Clerkship Students' Attitudes towards Patients and Health Care Personnel:Implications for Medical Education

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ABSTRACT

Background: *The former studies and observations indicate that medical students vary considerably in their attitudes towards patients and health care personnel.*

Objectives: *To study the attitude of clerkship students towards selected types of patient and selected types of health care personnel.*

Methods: *A quantitative cross-sectional study was conducted among clerkship students. The subjects received a self-administered questionnaire with a covering letter explaining the project and outlining terms and conditions for participation. Since twenty-one subjects did not return the questionnaire, data analysis was based on 111 questionnaires. The items were 5-point Likert-type. The internal consistency of the items was 0.706. Factor analysis was used in order to load the individual attitudinal items into main factors.*

Results: *There is a significant association between sex and attitudes towards medical personnel. Clerkship students showed a more positive attitude towards acute illness than chronic illness. The clerkship students responded more positively towards the health personnel than towards the patients. The results are discussed in terms of the impact of clerkship students' attitudes on patients and health personnel. Some possible justifications for these findings are discussed.*

Conclusions: *Developing key skills within the medical curriculum, especially communication and information technology skills are essential*

Key Words: *MEDICAL STUDENTS, ATTITUDE, VIEW, HEALTH CARE TEAM, PATIENTS, IRAN*

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Introduction

The UK's General Medical Council's document "Tomorrow's Doctors" (1) recommended major changes in undergraduate medical education. Moreover, one of a series of booklets published by the UK's GMC in 1995 under the general heading of "Duties of a Doctor" (2) emphasises that "patients must be able to trust their doctors with their lives and wellbeing. To justify that trust, we as a profession have a duty to maintain a good standard of practice and care and to show respect for human life". Due to these recommendations, attitudinal objectives have become embedded in the undergraduate curriculum of medical schools.

It has been strongly cited that beliefs or attitude of students can affect overall health. The world Federation for Medical Education identified health promotion as one of its key themes in the Edinburgh Declaration (3). While there are numerous definitions of attitudes, in this study the practical definition of attitude is defined as "a predisposition to act in a characteristic way towards people, organisations, processes and products and objects" (4).Core skills and knowledge may modify attitudes. One of the strongest factors that affects attitudes is the hidden curriculum. Although it is well documented that attitudes reliably predict people's action (5), the relation is not strong (6). Moreover, the former studies and observations indicate that medical students vary considerably in their attitudes towards patients and health care personnel (7, 8, 9, 10, 11). Concerning clerkship students' attitudes towards health personnel, few studies indicated that medical students and doctors have a positive attitude towards health personnel (10, 11, and 12). Using this evidence as a starting point, researchers sought to assess the attitudes of clerkships' students towards patients and health personnel.

Lawrie's investigations (13, 14) indicated general practitioners prefer patients with diabetes or overall good health over patients with mental disorder on their lists. There have been numerous studies showing that medical students' attitude towards patients become more positive over time, in particular toward psychiatric patients (10, 15, 16, 17, 18, 19, and 20). As a result of these attitudinal changes, some medical schools have modified their teaching and learning methods (21).

On the other hand, the 'clerkship' years are an important part of undergraduate education and training. This could be due to the fact that teaching methods such as small group methods in this period have a strong impact on shaping medical students' attitudes towards patients and health personnel.

The present study aimed to further explore the attitudes of the medical students towards their patients and their health personnel. To do this, we tested the following hypotheses: (1) the medical students view the health care team as a group more favorably than patients as a group; (2) that within the patient group the acutely ill are looked upon more favorably than the long-term organically or emotionally ill.

Materials and Methods

A questionnaire based on relevant literature concerning patients and health personnel was designed and developed. The questionnaire consisted of two parts. The first part covered demographic data of the respondents, the second part contained the statements on attitudes towards patients and health personnel. The attitude scale contained 10 Likert-style items, ranging from 1 (strongly disagree) to 5 (strongly agree) and the medical students were asked to circle one of five choices for each statement –strongly agree, agree, uncertain, disagree and strongly disagree.

In order to develop a valid and reliable scale, a new instrument was developed from the literature, and a preliminary 12-item scale was constructed. In order to develop a scale to measure clerkship students' attitudes towards patients and health personnel, one pilot study was conducted. After inverting the scores for the 12 items, the internal consistency of the 12 items was 0.706. In order to determine the reliability of scale, test-retest analysis was carried out. The weighted Kappa coefficient among the items showed that the items on test 1 and 2 ranged from 0.211(item14) to 0.723 (item2) on scale.

Moreover, the interclass correlation coefficient in test-retest analysis for scale was 0.596 (P value = 0.05). Concerning the values of Kappa and intra class coefficient, the Likert-style items were revised to 10.

Of the all medical students attending Tehran University of Medical Science and Health Services, 132 received the questionnaire. The subject received the self-administered questionnaire with a cover letter explaining the project and subject's rights. Twenty one student did not return the questionnaire. Therefore, data analysis was based on 111 questionnaires.

Data were computed using the Statistical Package for the Social Science (SPSS version 9.0). In computing, negative items were changed and turned positive, with score 1 being counted as 5 and score 5 as 1 and so on. Level of significance was set to $p \leq 0.05$. In order to assess that data were suitable for factor analysis, the Kaise-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity were calculated (KMO=0.642, Bartlett's Test=313.7, df=45, P<0001). Considering KMO result, factor analysis was employed using Component Factor Analysis (PCA) with Varimax rotation in order to collapse the individual attitudinal items into main factors. Differences in these factors across the three factors were then discovered using t-test.

The participants were informed in a letter signed by the researchers about the aim of the study, their voluntary participation and the guarantee for anonymity and confidentiality when publishing the data.

Results

A total of 111 (response rate 84.1%) students completed the questionnaire. The mean age of the respondents was 24.36 years (SD 2.17, range 21-33, (11 respondents did not indicated their age). Of all respondents 58.6% were male (n= 65) and 41.4% (n=46) were female.

Table 1 shows the respondents' attitudes towards patients and health personnel. The item, with the greatest level of agreement was the following: "the supervision of medical students by clinical faculty members is essential". The item with the greatest disagreement was the following: "Interns play an important role in the training of medical students".

In order to assess differences in attitudes in terms of sex, factor analysis using principal component analysis (PCA) with varimax rotation was employed to summate the individual items and create clerkship students' attitudes towards patient and health personnel. Three factors based on

TABLE 1 CLERKSHIP STUDENTS' ATTITUDES TOWARDS PATIENTS AND HEALTH PERSONNEL

Item	Percentage of clerkship students who agree, uncertain and disagree with each item		
	% Agree (Likert 5,4)	%Uncertain (Likert 3)	% disagree (Likert 1,2)
Patients preferred to be visited by specialists.	55.9	6.3	37.8
The examination of acute patients is high priority	46.0	7.2	46.8
I do not prefer to assess patients with mental and emotional disorders	58.6	5.4	36.0
I prefer to visit chronic patients.	43.0	26.1	31.6
Nurses prefer patients to be visited by medical students	57.6	8.1	34.3
The supervision of medical students by clinical faculty members is essential	75.9	13.5	30.6
Hospital resources aid patients care	48.7	10.6	40.5
Social workers provide a useful service to patients.	54.0	10.0	36.0
Interns play an important role in the training of medical students.	18.0	10.0	72.0
The majority of patients seek medical attention at hospital before receiving advice from GP.	61.3	11.7	27.1

the screen plot generated with Eigen value>1.0. In Table 2, individual items loading onto the different factors with a factor loading greater than 0.6 are demonstrated. Factor 1 was named "clinical examination" which consists of items suggesting greater emphasis on "patients preferred to be visited by specialists", "the examination of acute patients is a high priority", "I do not prefer to assess patients with mental and emotional disorders" and "I prefer to visit chronic patients". Factor 2 was named "medical professionals" which consists of items suggesting greater emphasis on "nurses prefer patients to be visited by specialists" and "the supervision of medical students by clinical faculty members is essential". Factor 3 was named "hospital and professional resources" which consists of items suggesting greater emphasis on "hospital resources aid patient care" and "social workers provide a useful service to patients".

On the basis of PCA, the items were summated to create three total scores for the different attitudes towards patients and health personnel. Differences in the attitudinal score between students according to sex were analysed using t-test. Levene's test for equality of variance indicated that there were equal variances for each three factors; the P values were 0.807, 0.596, and 0.261, respectively. The means for the factors by sex are shown in Table 3.

Additionally, the results indicated significant differences across the sex for factor 2 (medical professionals) (t=-2.05, df=109, P<0.05). No significant differences occurred between sex and factor 1 (Clinical Examination) and factor 3 (Hospital and professionals Resources), P=0.126 and P= 0.393, respectively.

Discussion

The descriptive analysis showed that clerkship students' attitudes towards patients and health personnel were different. The vast majority of students showed a strong positive attitude toward clinical academic staff. To our knowledge, no published data exist to describe clerkships students' attitudes towards clinical academic staff. This positive attitude, however, could be due to the fact, that clerkship students are seeking a clinical role model to guide their future in medicine. It should be noted that some specific character-istics of the academic staff influence students' attitudes towards them.These characteristics include: full respect of the students, a sociable personality, and a sense of humour (21).

The majority of students claim that patients prefer to be examined by specialists before receiving advice from a GP. Although the referral system does work, it seems patients showed more positive attitudes towards specialists than GP's or medical students. It is noteworthy, however, that literature reviews show that patients attitudes towards the involvement of medical students in their hospital care were favorable and patients claimed that students spent time with them and answered their questions (22, 23). In my opinion, patients feel that

TABLE 2 RESULT OF PRINCIPAL COMPONENT ANALYSIS: FACTOR LOADING (>0.6) FOR ATTITUDINAL ITEMS

Item	Factor 1 (%variance = 31.3) (Eigen value=3.98)	Factor 2 (%variance = 16.1) (Eigen value=1.74)	Factor 3 (%variance = 12.7) (Eigen value=1.236)
Patients preferred to be visited by specialists.	0.747		
The examination of acute patients is high priority	0.798		
I do not prefer to assess patients with mental and emotional disorders	0.716		
I prefer to visit chronic patients.	0.621		
Nurses prefer patients to be visited by medical students		0.825	
The supervision of medical students by clinical faculty members is essential		0.720	
Hospital resources aid patients care			0.693
Social workers provide a useful service to patients.			0.706
Interns play an important role in the training of medical students.			
The majority of patients seek medical attention at hospital before receiving advice from GP.			

TABLE 3 VARIATIONS IN FACTORS ACROSS SEX

	Mean factor score		
	Male	Female	Mean Difference
Factor 1	13.3	13.58	-0.2793
(standard deviation)	4.13	4.31	
Potential agreement=30			
Factor 2	5.69	7.21	-1.5251*
(standard deviation)	2.33	2.36	
Potential agreement=10			
Factor 3	6.72	6.28	0.4405
(standard deviation)	2.82	2.42	
Potential agreement=10			

*P<0.05

GPs and medical students are too young to examine patients and also they have not the necessary experience and knowledge about their diseases.

Clerkship students showed a more positive attitude towards acute illness than chronic illness. However numerous theories in recent years indicated that the situation of chronic illness differs completely from that of acute illness (24, 25, and 26). Sally et al. (27) suggested that medical care providers are unable to manage patients with long-term illnesses due to the nature of the ongoing condition. The patient's quality of life is dependent on their development of self-care and decision

making skills. In addition, people with chronic illness need to access appropriate supportive and health care services. As a result, chronic illness produces a particular condition within which patients and medical staffs interact. It has been argued that methods of interactive, student-centred learning and problem–oriented teaching produce improvement in attitudes (28).

However, in our study students have a more positive attitude towards the acute illness than chronic illness. This does not agree with previous data suggesting that students have a positive attitude towards chronic illness, in particular towards psychiatric patients (7, 29, 30, and 31).

Clerkship students did not have a positive attitude towards interns. The huge majority of students claimed that the interns do not play an important role in their training. To our knowledge, no cause has been established for clerkship students' negative attitudes toward interns.

The results from the questionnaires support that the students had more favorable attitudes towards health professionals than patients. The difference in students' attitudes toward health personnel and patients found in this study is probably detrimental to the medical care of the patient types considered least favorable, i.e., the patients with long-term care needs and mental disorders. It has been seen that if a person from the health care team becomes ill, he or she is likely to obtain a special care and medical attention and concern from his co-workers. In this manner, the positive attitudes of health care teams affect the medical care they provide. Conversely, unfavorable attitudes of the health care team towards other patient types could negatively affect the medical care they provide for these patients.

Factor loadings noted that there is a significant difference between sex and attitudes toward "medical professionals". Females had more positive attitudes towards "medical professionals" than males. It could be that the medical professionals are and considered as a model for medical students in hospital and perhaps male students may feel that they can not be like their models in the future. Therefore, they find a negative feeling about medical professionals. This is because that on the one hand students consider medical professionals as a model for their occupational future, on the other hand the number of unemployed GPs has increased. It is noteworthy, however, that male students are responsible for living costs in the future compared with females that do not have any responsibility in this regard after marriage. As a result, male students do see a prosperous future ahead. A study indicated that male students saw a darker future a head than female did (32).

Using teaching methods such as small group tasks that focus on student's values and beliefs may affect the student's attitude towards chronic patients. Moreover, developing key skills within the medical curriculum, especially communication and information technology skills are essential.

Further study is necessary to determine important components of the medical care process which is required to be included in the current medical undergraduate curriculum in Iran.

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