Journal of Fundamentals of Mental Health

Mashhad University of Medical Sciences

Psychiatry and Behavioral Sciences Research Center

Original Article

Reliability and validity of Persian version of mentalization scale in university students

Zahra Ahmadian[1]; *Amir Ghamarani[2]

[1]M.Sc. Department of Psychology and Education of Children with Special Needs, Faculty of Psychology and Educational Sciences, University of Isfahan, Isfahan, Iran.
[2]Assistant professor, Department of Psychology Children with Special Needs, Faculty of Psychology and Educational Sciences, University of Isfahan, Isfahan, Iran.

Abstract

Introduction: Mentalization is a type of social cognition that determines the ability to understand and interpret the behavior of oneself and others. This study aimed to assess the validity and reliability of Persian version of mentalization scale in students of medical sciences.

Materials and Methods: In this study, among students studying at Isfahan University of Medical Sciences in 2019, 176 cases were selected randomly and fulfilled the mentalization scale. The correlation of the scores with the total score and the correlation of the subscales were used after examining the content validity of the mentalization scale. Exploratory factor analysis was used to determine the factor structure. Convergent validity was to examine the relationship between mentalization and empathy. Cronbach's alpha, halving coefficient and retest method were used to determine the internal consistency.

Results: The results showed that the content validity and the convergence validity between empathy and mentalization were significant. The correlation between the items and the total score was between 0.12 and 0.49, and it was significant ($P< 0.001$). The results of exploratory factor analysis explained the scale as 3 factors and the total variance of the questions as 34.38. Cronbach's alpha coefficient, retest reliability coefficient and halving reliability coefficient were 0.63, 0.36 and 0.66, respectively.

Conclusion: Based on the results, it seems that the mentalization scale is a tool with appropriate validity and reliability for measuring mentalization.

Keywords: Mentalization, Reliability, Students, Validity

Please cite this paper as:
Ahmadian Z, Ghamarani A. Reliability and validity of Persian version of mentalization scale in university students. Journal of Fundamentals of Mental Health 2021 Jul-Aug; 23(4): 233-240.

Introduction

Mentalization is a type of social cognition identified through the ability to understand and interpret the behavior of oneself and others, understanding mental states, thoughts, feelings, desires, aspirations, goals, and attitudes (1). It is defined as the process by which a person interprets his or her actions implicitly and explicitly and

***Corresponding Author:**
Department of Psychology Children with Special Needs, Faculty of Psychology and Educational Sciences, University of Isfahan, Isfahan, Iran.
aghamarani@yahoo.com
Received: Dec. 11, 2020
Accepted: May. 05, 2021

those of others as meaning based on voluntary mental states such as personal desires, needs, feelings, beliefs, and reasons (2). Mentalization is the ability to understand the mind of one-self and those of others (3). Funaji and Batman believe that mentalization can be used as a broad concept and as an umbrella for all concepts such as mental mentality (4), Alexithymia (5), experiences (6), and metacognition (7).

The results of research on the importance of mentalization show that high mentalization with curiosity about mental characteristics, the ability to imagine the views and emotional states of others to reflect on themselves, the ability to understand the distinction between mental states and low mentalization are characterized by lack of reflection of mental states, extreme attachment to one's views and interpretations, having certain confidence in oneself or others, automatic and distorted interpretations, and an inability to regulate anxiety about others (8). In general, low mentalization is associated with a lack of interest and curiosity in the mental states of oneself and others. In general, mentalization is essential for our social and behavioral functioning because it allows individuals to recognize and predict their own and others' behaviors regarding their state of knowledge, intentions, beliefs, and desires. Mentalization is an essential aspect of our ability to empathize (9).

In early childhood, the existence of a mental function is necessary for the child to distinguish his or her mental state from others. When a child encounters a confusing experience of physiological and psychological changes, the mother responds to his state with facial and verbal manifestations in the form of (you are tired, angry, hungry, etc.). In the meantime, the child creates a representation of his inner state in his mind with the help of his mother and can organize it into his confusing inner state and label it as an emotional state (10).

Funagi et al. emphasize that the infant's experience of its inner states, such as feelings, beliefs, desires, and other inner states, is not just a genetic predisposition but a structure that develops from infancy to childhood, and its evolution depends on interaction with the caregiver (a parent) who is present and reflective (11).

Given the importance of the structure of mentalization, in recent years, attention has been paid to this concept from the perspective of psychopathology and treatment. In this regard, mentalization is a fundamental psychoanalytic approach for treating adults, relationships between couples, and people with a history of childhood trauma (12,13). In this way, considerable evidence shows that adverse childhood experiences are associated with a lack of mental capacity (8).

Various studies show that mental retardation, especially the ability to understand one-self and others in terms of mental states, plays an essential role in the development of various mental disorders, especially borderline personality disorder (14), antisocial personality disorder (15), depression (16), schizophrenia (17,18) and mood disorders (19). For example, it has been shown that patients with schizotypy who have difficulty understanding the desires of others may have an imbalance in the dimensions of mentalization (20).

According to Euler, people with borderline personality disorder receive lower scores on the mentalization scale due to their inability to understand themselves and others and face more interpersonal interactions. In short, emotional disorders, impulsivity, and lack of interpretation of self and others' views are the main areas of borderline personality disorder and are strongly associated with problems and interpersonal interactions (21). According to this view, empirical evidence shows that low mentalization capacity is associated with interpersonal problems (22,23). In addition, mentalization significantly improves interpersonal relationships (8).

Given the importance of mentalization and its essential role in mental health and its increasing application in research and treatment, no independent tool could measure this ability. The only available tools were interviews that required highly trained interviewers to conduct and grade (24). In line with this research gap, Dimitrijevich et al. (2) designed the mentalization scale as a separate and independent scale with 27 items, considering the above definitions. This scale is the most authoritative tool ever designed to measure mentalization. Therefore, considering the importance of this scale and its role in psychopathology, and the fact that the scale or its equivalent scale has not been found in the country based on searches, the reliability and validity of the mentalization scale in science students of Isfahan Medical Center was the target of this study.

Materials and Methods

This cross-sectional study was conducted to validate the mentalization scale. The statistical population of this study was all medical students of Isfahan University of Medical Sciences in 2019. Given the great importance of mentalization, researchers sought to identify it and used tools to measure it. In this regard, Dimitrijevich and his colleagues designed a three-factor scale of mentalization with 27 items. The factors of this scale are:

1. Self-mentalization with questions such as "It is difficult to find the right words to express my feelings".
2. Mentalization with others "I can distinguish the feelings of others".
3. Motivation to think "When someone is harassing me, I try to understand why he/she is doing this."

This scale has been used in several studies (2). In the present study, the mentalization scale of Dimitrijevic et al. has been used. This scale has 27 items with a 5-point scale from 1 to 5 (strongly disagree to agree strongly) that participants must specify for each item to what extent it is true for them. This scale is a three-factor self-report scale that includes self-related mindset (items 8, 11, 14, 18, 20, 21, and 25), others-related mindset (items 2, 3, 5, 6, 10, 12, 19, 22, 24 and 27) and motivation to think (items 1, 4, 7, 9, 13, 15, 16, 17, 23 and 26). On this scale, items (8, 9, 11, 14, 18, 20, 21, and 26) are scored in reverse. For each question, it was considered as a Likert scale, I completely disagree (1), I disagree (2), I have no opinion (3), I agree (4), and I completely disagree (5). Accordingly, higher scores on this scale indicate more mentalization in the subject. Cronbach's alpha of this scale was equivalent in the research of Dimitrijevic et al. In the present study, the relationship between mentalization and empathy was considered a sub-goal.

In order to localize the original version of the scale, the first two Iranian translators who were fluent in both Persian and English were asked to provide a Persian translation of the English version of the mentalization scale (forward translate). Two translators were then asked to rate the difficulty of translation on a 100-degree scale. Thus, a score of zero indicated easy translation, and a 100 indicated complicated translation. Finally, the researchers obtained a Persian version, considering the better translation of the above two translations of each item.

In the second stage, two English translators who were not aware of the content of the initial questionnaire translated the final Persian version into English (Translate Backward). The original English version was then matched with the English version of the translation by experts in terms of translation clarity. In addition, issues such as not using specialized words, conforming to local and Iranian culture, and not changing the concepts and themes in the original version were examined. Finally, the final version of the scale was prepared after literary editing by one of the Persian language and literature graduate students.

In order to evaluate the content validity ratio (Content Validity Ratio: CVR), it was referred to the opinion of experts (10 people including six faculty members of the Department of Psychology at the University of Isfahan and 4 Ph.D. students at the University of Isfahan). For this purpose, they were asked, considering the relevance of each item to the theoretical foundations of mentalization and the appropriateness of each question, the necessity of having each question as "1. Not necessary", "2. Is not necessary but useful" and "3. It is necessary." Then, based on the CVR, each question was calculated according to the following formula (Ne is the number of specialists who answered the necessary question, and N is the total number of specialists).

Then, using the CVR average, the whole questionnaire content validity index (Content Validity Index: CVI) was measured. Two criteria were used to select the sample size in the last step. The first one included determining the sample size based on the type of research method. In this regard, it has been determined that the sample size in descriptive research is 100 people, and the sample size for test standardization research is 100 or more. On the other hand, one of the views for the sample size in factor analysis is that the minimum sample size is equal 5 to 10 subjects for each substance. Based on this, the number of samples of 184 people was selected by stratified sampling in proportion to the volume, and they self-reportedly answered the questions, which were eight distorted and incomplete questionnaires, of which 176 were sampled. Inclusion criteria included personal satisfaction

to participate in the study and being an Isfahan University of Medical Sciences student in medical sciences. Exclusion criteria included students in the final semester or on the eve of the defense session, failure to complete the questionnaires fully, and lack of interest in participating in the study. It is necessary to mention that the participants participated in the research voluntarily, and there was no need to mention their names and surnames regarding the observance of ethical standards.

The questionnaire asked about gender (male and female) and age of individuals. In addition, it was decided that the results will be provided to them after the end of the research. Statistical analysis of data was performed using SPSS software version 21. To assess the content validity of the questionnaire, the content validity ratio (CVR) and content validity index (CVI) was assessed after consulting experts and specialists.

In order to analyze the analysis of scale materials, which is a kind of validity, the correlation of the scores of each question was used with the total score and the correlation of the subscales. In this study, ethical principles, conscious satisfaction of the participants, and naming of the questionnaires were done. The research was reviewed by the Ethics Committee of the University of Isfahan and was approved with the ethics code IR.UI.REC.1399.052.

Results

Out of 200 distributed questionnaires, 176 questionnaires were returned (88% response rate). The sample consisted of 71 male students (40.34%) and 105 female students (59.66%) with a mean age of 25.88 and a standard deviation of 4.1. Four methods were used to determine the validity of the mentalization scale: 1. Content validity; 2. Correlation of items with the total score (material analysis); 3. Convergent validity; and 4. Factor analysis. The scale content validity was achieved through a survey of 4 experts and psychologists and matched the questions in terms of content with the concepts and structures of mentalization theory.

For this purpose, the scale items were examined in terms of the conditions of Iranian culture. In order to analyze the questionnaire materials, the correlation between test scores in each item and their score in the whole mentalization questionnaire was studied in this regard. The results showed that the correlation coefficients of items with the total score were significant in all cases (Table 1). In addition, the correlation of the scales with the total score was also investigated, and the results are presented in Table 2.

In order to evaluate the structural validity of the scale, exploratory factor analysis was used. Apart from that, Cronbach's alpha coefficient and half-split reliability coefficient, and reliability testing were used.

The results of Table 1 show that the correlation coefficients of the items with the total score were significant in all cases and ranged from 0.12 to 0.33. Therefore, at this stage, none of the items was deleted. The correlation coefficient of the subscales with the total score is presented in Table 2. The results show that the correlation coefficients of the subscales with the total score are positive and significant.

Convergent validity was used to investigate the relationship between mentalization and empathy. Pearson correlation coefficient was used to investigate the relationship between mentalization and empathy. In this regard, the Pearson correlation coefficient (0.35) results indicated a significant relationship between these two variables. In other words, the relationship between mentalization and empathy in medical students was confirmed. Factor analysis of the mentalization scale was performed by exploratory factor analysis.

The results show that the value of sampling adequacy ratio (Kaiser-Meyer-Olikin: KOM) for the present study is equal to 0.87, which indicates the adequacy of the sample size. Therefore, the sample size was sufficient for this analysis. The results showed that implementing factor analysis for the obtained data is justifiable. The factor analysis results confirmed that the mentalization scale is reported in Table 3.

The results of exploratory factor analysis of the scale were performed using the method of main motions and Varimax rotation.

The criterion for extracting the factors was the special value higher than one. The factor analysis results indicate that the special value related to principal component analysis is higher than 1 in 3 cases, which explains 34.38% of the scale variance.

Table 1. Items and correlation with the total score of the mentalization scale

	Title	Coefficient Correla with Total Scor	CVR
1	I can identify the reasons for my behavior.	0.41	0.8
2	When I want to comment on people's personality traits, I carefully evaluate their behavior and speech.	0.25	1
3	I can recognize the feelings of others.	0.12	0.8
4	I often think about others and their behaviors and interactions with them.	0.33	1
5	I can usually tell what bothers others.	0.49	1
6	I can empathize with others.	0.44	1
7	When someone is harassing me, I try to understand why they are doing this.	0.28	1
8	When I'm sad, I do not know exactly how I feel (scared, upset or angry).	0.44	1
9	I think paying attention to the details of others' behavior to better interact with them is a waste of time.	0.39	1
10	When I am aware of the opinions and feelings of others, I can predict their behavior well.	0.26	1
11	I often cannot give a good reason for what I do.	0.25	1
12	Sometimes I can understand their feelings before others tell me anything.	0.20	1
13	It is important for me to understand what happens in my relationships with close people.	0.20	1
14	I do not like to have unpleasant traits even for myself.	0.29	0.8
15	I believe that in order to understand the behavior of others, it is necessary to know their thoughts, desires and feelings.	0.25	1
16	I often talk about my feelings with people I am close to.	0.18	1
17	I like to read books and articles on psychology.	0.17	1
18	It is hard for me to accept that I am sad or scared.	0.39	1
19	I can describe the most important features of my close friends in detail.	0.37	1
20	Most of the time it is difficult for me to understand exactly how I feel.	0.20	1
21	It is difficult to find the right words to express my feelings.	0.35	1
22	Others tell me that I understand them and give them good advice.	0.24	1
23	To get to know others better, I always think about how they behave.	0.25	1
24	I can easily describe what I feel.	0.33	1
25	I am usually attracted to people when they talk about their feelings and thoughts.	0.35	1
26	It is pointless to think about the goals and aspirations of others, because everyone has their own problems in life.	0.25	1
27	One of the most important things for children to learn is to express their feelings and desires.	0.29	1
		CVI	0.93

Note: All coefficients were significant at the level of P< 0.0001

Table 2. Correlation coefficients of mentalization subscales with a total score

Factor	Coefficient correlation with total score
Self-mentalization	0.71
Mentalization of others	0.69
Motivation to think	0.80
Convergent validity with empathy	0.35

Table 3. Exploratory factor analysis and items of the Persian version of the mentalization scale

Factor	Special value	Percentage of compression variance	Percentage of compression variance	Number of items
Self- mentalization	3.66	13.55	13.55	8, 11, 14, 18, 20, 21،25
Mentalization of others	2.87	10.65	24.21	2, 3, 5, 6, 10, 12, 19, 22, 24, 27
Motivation to think	2.74	10.16	34.38	1,4,7,9,13,15,16,17, 23, 26

Table 3 shows a significant difference between the mean of pre-test, post-test, and follow-up the total score of Social adjustment in the three experimental and control groups. In other words, there is a significant difference between the scores of stages (pre-test, post-test, and follow-up) in these groups ($P< 0.01$, f= 55.89).

Also, the significance of the interaction between the stages with all three experimental groups in Social adjustment indicates that in the post-test and follow-up stages, the mean of the experimental groups is significantly higher than the control group ($P<0.01$, f = 43.91).

Therefore, there is a significant difference between the level of social adjustment of the subjects in the three experimental and control groups (f=19.26, $P< 0.01$).

These results indicate the effectiveness of Compassion Focused Therapy, Acceptance, and Commitment Therapy, and Acceptance and Commitment therapy enriched compassion on Social adjustment. For more detailed study and determination of groups that are different, the Bonferroni test is used (Table 4).

Reliability

In order to study the reliability of the scale, the methods of internal consistency, descriptive reliability, and retesting were used. As presented in Table 4, the results of this analysis show that Cronbach's alpha coefficients for the whole scale of mentalization and its subscales, including self-mentalization, mentalization of others, and motivation to think, are 0.63 0.65, 0.66, and 0.53, respectively. Moreover, the halving reliability coefficient of the mentalization scale was estimated to be 0.66, which indicates the optimal reliability coefficient of the mentalization scale.

Table 4. Results of the reliability of the mentalization scale

Factor	Cronbach's Alpha
Self-mentalization	0.65
Mentalization of others	0.66
Motivation to think	0.53
Total score	0.63

Discussion

This study aimed to investigate the reliability and validity of the mentalization scale in Iranian society and students of Isfahan University of Medical Sciences in 2019. In this study, different methods were used to measure the reliability and validity of the scale. The results regarding the reliability and validity of this instrument were comparable with those obtained by Dimitrijevich et al. (2) in determining the reliability and validity of the main form of the scale and were at a satisfactory level. The structure observed in this study is consistent with the findings of Fonagi et al., Badoud et al., and Morandotti et al., who validated this tool in English, Italian, and French-speaking populations, respectively (24-26). In line with the present study, Drooger et al. examined the reliability and validity of the mentalization scale in a descriptive-correlational study. The confirmatory factor analysis results of this study showed that the mentalization scale is composed of two factors of confidence and uncertainty. The component of confidence has a significant relationship with anxiety-depression and mindfulness, avoidant attachment, and ambivalent style. Cronbach's alpha was also estimated to be 0.88 for the confidence factor and 0.66 for the uncertainty factor (10).

Content validation is one of the main requirements of any new test. To determine the content validity of a tool, various methods may be used, and one of the accepted methods in this field is CVR and CVI calculation, so that the simplicity and comprehensibility of this method is one of its most important advantages. Since the minimum and maximum CVR were equal to 0.8 and 1 and the average CVI was equal to 0.93, it can be estimated that the mentalization scale has acceptable content validity. Furthermore, the results of the analysis of scale factors by heuristic factor method with principal components and Varimax rotation indicated that the questionnaire was saturated with a general factor (similar to the original form) which in total determines about 34.38% of the variance of the questions and the finding is consistent with the study finding of the original version of the scale (2).

The reproducibility or reliability of the scores obtained from a measurement tool is always one of the most important features that make its safe use in the clinical and research environment

possible. Scores obtained from a scale in terms of reliability should have two characteristics. First, they must have constant values with a small error, provided the same phenomenon or concept. Second, in questionnaires with several questions, such as the present scale, changes in test scores must occur harmoniously. Findings from the study of the reliability of the mentalization scale in the Iranian society were also estimated to be desirable, which is consistent with the study results in the original version (2). In this regard, Cronbach's alpha coefficient in the present study was 0.63 and in the original version was 0.74, which indicates the consistency of this scale in the Iranian sample. According to the results obtained in the present study, there is a positive and significant relationship between the degree of empathy and mentalization. In this regard, this scale can be considered by mental health professionals with preventive approaches to students' mental disorders. The results of factor analysis by principal component analysis method showed that the mentalization scale is a multidimensional scale with three factors explaining the variance of mentalization, which are sequential: 1. Self-mentalization 2. Mentalization of others 3. Motivation to think. By reviewing the studies conducted on the mentalization scale, none of the studies used content validity, which is one of the advantages of the present study. Based on this, it is suggested that the mentalization scale be used in various fields such as parenting, mental well-being, mental health, and pathological aspects such as depression and personality disorders. In addition, the validity and reliability of the mentalization scale should be reviewed on other technical, medical, and humanities disciplines, as well as at different levels of education and different age periods. On the other hand, to ensure optimal psychometrics, it needs to be examined in more diverse environments and larger sample sizes. Accordingly, the study of validity and reliability of this scale in other cities of Iran is another suggestion of this study.

In addition to being new, the scale can be used in other studies due to its desirable psychometric properties. However, notable limitations in this study include the limited group of samples to Isfahan medical students and, as a result, the difficulty of generalizing the findings to a different statistical population and the self-report form of the scale that leads to better appearance.

Conclusion

In general, the results confirm the acceptable validity and reliability of the mentalization scale, and this scale can be used to study and evaluate mentalization in Iranian society.

Acknowledgments

We want to thank all the experts and professors who evaluated the content validity of the scale, as well as all medical students who devoted part of their time to answering the research questionnaires. This study approved by the Ethics Committee of the University of Isfahan. The authors declare any conflict of interest.

References

1. Luyten P, Mayes LC, Nijssens L, Fonagy P. The parental reflective functioning questionnaire: Development and preliminary validation. PloS One 2017; 12(5): 1-18.
2. Dimitrijević A, Hanak N, Altaras Dimitrijević A, Jolić Marjanović Z. The Mentalization Scale: A self-report measure for the assessment of mentalizing capacity. J Pers Assess 2018; 100(3): 268-80.
3. Hörz-Sagstetter S, Mertens W, Isphording S, Buchheim A, Taubner S. Changes in reflective functioning during psychoanalytic psychotherapies. Journal of the American Psychoanalytic Association 2015; 63(3): 481-509.
4. Bohart AC, Wade AG. The client in psychotherapy. Bergin and Garfield's handbook of psychotherapy and behavior change. New Jersey: Wiley; 2013: 219-57.
5. Ogrodniczuk JS, Piper WE, Joyce AS. Effect of alexithymia on the process and outcome of psychotherapy: A programmatic review. Psychiatry Res 2011; 190(1): 43-8.
6. Yeryomenko N. Does the depth of client experiencing predict good psychotherapy outcomes? A meta-analysis of treatment outcomes. University of Windsor. Electronic theses and dissertations. 4847, 2012.
7. Dimaggio G, Lysaker PH. Metacognition and mentalizing in the psychotherapy of patients with psychosis and personality disorders. J Clin Psychol 2015; 71(2): 117-24.
8. Luyten P, Fonagy P, Lowyck B, Vermote R. Assessment of mentalization. Handbook of mentalizing in mental health practice. Washington. D.C.: American Psychiatric Publishing; 2012: 43-65.

9. Shamay-Tsoory SG, Harari H, Aharon-Peretz J, Levkovitz Y. The role of the orbitofrontal cortex in affective theory of mind deficits in criminal offenders with psychopathic tendencies. Cortex 2010; 46(5): 668-77.
10. Drogar E, Fathi-Ashtiani A, Ashrafi E. Validation and Reliability of the Persian Version of the MentalizationQuestionnaire. J Clin Psychol 2020; 12(1): 1-2.
11. Debbané M. Anthony Bateman, MA, FRCPsych. Handbook of mentalizing in mental health practice. Washington. D.C.: American Psychiatric Publishing; 2019: 417-29.
12. Nyberg V, Hertzmann L. Developing a mentalization-based treatment (MBT) for therapeutic intervention with couples (MBT-CT). Couple and family psychoanalysis 2014; 4(2): 116-35.
13. McIntosh HB. Mentalizing and its role as a mediator in the relationship between childhood experiences and adult functioning: Exploring the empirical evidence. Psihologija 2013; 46(2): 193-212.
14. Levy KN, Beeney JE, Temes CM. Attachment and its vicissitudes in borderline personality disorder. Curr Psychiatry Rep 2011; 13(1): 50-9.
15. Bateman A, Campbell C, Luyten P, Fonagy P. A mentalization-based approach to common factors in the treatment of borderline personality disorder. Curr Opin Psychol 2018; 21(1): 44-9.
16. Fischer-Kern M, Fonagy P, Kapusta ND, Luyten P, Boss S, Naderer A, Blüml V, Leithner K. Mentalizing in female inpatients with major depressive disorder. J Nerv Ment Dis 2013; 201(3): 202-7.
17. Fretland RA, Andersson S, Sundet K, Andreassen OA, Melle I, Vaskinn A. Theory of mind in schizophrenia: error types and associations with symptoms. Schizophr Res 2015; 162(1-3): 42-6.
18. Hoertnagl CM, Yalcin-Siedentopf N, Baumgartner S, Biedermann F, Deisenhammer EA, Hausmann A, Kaufmann A, Kemmler G, Mühlbacher M, Rauch AS, Fleischhacker WW. Affective prosody perception in symptomatically remitted patients with schizophrenia and bipolar disorder. Schizophr Res 2014; 158(3): 100-4.
19. Abu-Akel A, Bo S. Superior mentalizing abilities of female patients with schizophrenia. Psychiatry Res 2013; 210(3): 794-99.
20. Ripoll LH, Zaki J, Perez-Rodriguez MM, Snyder R, Strike KS, et al. Empathic accuracy and cognition in schizotypal personality disorder. Psychiatry Res 2013; 210(1): 232-41.
21. Euler S, Nolte T, Constantinou M, Griem J, Montague PR, Fonagy P, Personality and Mood Disorders Research Network. Interpersonal problems in borderline personality disorder: associations with mentalizing, emotion regulation, and impulsiveness. J Pers Disord 2021; 35(2): 177-93.
22. Correll N, Bekris KE, Berenson D, Brock O, Causo A, Hauser K, et al. Analysis and observations from the first amazon picking challenge. IEEE Trans Autom Sci Eng 2018; 15(1): 172-88.
23. Dejko K, Janusz B, Treger B. [Characteristics of mentalization patterns in parents of children with difficulties in realizing developmental objectives of the latency stage-qualitative analysis results]. Psychiatria Polska 2016; 50(3): 597-606. (Polish)
24. Fonagy P, Luyten P, Moulton-Perkins A, Lee YW, Warren F, Howard S, et al. Development and validation of a self-report measure of mentalizing: The reflective functioning questionnaire. PLoS One 2016; 11(7): 1-19. .
25. Badoud D, Luyten P, Fonseca-Pedrero E, Eliez S, Fonagy P, Debbané M. The French version of the Reflective Functioning Questionnaire: validity data for adolescents and adults and its association with non-suicidal self-injury. PloS One 2015; 10(12): 14-32.
26. Morandotti N, Brondino N, Merelli A, Boldrini A, De Vidovich GZ, Ricciardo S, et al. The Italian version of the Reflective Functioning Questionnaire: Validity data for adults and its association with severity of borderline personality disorder. PLoS One 2018; 13(11): 24-31.