EMPATHY AND PERSONALITY TRAITS OF MEDICAL DOCTORS WORKING IN THE COVID-19 PANDEMIC

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Abstract

During the COVID-19 pandemic doctors use their intellectual and personal potential in order to be effective in their work, as they were placed in a situation with special requirements for professional activity, creating an emotionally charged environment. Empathy, emotional intelligence (EI), and emotional stability play an important role. Our objective was to study the relationship between empathy, EI, intuition, attitudes toward uncertainty and personality traits in doctors performing their professional activities during the COVID-19 pandemic. The study involved 122 doctors of different specialties (psychiatrists, pediatricians, surgeons, oncologists, etc.). Six questionnaires were used. The Jefferson Scale of Empathy and confirmatory factor analysis were used to verify the factor structure, where the original three-factor model showed the best fit. To identify the relationships between the variables, the Spearman test was used. In our sample of medical doctors, emotional stability characterizes individuals with high self-control and sociality (TEIQue scales). Our data allows us to highlight that empathy fails to be integrated with traits of emotional intelligence in the personality profiles of medical doctors. But distancing from the sphere of one's experiences in interpersonal relationships during the COVID pandemic may be a necessary component in the personal regulation of the performance of one's professional responsibilities.

Keywords: COVID-19, medical doctors, personality traits, empathy, emotional intelligence, Big Five, tolerance–intolerance for uncertainty.

Introduction

During the COVID-19 pandemic doctors were placed in a situation with special requirements for professional activity, creating an emotionally charged environment where doctors must use their intellectual and personal potential (Kornilova, 2016) in order to be effective in their work. In this process empathy, emotional intelligence, emotional management, and emotional stability play an important role (Matyushkina et al., 2020).

Medical doctors' personality profiles have already been studied in terms of motivation and representation of risk (Kornilova et al., 2020). However, the pandemic raised special demands for their work. As such, research into the personality

profiles of medical doctors working in the COVID-19 pandemic conditions is important.

Amidst the discussion of whether empathy benefits medicine, opinions that objective solutions for treating patients can only be made by "clinically distant" medical doctors without an emotional connection to patients, are countered by an increasing amount of data showing that patients appreciate emotional care as much as technical skills in choosing a medical doctor (Hirsch, 2007). The idea that medical objectivity and medical doctors' effectiveness require emotional distance from a patient, or "clinical indifference", is doubted (Shelley, 2015).

It was demonstrated that a doctor's expression of empathy during the motivational interview and reflective listening increased the patients' perceived autonomy and satisfaction with the doctor (Pollak et al., 2011). Medical doctors' self-reported ability to empathize was significantly positively correlated with sleep and patient self-efficacy and significantly negatively correlated with patient anxiety and the levels of acute inflammation mediator (IL-6). In addition, doctors' empathy reported by patients was negatively correlated with anxiety and IL-6 and positively correlated with self-efficacy and sleep quality (Chen et al., 2019).

Doctors' ability to empathize affected the stigma and self-efficacy in a group of breast cancer patients (Yang et al., 2018). There is extensive research on empathy among medical students (Garnett et al., 2020), the importance of proactive educational intervention is discussed with the aim to increase the empathy levels of future medical doctors and its impact on health in general (Haque, 2020).

Together with general empathy questionnaires, special measures were developed taking into account the specifics of empathy expression in doctor's activity. The example is Jefferson's questionnaire (Hojat & LaNoue, 2014).

Some authors include empathy in EI (Bar-On, 2006; Goleman, 2013). This corresponds to the second line of understanding EI as a personality trait rather than an ability. In particular, Petrides and Furnham offered a measure of Trait Emotional Intelligence – TEIQue questionnaire (Petrides & Furnham, 2001).

In medical psychology emotional intelligence is studied in such diseases as alexithymia, clinical depression, schizophrenia, etc. (Dawson et al., 2012; Hansenne, 2012; et al.).

Medical doctors who scored higher in openness, conscientiousness, extraversion and agreeableness (Big Five traits) face a lower risk of developing emotional burnout (Sharma & Kashyap, 2017). Conscientiousness, emotional stability, and agreeableness are associated with lower rates of depression, anxiety, stress, and lack of control (Krasavtseva et al., 2020).

Objectives of research are to highlight the relationship between empathy, EI, intuitions, attitude to uncertainty, and personality traits in medical doctors working during the COVID-19 pandemic.

Hypotheses

1. Greater adherence to the incremental implicit theory of emotions is positively associated with those indicators of emotional intelligence that reflect aspects of

sociality and self-control (since self-control of emotions is positively associated with interpersonal interactions).

2. Greater empathy among doctors is positively associated with higher emotional intelligence.

3. The trust of intuition among doctors is positively associated with empathy and a positive attitude towards uncertainty – tolerance to uncertainty and negatively with intolerance to uncertainty.

4. Greater empathy is positively associated with emotional stability and extraversion, suggesting openness to other people.

Methods

We collected data in Russia from 17th to 30th June, 2020 during the period of "self-isolation" in accordance with the requirements of social distancing and wearing face masks in public areas.

Participants

The study involved two samples of medical doctors, a total of 122 people: 1) 68 doctors (physicians and surgeons across different specialties – pediatricians, gynecologists, oncologists, etc.). Participants' age ranged from 22 to 65 y. o. (M = 38.01, SD = 10.78), 57.3% of them were female. 2) 54 psychiatrists. Participants' age ranged from 23 to 72 y. o. (M = 35.96, SD = 8.54), 81.4% of them were female.

Procedure

All questionnaires were adapted for Russian participants.

1. Implicit Theories of Emotions (ITE) scale (Tamir et al., 2007).

2. The Trait Emotional Intelligence Questionnaire (TEIQue) (Petrides & Furnham, 2001). The factor structure was verified using confirmatory factor analysis with robust characteristics. The best fit was shown by the original four-factor model. Original Four-Factor Matching metrics SBx2 = 745.2; df = 294; $p < .005$, CFI = 0.681, RMSEA = 0.08 (Kryukova et al., 2020).

3. Jefferson Scale of Empathy (Hojat & LaNoue, 2014). The factor structure was verified using confirmatory factor analysis with robust characteristics. The best fit was shown by the original three-factors model. Original three-factor model matching metrics SBx2 = 297.2; df = 164; $p < 0.005$, CFI = 0.767, RMSEA = 0.082.

4. Intuition Confidence Scales (from Rational-Experiential inventory: REI) (Epstein et al., 1996), in the Russian adaptation (Kornilova & Razvaliaeva, 2017). We used an earlier adaptation of a questionnaire with 20 items diagnosing two variables, intuitive engagement and intuitive ability (Kornilova & Kornilov, 2013).

5. Tolerance–intolerance for uncertainty new questionnaire — NTN-33 (Kornilova, 2010). Three scales allow the evaluation of ambiguity tolerance (TN) as a generalized property reflecting a positive attitude towards uncertainty, readiness for decisions and actions in case of incomplete guidelines and in a new and ambigu-

ous situation; intolerance of ambiguity (ITN) as a desire to attain clarity and to fol-
low rules and regulations; interpersonal intolerance of ambiguity (MITN) as a
desire for clarity and control in interpersonal relations.

6. Ten Item Personality Inventory (TIPI) (Gosling et al., 2003), in the Russian
adaptation (Kornilova & Chumakova, 2016).

Results

We applied the Holm-Bonferroni criterion to the obtained matrix of intercorre-
lations of measured personality traits allowing us to highlight the most significant
relationships indicated in Table 1.

Table 1

**Correlations (Spearman's ρ) between the personality measures of ITE, empathy, emotional intelligence
and tolerance for uncertainty (partial correlations adjusted family-wise error rate Holm-Bonferroni)**

№	Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Jefferson's Total Score	1														
2	Perspective-taking	.89*	1													
3	Compassionate Care	.82*	.55*	1												
4	Walking in Patient's Shoes	.45*			1											
5	Implicit Theories of Emotion					1										
6	Well-being		.42*	000	000		1									
7	Self-control					.47*	.51*	1								
8	Emotionality								1							
9	Sociality					.43*		.47*	.45*	1						
10	Intuitive ability									.42*	1					
11	Application of intuition										.70*	1				
12	Interpersonal intoler-ance to uncertainty							−.57*					1			
13	Extraversion	.46*	.43*						.42*					1		
14	Conscientiousness						.43*	.41*							1	
15	Emotional Stability							.62*		.41*			−.51*			1
16	Openness to Experiences							.54*		.48*						.42*

Note. 1) **p* < .01; 2) Jefferson Scale of Empathy (JSE) = scale number 1–4; Implicit Theories of
Emotions (ITE) scale = 5; The Trait Emotional Intelligence questionnaire (TEIQue) = scale number
6–9; Intuition Confidence Scales (from Rational-Experiential inventory, REI) = scale number 10–11;
Tolerance–intolerance for uncertainty new questionnaire (NTN-33) = scale number 12; Ten Item
Personality Measure (TIPI) = scale number 13–16.

The fact that empathy among doctors specifically on the Perspective-taking scale — decentration — is positively associated with well-being (as a trait of EI), and the overall empathy score and decentration — with extraversion, allows us to accept Hypothesis 2. In addition, this also suggests a general cognitive component (orientation toward others) as a mediating link between the personal and cognitive domains. However, testing such a hypothesis would mean using structural modeling tools, which was not possible at this time due to our sample size.

Hypothesis 3 on the relationship of empathy with confidence in intuition has not been confirmed, from EI scales, only sociality turned out to be related to intuitive ability. Our data thereby contradicts the conventional notion that there is a link between intuition, empathy and EI. They contradict the data in the larger sample (persons of non-medical specialties), where intuition trust correlated positively with interpersonal emotional intelligence and negatively with intrapersonal EI (Kornilova & Kornilov, 2013). Our data allows us to highlight that the personality profile of medical doctors does not integrate empathy with traits of emotional intelligence. Perhaps it is due to the fact that while working in extreme hospital conditions with COVID patients, medical doctors needed some emotional detachment, without which their professional activities would be too difficult to sustain.

In a larger sample of non-medical workers, intuition confidence scales on S. Epstein's questionnaire were positively associated with tolerance toward uncertainty (Kornilova & Kornilov, 2013). However, empathy was not measured in that study. We have not revealed any connections between tolerance to uncertainty and other measured traits. But the negative relationship of interpersonal intolerance with Emotional Stability is consistent with previous results. That is, Emotional Stability accompanies the acceptance of uncertainty in the interpersonal relationships of medical doctors with other people.

The data obtained allows us to accept Hypothesis 4 about the positive relationship of empathy with extraversion and emotional stability. The only significant relationship for the scales of emotional intelligence was a low level of self-control with high levels of interpersonal and tolerance to uncertainty. The fact that intolerance to uncertainty in interpersonal relationships characterized doctors with low emotional stability generally gives a consistent picture of a decrease in self-control in those who are emotionally unstable and do not accept uncertainty in interpersonal relationships.

On another sample of medical specialists, the following relationships were established between the Big Five traits (measured with TIPI) and the attitude toward uncertainty (Pavlova et al., 2019). Extroversion was negatively associated with ITN (NTN-33 scales) in both samples, but medical doctors did not observe its positive relationship with TN shown in the control group, and ITN in medical doctors was not associated with openness to experience (a negative connection in the control group). It was also shown that the total group of medical doctors (medical students and doctors) is characterized by a higher intolerance to uncertainty compared with the total control group of non-doctors, and there were no differences in indicators of attitude to uncertainty when comparing groups of medical students and practicing medical doctors.

Conclusion

So, in our sample of medical doctors, emotional stability characterizes individuals with high self-control and sociality (TEIQue scales). The same two indicators of EI are higher in individuals with increased traits of openness to experience, which in turn is associated with emotional stability.

Empathy according to a doctor-specialized questionnaire (Jefferson Scale of Empathy) is also positively associated with extraversion. The Perspective-taking empathy scale is positively associated with well-being as an EI trait.

Empathy and traits of EI are not associated with a confidence in intuition and attitudes toward uncertainty in a sample of medical doctors. But the distance from the sphere of one's experiences in interpersonal relationships under the conditions of COVID, perhaps, is a necessary component in the personal regulation of the performance of one's professional responsibilities.

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Эмпатия и личностные качества врачей, работающих в условиях пандемии COVID-19

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Резюме

Во время пандемии COVID-19 врачи оказались в ситуации особых требований к профессиональной деятельности, которые вместе создают эмоционально заряженную среду, и врачи должны использовать интеллектуальный и личностный потенциал, чтобы быть эффективными в своей работе. Особая роль здесь отводится эмпатии и эмоциональному интеллекту (ЭИ), управлению эмоциями и эмоциональной стабильности. Нашей целью было выявить связи эмпатии, ЭИ, интуиции и отношения к неопределенности во взаимосвязях с личностными чертами в профиле врачей, выполняющих свою профессиональную деятельность в условиях пандемии COVID-19. В исследовании приняли участие 122 врача разных специальностей (педиатры, гинекологи, онкологи, психиатры и т.д.). Тестирование проходило по шести методикам. По опроснику Джефферсона с помощью конфирматорного факторного анализа проверялась факторная структура, где наилучшие результаты показала оригинальная трехфакторная модель. Для выявления связей между переменными методик использовался критерий ρ Спирмена. В нашей выборке врачей эмоциональная стабильность характеризует людей с высоким самоконтролем и социальностью (шкалы TEIQue). Полученные нами данные позволяют выделить такую специфику личностного профиля врачей, как неинтегрированность эмпатии с чертами эмоционального интеллекта. Но отстраненность от сферы своих переживаний в межличностных отношениях в условиях пандемии COVID-19, возможно, выступает необходимым моментом в личностной регуляции выполнения профессиональных обязанностей.

Ключевые слова: COVID-19, врачи, личностные черты, эмпатия, эмоциональный интеллект, Большая Пятерка, толерантность-интолерантность к неопределенности.

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