



Olena Lazurenko

Ukraine

Nataliya Smila

Ukraine

Emotional Intelligence of Future Physicians Who Tend to Hide Professional Mistakes

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Abstract

The purpose of the article is to present the results of testing the emotional intelligence of the future physicians who tend to hide professional mistakes. The article is based on the study involving 129 students who are studying in the specialties “Medical business”, “Medical psychology”, “Pediatrics”, “Dentistry” at the medical-psychological, dental and medical faculties of the O.O. Bohomolets National Medical University. During the study, the following methods were used: 1) The Error-Oriented Motivation Scale (EOMS) in order to measure a tendency to hide professional mistakes; 2) The Emotional Intelligence Scale in order to determine the level of emotional intelligence. Statistical processing of the study results was performed using 1) descriptive statistics (percentages, arithmetic means, standard deviations); 2) Student’s T-test to compare the emotional intelligence level in the groups of future physicians with different levels of propensity to hide professional mistakes. The study has found that a significant number of future physicians (53.5%) showed a tendency to hide their professional mistakes. The respondents in this group are characterized with low and medium levels of emotional intelligence compared to future physicians who strive to learn from their mistakes. This study has demonstrated that the vast majority of future physicians believe that professional errors should be hidden, which, in turn, does not contribute to their professional development; the future physicians who tend to hide professional mistakes have low levels of emotional awareness, ability to manage one’s emotions, self-motivation, empathy, ability to manage other people’s emotions. The development of emotional intelligence would apparently contribute to a more conscious attitude of future physicians to professional activities as well as more common-sense

attitude to mistakes, and this poses new challenges for medical education to form emotional intelligence of future medical professionals.

Key words: *emotional intelligence, physicians, professional development, professional mistakes*

Introduction

Problems related to medical ethics have not lost their relevance for many decades. Respectful attitude to colleagues, subordinates and patients, sincere interest in providing quality care to those who need it, efforts not to harm. All these classic theses of medical ethics are known even to people who are not directly related to medicine. According to recent research, medical students not only share the basic ethical principles, but also understand that the study of medical ethics is directly related to professional success in the future (Vodenitcharova, Leventi & Popova, 2019). While medical universities are increasingly introduce into their programs the medical ethics courses aimed at analysis and investigation of cases with ethical professional problems (Yoo, Joo & Lee, 2017), researchers often ignore such a complex and ethics issue as hiding professional mistakes (Schleifer & Vannatta, 2019).

Mistakes are considered natural phenomenon in any professional activity, however when it comes to the professional activity of a physician, the issue of errors acquires a special depth and significance. A medical error may cost patient time and money for treatment, health and even life. That is why mistakes in medical activities are an issue that is painfully sensitive to discuss and investigate. However, mistakes are a source for self-development of a physician. Any own mistake teaches better than investigated cases of other people's mistakes. Contemporary researchers believe that medical errors deserve a separate study and investigation in medical education (Ritterman, 2017). However, it is important to teach future doctors not only to understand what a mistake is but also to respond correctly to mistakes, so that they do not cause harm in the future.

Problem of Research

According to the modern theory of error-oriented motivation, there are three main ways to respond to error: hiding mistakes, worrying about mistakes and learning from mistakes. Only the last strategy is constructive and involves deep reflection, acceptance by a physician of his/her imperfections, willingness to

change. These characteristics may develop only in an emotionally mature person. In order to better understand the ways of forming a readiness of future physicians to respond constructively to mistakes, it is important to gain an insight how these characteristics are related to their emotional intelligence level.

Research Focus

The purpose of the article is to present the results of testing the emotional intelligence in the future physicians who tend to hide professional mistakes.

Methodology of Research

Sample of Research

The article is based on the study involving 129 students who are studying in the specialties “Medical business”, “Medical psychology”, “Pediatrics”, “Dentistry” at the medical-psychological, dental and medical faculties of the *O.O. Bohomolets National Medical University*.

Instrument and Procedures

During the study, the following methods were used: 1) The Error-Oriented Motivation Scale (EOMS) in order to measure a tendency to hide professional mistakes; 2) The Emotional Intelligence Scale – to determine the level of emotional intelligence. Statistical processing of the study results was performed using 1) descriptive statistics (percentages, arithmetic means, standard deviations); 2) Student’s T-test to compare the emotional intelligence level in the groups of future physicians with different levels of propensity to hide professional mistakes.

Data Analysis

During the first stage of the study, a tendency of future physicians to hide professional mistakes was examined using the Error-Oriented Motivation Scale (EOMS). According to the results of this questionnaire, the respondents were divided into two groups: inclined to hide professional errors ($n = 69$), not inclined to hide professional errors ($n = 60$). During the second stage, the level of emotional intelligence was examined in the future physicians using the Emotional Intelligence Scale. According to psychological testing results, the levels of emotional intelligence were compared between the groups using Student’s T-test.

Results of Research

According to the results of testing students with EOMS, there were identified in the future physicians the leading strategies to respond to professional errors (Table 1).

Table 1. The results of testing with the Error-Oriented Motivation Scale in the study groups

Scale	Number of subjects
Learning from errors	31 (24.03%)
Worrying about errors	56 (43.41%)
Covering errors	42 (32.56%)

The methodology allowed to determine that the largest among all respondents was a subgroup of students who are worrying about professional mistakes (43.41%). This error response strategy may have both constructive and destructive consequences for the professional development of future doctors. Thus, if the second most important strategy for a person is learning from errors, then excessive worrying will contribute to a more meticulous attitude of the future physician to self-development. In such situation, an error will act as a driving force for continuous self-development as well as conscious attitude towards future patients. If the second most important strategy is covering errors, then the opposite situation will be observed – the future physician will constantly worry about the need to hide a mistake, and the worrying will have a disorganizing effect on him/her.

The second largest subgroup involved students who are covering errors (32.56%). Representatives of this group are overly focused on maintaining an ideal external image rather than internal professional growth. Their major fear is admitting a mistake to others. That is why they build their professional development by finding the easiest tasks and situations with the lowest risk. Such professional development strategy neither contribute to the development of professionally important competencies nor personal hardening and makes members of this group the potential victims of emotional burnout in the future.

The group with a tendency to learn from their mistakes (24.03%) was the smallest. Respondents of this subgroup are well aware that any activity, including medical, is accompanied by mistakes. Error is a natural phenomenon that often

accompanies activities of professionals working with people. Lack of direct dialogue, concealment of information as well as decision-making in a situation of limited time may lead to professional mistakes. Even though mistakes of physicians are not a good thing and may sometimes cost the patient's life, nevertheless, if they happen, everyone should take the maximum – to learn from them. After all, the experience gained through a professional mistake is better engraved in memory and it should be used for development, not for self-suppression.

To determine the features of emotional intelligence in the future physicians who tend to hide professional mistakes, two groups were formed in the study.

Group 1 included the future physicians who tend to hide their mistakes ($n = 42$), and future physicians who chose worrying as the first strategy and covering errors as the second strategy for responding to the error ($n = 27$). The total number of respondents in this group was 69 people.

Group 2 included future physicians who tend to learn from mistakes ($n = 31$) and future physicians who choose worrying as the first strategy and learning from errors as the second strategy for responding to error ($n = 29$). The total number of respondents in this group was 60 people.

The results of comparative analysis showed the statistically significant differences for all parameters according to the technique of N. Hall (Table 2).

Table 2. Comparison of the results obtained with the technique N. Hall for testing the emotional intelligence in the study groups

A scale of emotional intelligence	Mean score		Student's T-test
	Group 1 ($n = 69$)	Group 2 ($n = 60$)	
Emotional awareness	9.32 ± 5.51	12.61 ± 5.05	3.25 **
Managing one's emotions	0.41 ± 8.19	5.80 ± 6.45	3.80 **
Self-motivation	6.83 ± 6.11	9.38 ± 5.11	2.10 *
Empathy	8.29 ± 5.93	12.50 ± 2.91	4.94 **
Managing the emotions of other people	8.11 ± 5.61	11.26 ± 3.21	3.50 **
Total score	32.74 ± 22.06	51.61 ± 16.96	4.93 **

** - $p \leq 0.01$, * - $p \leq 0.05$

In group 1, the mean score on the scale “Emotional Awareness” was 9.32 points with a standard deviation of 5.51 points (59.12%), which corresponds to a low level. In group 2, this result was 12.61 points with a standard deviation of 5.05 points

(40.04%), which corresponds to the average level. The difference was 3.07 points, and it was statistically significant ($T = 3.25, p \leq 0.01$). The identified difference indicates that the future physicians who do not tend to hide professional errors show a high awareness of the manifestations and ways of managing emotional states.

The mean score on the scale "Managing one's emotions" in group 1 was 0.41 points with a standard deviation of 8.19 points, which corresponds to a low level. In group 2, this result was 5.8 points with a standard deviation of 6.45 points, which also corresponds to a low level. The difference was 5.11 points, and it was statistically significant ($T = 3.8, p \leq 0.01$). Although the future physicians in group 2 had a low level of managing their emotions, they still have a pronounced ability to control the manifestation of their emotions.

The mean score on the scale "Self-motivation" in group 1 was 6.83 points with a standard deviation of 6.11 points (89.45%), which corresponds to a low level. In group 2, this result was 9.38 points with a standard deviation of 5.11 points (54.47%), which also corresponds to a low level. The difference was 2.26 points, and it was statistically significant ($T = 2.1, p \leq 0.05$). This indicates that the future physicians in group 2 have advanced skills and techniques of self-motivation.

The mean score on the scale "Empathy" in group 1 was 8.29 points with a standard deviation of 5.93 points (71.53%), which corresponds to a low level. In group 2, this result was 12.5 points with a standard deviation of 2.91 points (23.28%), which corresponds to the average level. The difference was 4.47 points, and it was statistically significant ($T = 4.94, p \leq 0.01$). Thus, the results of the technique of N. Hall show significant differences in the empathy level between the study groups. Future physicians who are not inclined to hide their own mistakes have a more developed empathy, are able to put themselves in the place of another person and therefore they are more responsible to their professional activities and its possible impact on others.

The mean score on the scale "Managing the emotions of other people" in group 1 was 8.11 points with a standard deviation of 5.61 points (69.17%), which corresponds to a low level. In group 2, this results was 11.26 points with a standard deviation of 3.21 points (28.5%), which corresponds to the average level. The difference was 3.16 points, and it was statistically significant ($T = 3.5, p \leq 0.01$). A higher level of emotional competence in group 2 obviously contributes to the development of the ability to manage other people's emotions in the respondents.

The mean score for the integrative index of emotional intelligence in group 1 was 32.74 points with a standard deviation of 22.06 points (67.37%), which corresponds to a low level of emotional intelligence. In group 2, this index was 51.61

points with a standard deviation of 16.96 points (32.86%), which corresponds to the average level. The difference was 18.39 points, and it was statistically significant ($T = 4.93, p \leq 0.01$). In general, physicians who tend to hide their professional mistakes have less developed social intelligence, which obviously has a negative impact on the level of their social consciousness, self-confidence, willingness to work systematically to correct their own shortcomings.

It should be noted that all components of emotional intelligence in the students of group 1 have medium and low results (94%). Therefore, according to the integrative indicator of emotional intelligence, which characterizes the level of emotional intelligence in general, the low quantitative data have been obtained. At the same time, only 18% of students (54% in group 1) demonstrate a low level of emotional intelligence in group 2. The average level of emotional intelligence is represented in 61% of students (40% in group 1). High level of emotional intelligence have been revealed in 21% of respondents (6% in group 1).

Discussion

The study has found that most of future physicians tended to hide professional mistakes. These results are higher than the average data for people in this age group (Çikrikci, Topkaya & Yılar, 2014; Schell, 2012; Pidbutska & Knysh, 2020). This indicates that specifics of activities in the medical field turns professional mistakes into a taboo subject, which, in turn, leads to the desire of future physicians to hide mistakes.

Analysis of emotional intelligence indicators demonstrates that most of future physicians have low and medium levels of emotional intelligence, which is generally typical for medical students (Abe, Niwa & Fujisaki, 2018; Sundararajan & Gopichandran, 2018; Gupta, Singh & Kumar, 2017). This is due to the prevalence in future physicians of the mental protective mechanisms such as rationalization and isolation of any affect, which leads to isolation of unpleasant and anxious emotional states.

In the group of future physicians who tend to hide professional mistakes, emotional intelligence scores were significantly lower, which confirms our initial hypothesis that the ability to recognize one's own mistakes and learn from them is associated with emotional maturity and willingness to accept and understand one's own emotions and emotions of other people.

Conclusions

During the study it has been determined that:

- 1) the vast majority of future physicians believe that professional mistakes should be hidden, which, in turn, does not contribute to their professional development;
- 2) the future physicians who tended to hide professional mistakes had low level of emotional awareness, ability to manage one's emotions, self-motivation, empathy, ability to manage other people's emotions;
- 3) the formation of a common-sense attitude to professional mistakes should take place in the context of the development of emotional intelligence, since it would promote a more conscious attitude of future physicians to professional activities and development of a more common-sense attitude to mistakes, and this poses new challenges for medical education to form emotional intelligence of future professionals in the medical field.

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