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RESEARCH ARTICLE

The Relationship between Communication Skills and Intellectual Health in Senior-Year Students of Paramedicine School at Kashan University of Medical Sciences 2019

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Abstract:

Introduction and Objective:

Communication skills are the ability to communicate effectively and efficiently with others, which plays a role in people's intellectual and psychological health; therefore, this study was conducted to investigate the relationship between communication skills and intellectual health in senior students of Paramedicine School at Kashan University of Medical Sciences.

Methods:

The present study is descriptive-analytical, which was performed cross-sectionally in 2019 on 95 senior students of the Paramedicine School of Kashan University of Medical Sciences. The census method was used in this study due to the limitations of the statistical population. The data collection tool consisted of three parts: Participants' demographic profile, Barton's standard communication skills questionnaire (1990), and intellectual health questionnaire based on the intellectual health scale of entrepreneurs' personality traits assessment questionnaire. The questionnaire was presented to the students in person. After collecting data, it was entered into SPSS 22 software and analyzed with descriptive indices (mean and standard deviation) and analytical statistics (Pearson's correlation and t-test).

Results:

The total mean score of the communication skills in students was 59.61±5.82. There was a direct and significant relationship between verbal and listening skills ($r = 0.32$, $p = 0.003$), verbal and feedback skills ($r = 0.43$, $p = 0.001$), listening and feedback skills ($r = 0.41$, $p = 0.001$). The mean mental health of the participants in the study was 33.45±5.02. There was a positive correlation between communication skills and intellectual health in students ($r = 0.2$, $p = .07$).

Conclusion:

Communication skills affect intellectual health. Therefore, it is recommended that educational workshops on communication skills and how to communicate be held for students at the beginning and during the study, and that psychological counseling centers be set up or become more active in the university.

Keywords: Communication skills, Health, Intellectual health, Students, Medical sciences, Counseling centers.

Article History

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1. INTRODUCTION

Communication is the process of conveying messages, ideas, facts, opinions, information, and attitudes from one person to another [1]. To communicate effectively, people must have skills in this area. Communication skills are also an important part of life skills that are defined as the ability to communicate effectively and efficiently with others [2]. Communication skills are one of the main concerns in human

life [3]. The importance of communication skills is such that some experts attribute human success in social life to them [4]. In the field of health care, there is two-way communication between the patient and the medical staff. Therefore, the communication skills of medical staff play an important role in establishing this relationship and also judging the competence and qualification of employees in the health care field [5, 6]. Numerous studies have always shown that the Communication skills of care providers in communicating effectively with

patients play an important role in their satisfaction [7]. Medical science students who will be working in medical centers in the future have a serious need to acquire these skills to communicate with the patient and increase their learning [8]. A study by Shahjooi *et al.* showed that medical students have poor communication skills [9] and other studies assessed the level of students' communication skills as average [10, 11]. In Fazel's study entitled Attitudes toward learning communication skills among medical students of a university in Iran, medical students have a positive attitude in learning communication skills, and on the other hand, it is stated in this study that curriculum planners should not lose negative attitudes, but should minimize these attitudes by designing programs [12]. Intellectual health refers to the acceptance of new ideas and experiences and the desire to increase understanding and improve skills and maximize creativity and create the potential to share with others and use it to improve society [13 - 15]. Intellectual health causes creative mental stimulation as well as learning new and exciting things [16]. Discovering and exploring one's world, gaining more information about others, expanding one's mind and potential, and solving a problem, sharing and receiving knowledge with others, strengthen spiritual health [13]. Therefore, the intellectual health of individuals in society plays an important role in ensuring the dynamism and efficiency of that society [17]. Undoubtedly, students are young and active workers of society, and their intellectual health plays an important role in the growth and development of their critical thinking and problem-solving and coping, time management, and self-knowledge skills [18, 19]. Students can develop this dimension of health in university environment, cultural participation, community participation, and personal entertainment.

Students who have a high level of intellectual health have an active mind and continue to learn and use available resources to expand knowledge and improve skills [19, 20]. In addition, intellectual health is critical to sustainable health and well-being, and strengthening this dimension of health, surprisingly strengthens individuals' critical thinking and innovation and growth [21]. Intellectual and psychological problems in students lead to disruption of homework, reduced motivation, anxiety, fear and worry, and it wastes a significant portion of their mental energy instead of spending time studying and learning [19, 21, 22]. However, the intellectual health of students in the medical sciences department is of particular importance due to the special conditions and stresses in the workplace. Official reports show an increase in the number of mental disorders in medical students [23]. Ahmadi *et al.*'s study showed that 1.6% of nursing students suffer from relatively severe depression [24].

Intellectual health among students is achieved when they participate in group discussions, share their experiences, and listen to the ideas and experiences of others, strengthen critical thinking, find solutions to their problems, and have innovation. Therefore, considering the importance of intellectual health of

medical students in order to have a creative, critical and successful mind in clinical activities and the role of communication skills to achieve these characteristics, our aim in this study has been to investigate the relationship between intellectual health and communication skills of students of Paramedicine School at Kashan University of Medical Sciences. Since this dimension of health is achieved through participation in the university environment, cultural participation, community participation, and personal entertainment such as studying, it is hoped that the results of this study will be a reference for policymakers in planning for academic activities to improve these two skills in medical students.

2. METHODS

The present study is descriptive-analytical, which was performed cross-sectionally in 2019 at Kashan University of Medical Sciences. The statistical population of this study included senior students of the Paramedicine School (Radiology, Laboratory Sciences, Anesthesia, Health Information Technology) (95 people). Due to the limitations of the statistical population, all individuals were selected as the sample; that is, the statistical sample is the same as the members of the statistical community. Library methods such as reading and reviewing domestic and foreign books and publications and searching in information databases (Internet) were used to collect and review literature review and the questionnaire was used as the main tool for data collection to achieve the required data. The questionnaire consisted of three parts: participants' demographic profile, Barton's standard communication skills questionnaire (1990), and intellectual health questionnaire based on the intellectual health scale of entrepreneurs' personality traits assessment questionnaire. Since students are young, creative, and have new ideas, they are similar to entrepreneurs, so this questionnaire was used. Barton's Questionnaire, whose validity and reliability have been confirmed in a study by Moradi Dasht *et al.* (2013), has three subscales of listening, feedback, and verbal skills. Each subscale had 6 questions. The questions were in the form of a five-choice Likert, from "fully disagree" at score 1 to "fully agree" at score 5. The minimum score for each subscale was 6 and the maximum was 30. The higher score indicated that more communication skills were used. A 13-question questionnaire based on the intellectual health scale of entrepreneurs' personality traits assessment questionnaire [25], whose validity and reliability have been confirmed [26], was used to measure students' intellectual health. Each question was measured using a 4-choice Likert scale from "fully disagree" at score 1 to "fully agree" at score 4. The analysis of the scores in this questionnaire was as follows: very weak (13-34), weak (34-38), strong (38-43), and very strong (43-52). The questionnaire was presented to the students in person after obtaining permission from the faculty officials. After data collection, it was entered into SPSS 22 software and analyzed through descriptive statistic indices (mean and standard deviation) and analytical statistics (Pearson correlation and t-test).

3. RESULTS

Of the 95 senior students of Paramedicine School, 80

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students (84%) participated in the study. 75% of the participants were women. The mean age of the participants was 21.15 ± 1.89 . The total mean score of the communication skills in students was 59.61 ± 5.82 (Table 1).

Table 1. The mean score of communication skills based on gender.

Type of Skill	Gender	Mean	Standard Deviation
Verbal	Female	19.65	2.11
	Male	21.05	3.33
	Total	20.00	2.52
Listening	Female	18.06	2.10
	Male	20.35	3.06
	Total	18.63	2.56
Feedback	Female	20.45	2.25
	Male	22.55	2.5
	Total	20.97	2.48
Communication Skills	Female	58.17	4.39
	Male	63.95	7.38
	Total	59.61	5.82

The results of the T-test showed that the difference between the mean communication skills in the two groups of men and women was statistically significant ($P = 0.003$). Spearman's test results showed a relationship between communication skills and the age of participants ($r = 0.13$, $p = 0.2$). Pearson's test results also showed a direct and significant relationship between verbal and listening skills ($r = 0.32$, $p = 0.003$), verbal and feedback ($r = 0.43$, $p = .001$) and listening and feedback ($r = 0.41$, $p = 0.001$).

The mean intellectual health of the participants in the study was 33.45 ± 5.02 , which was 33.08 ± 4.78 for women and 34.55 ± 5.68 for men. The difference in mean intellectual health between the two groups of men and women was not statistically significant ($p=0.261$). Mental health had a positive relationship with age, which means that as age increased, intellectual health scores also increased. There was a positive correlation between communication skills and students' intellectual health ($r=0.2$, $p=0.07$). Pearson test results showed a positive but not statistically significant correlation between intellectual health with verbal skills ($r=0.162$, $P = 0.152$) and listening skills ($r = 0.096$, $P = 0.395$) and feedback skills ($r = 0.204$, $P = 0.069$).

4. DISCUSSION

This research was conducted with the aim to investigate students' communication skills level and its relation with their intellectual health. The study's findings showed students' communication skills are moderate. The communication skills had a relation with the participants' age and gender, meaning that as age increased, communication skills of participants increased as well. Also, results showed students' intellectual health is at a low level and there is a relationship between communication skills and intellectual health.

The present findings showed students' communication skills are at a moderate level. In line with the present study's findings, Hemmati *et al.* [11] evaluated students' com-

munication skills as moderate. The results of some studies [10, 27] evaluated students' communication skills as low and in other studies [28 - 30], it was evaluated as good and strong, in which the findings of this study are different from these studies. This difference can be due to differences in the statistical population, information collection tools, or students' cultural differences. Therefore, it is suggested that educational workshops be held for students at the beginning of university or during their studies on how to communicate.

In this study, men had stronger communication skills than women. This was different from the results of a study by Molaei *et al.* at Ardebil University of Medical Sciences, which assessed the level of communication skills of female students as higher than that of men [31] and there was no significant statistical relationship between communication skills and gender in other studies [2, 32]. This difference in communication skills can be attributed to the differences between men and women. Men are more likely to communicate as a way to maintain their status and independence and to negotiate for power and victory and counseling, while women tend to see communication as a way to make friends and build relationships. Although women communicate more quickly, they are very weak in transmitting their thoughts to the other side, and only the power of understanding what others say is high in them, which is called understanding, but, perceiving and receiving what others say is said to be higher in men; therefore, communication is more in men than women [33].

Every three domains of communication skills had positive and significant correlation, meaning that as each of the domains of communication skills increased and was promoted, other domains were also increased. This finding is consistent with the results of Barati's study [34] that examined the level of communication skills of students and staff in the health care sector.

The results of the study also showed that the intellectual health of the participants is at a weak level. In the present study, the comparison of students' intellectual health in terms of gender did not show a significant difference, which this finding was consistent with the result of studies conducted by Bahar *et al.* [35], Bagheri Yazdi *et al.* [36] and Dibajnia *et al.* [37].

In the results of this study, intellectual health had a positive relationship with age, which is in contrast to Gheirati's study [2] that has shown that students' intellectual health is negatively correlated with their age. Since intellectual health refers to the acceptance of new ideas and experiences and the desire to increase understanding and improve skills and maximize creativity, it is necessary to hold the workshop on creativity and innovative ideas in universities, which is now the missing piece in these centers.

There is a positive correlation between communication skills and students' intellectual health. So that the improvement of communication skills in students increases their intellectual health in accepting new ideas, increasing their creativity and skills in solving complex problems, and critical thinking. The results of the study are in line with the results of Amini *et al.*'s study [28], which states that communication skills affect

people's intellectual health, but it is inconsistent with the results of Gheirati's study [2] that found no relationship between communication skills and mental health.

Some of the strongest points of this study that can be mentioned are the cooperation of students in completing the questionnaire and the enthusiasm of the students and the relevant officials in the faculty and university to know the results of the study and some of the limitation for this study that can be mentioned are the inability to investigate academic major and place of residence and marital status of the participating students. The cross-sectional nature of this study, hence the inability to infer causation and recommend interventions and its relatively small sample from only one university; hence the difficulty generalizing are other limitations.

Providing the results of the study to the authorities makes it more accurate to hold such workshops and to make the counseling centers more active at the faculty and university level. Also, the study of basic factors in measuring the level of communication skills and intellectual health can help macro-planning in improving these skills and the intellectual health of individuals. Also, recommend using other tools for the same constructs, and examining more students at this university and at other universities in Iran and elsewhere.

CONCLUSION

Communication skills affect intellectual health, and it can be argued that as communication skills improve, so does intellectual health. Since the university is not only a space for the transfer of knowledge but also an environment for human education, it is suggested that workshops be held continuously for students especially at the beginning of their studies at the university to improve their communication skills, as it can be expected that students' intellectual health will be improved by improving communication skills and it should be noted that the cost of holding workshops to improve communication skills will be much lower than the cost of treating mental and psychological problems.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The authors confirm that mentioned data for this manuscript gathered as an educational activity in educational courses and do not require ethical approval.

HUMAN AND ANIMAL RIGHTS

Not applicable.

CONSENT FOR PUBLICATION

Written informed consent was obtained from each participant prior to the study.

AVAILABILITY OF DATA AND MATERIALS

All data presented in the result but the raw data that supports the finding of this study are available from the corresponding author [R.F] upon request.

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None.

CONFLICTS OF INTEREST

The author declares no conflict of interest, financial or otherwise.

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