This finding is supported by other reports that both pharmacy and medical students do have favorable attitude toward medical help-seeking [15,30,31]. Students may have varying levels of concern about academic jeopardy in association with personal illness, and want to seek medical help in need [31]. However, confidentiality issues, issues relating to cost, lack of time and fear of side effects may impede health-seeking [32]. Other possible reasons of favorable attitude could be exposure to health education during their high school days or ongoing exposure to health education during their training.

Majority in the sample had partial attitude on DAI with mean score of 14 out of 36 maximum score. Similar findings were observed among patients with schizophrenia [33]. Attitude is acquired through direct experience, or indirect exposure (friends and acquaintances, social comparison). It takes time to develop a clear attitude and 2 mean years of pursuing the course indicates the same. In addition, the medication in general has a multifaceted impact on attitude formation based on needs and side effects, and other pharmacological merits and demerits. Since most of the participant did not have any significant illness nor had family history of death due to illness, partial attitude was likely.

No group difference on the score of ATMHSS among pharmacy and medical groups may indicate that health is a basic need that is unlikely to change across groups. Other possible reason

could be multiple determinants of health seeking, popular medical model of illness in the studied population and importantly, a teaching curriculum that uniformly acknowledges the need of health seeking [34].

An important finding of this study was significant negative attitude of pharmacy students toward medication. This indicates that majority of the study population started developing a sort of contrasting attitude depending on the course they were pursuing. It is not uncommon that pharmacy students focus more on identification and reporting of adverse events during their training, compared to medical students [18]. This may lead to development of a different attitude from medical students who are more focused primarily on use of a medication for different indications.

Another finding in this study was a better medical health seeking attitude among those with good to partial attitude toward medication. Such an observation has already been reported earlier [6]. This finding has a preventive implication. Those with partial to good attitude (78.3% in this study) are more likely to seek medical help and may have better compliance to the prescribed medication.

Like any other study, this study had limitations such as being a cross sectional study and there being no measure of health care utilization. Further study with a larger sample size is required.

With the findings of this study, it may be concluded that pharmacy students tend to have negative attitude toward medication use as compared to medical students. There is a negative association between poor attitude toward medication and medical help-seeking.

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