



➔ Original Article

Predicating Attitude Toward Learning Communication Skills in Medical Students of Shahid Beheshti University

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Abstract

Background: The ability of communicating with people is of great importance for physicians. Predicting unknown variables like personality traits is one of the important impressive issues in choosing future medical experts in medical training. Regarding this, medical colleges have training programs all around the world. The present study aimed to investigate the attitude toward learning communication skills based on the personality traits of medical students.

Materials and Methods: This correlational study was done in 2019 and the participants were medical students who were selected using a convenience sampling method. Zuckerman-Kuhlman personality questionnaire and communication skills attitude scale (CSAS) were used for data collection. CSAS was used to assess positive and negative attitudes.

Results: The results showed that only the sociability dimension among the five dimensions of personality had a significant relationship with attitude toward learning communication skills ($P=0.018$). Moreover, significant relationships of gender ($P=0.022$), mother's education level ($P=0.049$), and residence ($P=0.036$) with attitude to learning communication skills were found.

Conclusion: According to the results, the dimension of demographic characteristics is effective in improving communication skills of medical students. Therefore, it is recommended that it should be considered in medical curriculum development and revision and modifications.

Keywords: Prediction, Personality, Medical student

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Introduction

Communication skills attitude scale (CSAS) was published in 2002. This scale measures the medical students' attitude toward learning communication skills during medical school. Good communication skill plays a vital role in improving the doctor-patient relationship and leads to improved patient compliance, satisfaction with care, and benefits to physical and mental health of patients (1). The ability to communicate is so important as medical knowledge of a physician. Communication is the only way to detect skills and the doctors' ingenious knowledge, without which efforts are easily faded away. Medical errors that have been doubled in the past few years and have killed nearly 100 000 people are largely due to a lack of communication skills (2). Nowadays, medical science education has been changed from pure theoretical

education to the acquisition of communication skills and this is one of the variables which should be considered in determining physicians' competence (3). In this regard, communication skills have been described as the most essential attribute for people working in primary health care (4). Several variables such as personality traits are assumed to affect attitudes toward communication skills training. Personal qualities as one of the current debates in medical education encompass non-cognitive variables in the selection procedure of future health professionals (5). Paying attention to learning the communication skills and to students' personality is an important element which strongly affects and improves the communication skills training courses and may lead to the reduction of medical errors in the long run. Personality is one of the most vital aspects of human life (3). It is also one of the

most fundamental psychological concepts that can help people in better understanding themselves and the others (6), and can influence all human behaviors in personal and social life and sometimes confront the person and his or her surroundings with a serious problem as a result of incompatible traits and characteristics (7). Zweig and Webster, personality theorists, believe that individual differences in personality are one of the important factors that influence one's motivation in behavior, performance, and learning because it is the core of the discussion in areas like learning, motivation, perception, thinking, emotions, intelligence, and so on. In other words, the mentioned items are the constituent parts of the personality (3). Many psychologists who are specialized in personality believe that individual differences can be measured on the basis of the relatively stable personality traits reported by the individual. Zuckerman-Kuhlman personality questionnaire is one of the tools for measuring personality traits and characteristics (8). College environments and students comprise a large part of the youth, the elite, and the educated persons of the society. Training efficient and effective human resources is one of the main tasks of universities (9). One of the most important issues in medical education is to predict unknown variables such as personality traits in the selection of future medical professionals (10). Nami et al found a significant relationship between personality traits (extraversion, desire for new experiences, and agreeableness) and students' learning styles (2). Students' attitude and satisfaction with learning is an effective factor in motivating and promoting knowledge quality. Negative attitudes toward learning communication skills are common because students do not recognize communication skills training as an important part of medical and practical education and find no merit in improving their skills (3). To the best of our knowledge, there is little research identifying medical students' attitudes toward communication skills learning based on the personality dimension. In this regard, the present study was carried out to predict the communication skills learning according to the students' personality which plays a very important role in educating and empowering the individuals.

Materials and Methods

This correlational study was done on 800 medical students of Shahid Beheshti University of Medical Sciences who were studying in 7th or upper semesters. Sampling was done using a convenience sampling method in this study. Data were collected using Zuckerman-Kuhlman five-item questionnaire and CSAS.

The 50-item version of the Zuckerman-Kuhlman personality questionnaire contains five personality dimensions based on the five-factor Zuckerman personality model. These five factors are: neuroticism - anxiety, impulsive sensation-seeking, activity, sociability,

and aggression - hostility. Each of its scales consists of 10 items. The answer to each item is given based on a two-choice scale (True and False). Cronbach's alpha coefficient for all five factors except for aggression was 0.66 which was higher than 0.7. Having studied factor structure, validity, and reliability of the Zuckerman-Kuhlman personality questionnaire, correlation coefficient for the whole questionnaire was 0.79, Cronbach's alpha was 0.64, and ICC coefficient was 0.60. CSAS is a tool designed to measure attitudes toward learning communication skills. It has both positive attitude scale (PAS) and negative attitude scale (NAS). Each scale contains 13 items, a total of 26 items, and each item is rated based on a Likert scale. The reliability of CSAS was piloted on 38 Internship students (in equal proportions of Internal and Surgical students) in Shahid Beheshti University. In order to examine the internal consistency, the correlation between each question and the total score of the questions was examined in each part with separate negative and positive mean and this correlation was highly significant for all questions. Cronbach's alpha, as another criterion for internal consistency, was 0.78 and 0.70 for both positive and negative parts. The next step was performed on the same 38 subjects with the same conditions two weeks after the first step of data collection. The results were as follows: Cronbach's alpha coefficient of reliability before and after the test was 0.727 and 0.835, respectively, indicating an acceptable reliability. The relevant questionnaires were supplied for eligible students. Finally, 260 questionnaires were returned, of which 234 were without any damaged or missing values. The collected data were analyzed by SPSS software version 23.0. Quantitative data were described as mean \pm standard deviation and qualitative data as abundance (percent). Analysis of variance (ANOVA) and *t* test were used after data normality assessment using Kolmogorov-Smirnov test.

Results

Out of 234 students, 82 (35%) were male and 152 (65%) were female. Majority of the students (82.9%) were over 30 years of age. Moreover, 85.1% of the students' fathers and 64.1% of the students' mothers were highly educated. In addition, 32.1% of the respondents were from large cities, 50.9% were from towns, and 17.1% were from rural areas.

Descriptive statistics for the personality traits showed sociability was at the highest level with an average of 4.12, while anxiety and neuroticism were at the lowest level with a mean score of 2.52. According to the standard deviation index for the personality traits, neuroticism - anxiety had the lowest dispersion with the score of 1.22 and the thrill-seeking type had the highest dispersion with the score of 1.52. Furthermore, the mean score of personality traits was 3.04 ± 1.130 and attitude toward learning communication skills was 3.91 ± 0.78 .

The comparative score of attitude to students'

communication skills based on the personality dimensions are shown in Table 1.

Regarding Table 1, *t* test showed that there was no significant difference between neuroticism - anxiety dimension in the students (two groups: low and average) and attitude toward learning communication skills. Additionally, one-way ANOVA showed that there was only a significant difference between sociability dimension and students' attitude to communication skills ($P=0.018$) and no significant difference was observed in other dimensions.

The relationship between students' demographic characteristics (age, sex, pre-university life, parents' education level) and attitude toward learning communication skills was analyzed using one-way ANOVA and *t* test. Results of one-way ANOVA showed no significant relationship between age and attitude toward learning communication skills ($P=0.665$). On the contrary, *t* test showed a significant difference ($P=0.022$) between attitude towards learning communication skills in both sexes as mean scores were higher in men than women. The results of one-way ANOVA on fathers' and mothers' levels of education showed that there was no significant relationship ($P=0.38$) between fathers' level of education and students' attitude toward learning communication skills, although fathers had higher education levels than mothers, but the relationship was significant regarding mothers' level of education ($P=0.49$). Considering the relationship between the students' pre-university residence and the score of attitude toward learning communication skills, a significant difference was observed ($P=0.036$). The mean scores of students living in cities were higher than those of students resident in rural areas.

Discussion

In this study, attitude to communication skills was assessed in 5 personality dimensions: neuroticism - anxiety, impulsive sensation-seeking, activity, sociability, and aggression - hostility. Among personality dimensions, sociability had the highest and neuroticism - anxiety had the lowest mean scores. In terms of anxiety dimension, those with less anxiety level had higher scores in attitude to learning communication skills, but there was no significant difference between less anxious students and those who had more anxiety. This shows that the neurotic personality does not influence students' learning

communication skills. In other words, although people with higher levels of anxiety are less adapted to the environment and have more negative emotions, attitudes toward learning their communication skills are not significantly influenced by their anxiety. The results of this study are in line with those of Nami et al (2), in that students' learning styles had no significant relationship with neurotic personality. Nonetheless, the results of the present study disagreed with the results of Zare et al (11) and Molinuevo and Torrubia (5). Zare et al asserted that psychosocial environment of the classroom and social anxiety can predict communication skills and this relationship is quite meaningful (11).

Regarding the impulsive sensation-seeking dimension, students who had less sensation had higher scores in attitude toward learning though this difference was not significant between the groups. The results of this study also corroborated those of Gheirati et al (4), Molinuevo and Torrubia (5), and Lumma-Sellenthin (12).

Furthermore, in this study, no significant relationship was found between the attitude toward learning communication skills and higher/lower activity of the students, although those with higher activities had higher attitude scores. Molinuevo and Torrubia (5) reported that students with high activity had a positive attitude toward learning communication skills. It can be inferred that individuals with high activity as a dimension of personality traits are more interested in communicating with others and subsequently have a positive attitude toward learning communication skills, hence a positive effect on this attitude. Although in this study, this efficacy was not verified between two groups possibly due to the low sample size.

Regarding the sociability dimension, students with higher sociability level also had higher attitude scores and this difference was significant. The results of this study are in agreement with those of Molinuevo and Torrubia (5) in that students with high sociability levels had a positive attitude toward learning communication skills. Sociability may affect communication behaviors and attitude toward learning in clinical settings. Considering the results of this study, it could be concluded that students need good communication skills in order to be a good doctor. Then Sociability could be a major factor in this regard.

In terms of the aggression-hostility dimension, those with less level of aggression had a higher attitude score but this difference was not significant between the

Table 1. Comparative Score of Attitude to Students' Communication Skills Based on Personality Dimensions

Dimensions/Rate	Neuroticism - Anxiety	Impulsive Sensation-Seeking	Activity	Sociability	Aggression - Hostility
Low	102.49 ± 18.9	103.44 ± 19.9	98.02 ± 26.69	96.66 ± 22.9	101.69 ± 19.5
Average	98.62 ± 25.5	100.44 ± 20.4	105.06 ± 17.4	103.75 ± 18.9	102.56 ± 22.2
High	No Rate	101.75 ± 24.2	111.25 ± 14.3	108.5 ± 14.6	74.5 ± 17.8
<i>P</i> value	0.33	0.557	0.063	0.018	0.16

groups. Aggression - hostility describes the anti-social and bold behaviors. Individuals with this trait are more isolated than those having sociability dimension and their anti-social behaviors indicate a lack of interest in communicating effectively with others and do not have the desired attitude. Medical students with this personality trait may not show a tendency to communicate positively with the patients. The results of this study are in line with the results of Shamsi and Amiria (13), Zare et al (11), and Molinuevo and Torrubia (5), as they also did not find any relationship between these factors. In our opinion, given that this study showed a relationship between sociability and attitude toward learning communication skills, then if a person who has a high aggression-hostility score, certainly he has not any high sociability score; as a result he has no good attitude toward learning communication skills.

There was no significant relationship between the student's age and attitude toward learning communication skills. This study bears a close resemblance to that of Gheirati et al (4), who found that mental health was not significantly correlated with the age and ability to understand the message, as well as insight into the process of communication, listening, and decisiveness. On the other hand, the results of this study are in contrast with the results of Lumma-Sellenthin (12) and Alotaibi & Alsaeedi (14). In the Lumma-Sellenthin's study, older age predicted the attitude toward learning communication skills. In Alotaibi and Alsaeedi study, positive attitude scores were also higher in older students at higher semesters. This result could be attributed to the age range which was not very different in this study.

There was a significant difference between the gender and attitude scores of the students in the two groups of males and females; the results showed that the males' scores were higher than the females'. In the present study, men received higher scores, which is contrary to the results of the Lumma-Sellenthin's study (12). In Lumma-Sellenthin's study, women were predicted with positive attitude toward learning. Moreover, women were predicted with positive attitude toward learning communication skills and their scores were higher than men's (12). However, despite the fact that there were more women in this study, they got fewer scores than men and this difference was significant. Then it could be deduced that attitude toward learning communication skills is quite relevant to sex.

Considering the effects of the education level of students' parents on students' attitude toward learning communication skills, the results showed that mothers' education level was more influential in their attitude, despite their lower level of education compared to fathers'. Perhaps the reason why mothers' education level is more effective than fathers' is that mothers spend more time with their children and are more supportive. Rees and Sheard also showed in their study that students having

physician parents tended to improve their communication skills (15).

Concerning students' place of residence, the results showed that the majority of students lived in counties, but those living in cities had higher mean scores of attitude than the students of counties, and this difference was quite significant. It can be concluded that living in a big city and its communication systems can influence attitude toward learning communication skills.

Conclusion

The results of the present study could be the first step in understanding the usefulness of the five-factor Zuckerman-Kuhlman personality model in predicting attitudes toward learning communication skills for medical university officials and professors. These results could also be a useful tool for predicting the likelihood of success in increasing the interest in medical students' learning communication skills. Personality assessment can be useful for medical education officials to identify students who may be at risk for cognitive, emotional, and social deficits, and hence decide to eliminate negative impacts.

Conflict of Interests Disclosure

None.

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Ethical Statement

This study was approved by the Ethics Committee of Shahid Beheshti University of Medical Sciences (registration number: IR.SBMU.SME.REC.1397.052). Moreover, the purpose of the study was explained to all the participants before data collection and informed consent was obtained.

Authors' Contribution

MAL supervised the study. FF did data collection. KR was the advisor and contributed to data collection and analysis, and MR did data analysis.

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Informed Consent

The purpose of the study was explained to all the participants before data collection and informed consent was obtained.

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