Predicting corona anxiety based on emotional schemas and personality traits in nurses

Nooshin Ashja-Arvan[1], **Sahar Naderi-Nooreini[1]**, **Samin Shahhosseini[2]**,
Naeimeh Ghasemi[3], **Fatemeh Fazeli[4]**

1 Department of Psychology, School of Humanities and Literature, Bu-Ali Sina University, Hamedan, Iran
2 Department of Psychology, School of Psychology and Educational Sciences, South Tehran Branch, Islamic Azad University, Tehran, Iran
3 Department of General Psychology, School of Psychology and Social Sciences, Roudehen Branch, Islamic Azad University, Tehran, Iran
4 Department of Clinical Psychology, School of Humanities, Semnan Branch, Islamic Azad University, Semnan, Iran

Abstract

Original Article

BACKGROUND: The high prevalence of corona disease has caused stress, anxiety, and distress in various groups, including medical personnel. Therefore, the aim of this study was to predict corona anxiety in nurses based on their emotional schemas and personality traits.

METHODS: The present study was a descriptive-correlational research. The statistical population of the study consisted of all nurses in the treatment department of Markazi Province, Iran, 2019. Through convenience sampling method, 290 individuals (163 women and 123 men) were selected. Participants were assessed using the Corona Anxiety Scale, NEO Five Factor Inventory (NEO-FFI), and Emotional Schemas Scale. The research data were analyzed using Pearson correlation and regression analysis in SPSS software.

RESULTS: The results of Pearson correlation analysis and stepwise regression showed that corona anxiety has a positive relationship with all emotional schemas, except poor consciousness. Moreover, it has a positive relationship with the psychological personality trait of neuroticism, and a significant negative relationship with openness to experience and agreeableness (P < 0.01). Furthermore, the emotional schemas of unfaithfulness, lack of perception, guilt, worthlessness, and the personality traits of neuroticism and empiricism (P < 0.01) were predictors of corona anxiety.

CONCLUSION: Based on the results, emotional schemas and personality traits are effective on corona anxiety and these variables can be considered in corona crisis conditions in nurses.

KEYWORDS: COVID-19; Anxiety Disorders; Nurses

Citation: Ashja-Arvan N, Naderi-Nooreini S, Shahhosseini S, Ghasemi N, Fazeli F. **Predicting corona anxiety based on emotional schemas and personality traits in nurses.** Chron Dis J 2023; 11(4): 223-30.

Introduction

Corona anxiety is the anxiety caused by being infected with the coronavirus, which is mostly due to the lack of knowledge and ambiguity surrounding it.[1-3] Recent evidence suggests that people, who are kept in isolation and quarantine due to corona disease, experience significant distress due to anxiety, anger, confusion, and stress symptoms of post-traumatic injury.[4,5] Moreover, the mental health of medical personnel, especially nurses, has attracted a great deal of attention due to their constant communication with patients

Corresponding Author:
Naeimeh Ghasemi; Department of General Psychology, School of Psychology and Social Sciences, Roudehen Branch, Islamic Azad University, Tehran, Iran
Email: naeimeh.ghasemi21@yahoo.com

and burnout caused by providing services during the corona epidemic.[6,7] Depression, anxiety, and stress of nurses and treatment staff working in COVID-19-related wards were moderate.[8,9]

Emotional schemas can predict corona anxiety among nurses. The model of emotional schemas was presented based on the concept of emotional processing and inspired by the metacognitive model of emotions.[9] Emotional schemas are individuals' cognitive perspectives on emotional experiences and are defined as programs, concepts, and strategies that a person uses in response to an emotion. Certain dimensions of emotional schemas may exacerbate or perpetuate depression or anxiety, both by increasing emotion-provoking assessments or through two maladaptive coping strategies such as avoidance, worry, or rumination that cause pathological experiences. They may be related, and in fact it is due to these schemes that many people with anxiety disorders are resistant to treatment.[10]

Emotional disorders are often the result of a person's assessment and interpretation of their feelings and the strategies used to deal with them.[9] Regarding the relationship between emotional schemas and stress and anxiety, research results showed a significant relationship between all subscales of emotional schemas, and depression and anxiety. Among the emotional schemas, strategies of uncontrollability, blame, rational effort, and guilt were predictors of anxiety and explained 24% of the variance and variability of anxiety; in addition, the results of previous studies showed that emotional schemas can predict a high rate of depression and anxiety.[11,12]

Personality traits can also predict corona anxiety among nurses. Personality is a set of distinct and enduring thoughts, emotions, and behaviors that show how we adapt to the world.[13] The five major factors (extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness) show

the main dimensions of a person's personality traits. Psychological traumas such as depression and anxiety in critical situations such as the pandemic of infectious diseases seem to be related to emotional schemas and personality traits of individuals and play a direct and significant role in mental health.[13-16]

Prior to 2020, mental disorders were a major cause of burden associated with global health, and depression and anxiety disorders were the major causes. The advent of COVID-19 has created an environment in which many of the determinants of poor mental health are exacerbated. Therefore, up-to-date information on the mental health effects of COVID-19 is essential in order to inform the health system's responses. Corona anxiety disorders were observed in 532 million people worldwide and an increase of 27.6% was observed in this disorder during pandemic upsurge. The overall prevalence of anxiety disorders during the epidemic reached 3152.9 cases per 100000 populations. In total, the COVID-19 epidemic resulted in 49.4 million depressive disorder cases daily worldwide in 2020.[10] COVID-19 epidemic definitive depressions were observed in 22% of nurses and symptoms of anxiety were observed in 29% of them.[13]

Shahyad and Mohammadi in 2020 reported coronavirus-related anxiety and depression in 79.2% and 82.1% of the staff of coronavirus reference clinics.[7] Huang and Zhao in 2020 showed that in 52.8% of respondents, the psychological effects of the coronavirus outbreak were moderate or severe.[8] In 2014, the study of Bagherinia et al. in 2016 showed that personality traits, neuroticism, and responsibility could predict anxiety.[14]

The rapid spread of COVID-19 has had many negative consequences, including anxiety and depression, a heavy burden on nurses who are constantly dealing with patients and their deterioration, and disruption of effective community service, which is a global concern.[17] Thus, this

highlights the need for attention to the mental health of medical staff and strategies to promote their psychological well-being. Therefore, the aim of this study was to predict corona anxiety in nurses based on their emotional schemas and personality traits.

Methods

In this study, corona anxiety in nurses based on emotional schemas and personality traits were examined and interpreted. The present research was conducted with a descriptive-correlational design. The study population consisted of all nurses in the treatment department in Arak, Markazi Province, Iran, 2019.

From among the 1112 nurses, a sample of 290 people was selected according to Krejcie and Morgan's sampling technique. Due to special conditions in the community and restrictions on traffic and social communication, the convenience sampling method available was used online. Initially, the objectives of the research were explained to all participants and they were assured that all ethical principles of research such as confidentiality and non-disclosure of names will be observed and they are allowed to withdraw from cooperation at any stage of the research. After obtaining informed consent to participation, individuals who had the inclusion criteria (a minimum education of diploma) were asked to complete the questionnaire with initial explanations. The study inclusion criteria were being a nurse, being employed in Markazi Province during the corona pandemic, and they understood the purpose of the study. Moreover, lack of suitable answers to the questions, having an acute psychiatric disorder with psychotic symptoms, and refusing to continue cooperation at any stage of the research were the most important criteria for exclusion from the study. The questionnaire was designed online and published through social networks

(Telegram, WhatsApp, and Instagram). An online questionnaire of 106 questions was used, which included two general sections consisting of a demographic characteristics form (gender, education, income level, and marital status), and the Corona Anxiety Scale, NEO Five Factor Inventory (NEO-FFI), and Emotional Schemas Scale. Research data were analyzed using the Pearson correlation and regression analysis in SPSS software (version 22; IBM Corp., Armonk, NY, USA).

Corona Anxiety Scale: Alipour et al. prepared and validated this scale with the aim of assessing the level of anxiety caused by COVID-19 in Iran in 2019.[18] This tool consists of 18 questions scored on a 4-point Likert scale (from never to forever). This tool consists of the two subscales of psychological symptoms (questions 1 to 9) and physical symptoms (questions 10 to 18). The reliability of whole questionnaire, and the psychological and physical symptoms subscales was estimated to be 0.91, and 0.87 and 0.86, respectively, using Cronbach's induction method.[18] In the present study, the reliability of the whole scale was 0.87 (Cronbach's alpha).

NEO Five Factor Inventory: The NEO-FFI consists of 60 questions in 5 dimensions (the big five personality traits). This questionnaire measures neuroticism (against mental and emotional stability), extraversion (against introversion), empiricism (against dryness and inflexibility), agreeability (against narcissism), and conscientiousness (against negligence) (12 questions for each). The questions are scored on a 5-point scale of strongly disagree (0), disagree (1), have no opinion (2), agree (3), and strongly agree (4). Some questions are scored in reverse. The minimum and maximum scores of each subscale are 0 and 48, respectively, and the minimum and maximum total scores of the questionnaire are 0 and 240. Short form scales have a high correlation of 0.68 with the full form NEO questionnaire.[19] Correlation coefficients for the subscales of

neuroticism, extraversion, empiricism, agreeability, and conscientiousness were 0.75, 0.71, 0.78, 0.75, and 0.74, respectively. Moreover, their reliability was 0.84, 0.82, 0.78, 0.65, and 0.86, resepctively.[20]

Emotional Schemas Scale: This scale consists of 28 items that are scored on a 5-point Likert scale. This scale evaluates emotional schemas in the 14 dimensions of validation, comprehensibility, feeling guilty, emotions simplified, superior values, control, insentience, and need for rationality, persistence, consensus, and acceptance of feelings, rumination, expression, and blame. The reliability of the Persian version of this scale was evaluated using the test-retest method at 2-week intervals and was reported as 0.78 for the whole scale and within the range of 0.56-0.71 for the subscales. Furthermore, the internal consistency coefficient of the scale was obtained using Cronbach's alpha method and was 0.82 for the whole scale and within the range of 0.59-0.73 for the subscales. In general, the results obtained from both methods indicate the acceptable reliability of this scale.[21] In the present study, the reliability of the 28-question version was 0.93 for the whole scale and within the range of 0.71-0.94 for the subscales (using Cronbach's alpha method).

The present study was approved by the ethics committee of Kermanshah University of Medical Sciences with the code IR.KUMS.REC.1399.1122.

Results

The present study included a sample of 286 nurses with a mean ± SD age of 21.95 ± 3.15 years. The participants consisted of 163 (57%) men and 123 (43%) women. First, the mean and standard deviation, and statistics of skewness and elongation of the distribution of variables were examined (Table 1).

Mean and standard deviation of emotional schemas, personality traits, and corona anxiety were assessed. The Kolmogorov-Smirnov test was used to evaluate the normality of the distribution of variables. The distribution of variables was in the normal range ($P > 0.05$) (Table 2).

Table 1. Demographic characteristics of the subjects

Demographic characteristics	Status of variables	n (%)
Marital status	Single	124 (43.35)
	Married	162 (56.64)
Gender	Female	163 (57.00)
	Male	123 (43.00)
Education	Bachelor's degree	227 (79.37)
	Master's degree	59 (20.62)
Income level	Low	41 (14.33)
	Medium	215 (75.17)
	High	30 (10.48)
Total subjects	-	286 (100)

All emotional schemas, except poor consciousness, have a positive and significant relationship with corona anxiety ($P < 0.01$). Neuroticism had a positive and significant relationship with corona anxiety, and empiricism and compatibility had a negative and significant relationship with corona anxiety ($P < 0.01$). The personality traits of extroversion and conscientiousness were not significantly associated with corona anxiety (Table 3) ($P > 0.05$).

Multiple regressions were used to examine the research question. Its presuppositions were examined before performing regression. The normality of the dependent variable distribution was examined using skewness and elongation statistics and the result showed that the distribution is normal. The linear relationship between the independent and dependent variables was examined using Pearson correlation and it was found that there is a linear relationship between the variables. The Durbin-Watson (DW) test was used to evaluate the independence of the errors, and the results showed no correlation between the errors (DW = 1.69, which is acceptable between 1.5 and 2.5).

Table 2. Mean and standard deviation of variables and results of Kolmogorov-Smirnov test

	Variables	Mean ± SD	Z	P
Emotional schemas	Unfaithfulness	8.42 ± 2.16	0.194	0.058
	Lack of understanding	8.13 ± 2.24	0.084	0.200
	Feeling guilty	8.23 ± 2.06	0.123	0.200
	Emotions simplified	7.58 ± 2.38	0.115	0.200
	Worthlessness	8.08 ± 2.16	0.181	0.101
	Lack of control	8.57 ± 1.98	0.124	0.200
	Insentience	9.36 ± 2.25	0.183	0.095
	Logical	9.28 ± 2.11	0.093	0.200
	Continuity of feeling	8.60 ± 2.22	0.182	0.099
	Poor consciousness	10.33 ± 2.15	0.183	0.093
	Negligence	10.18 ± 1.97	0.191	0.066
	Rumination	10.24 ± 1.88	0.168	0.161
	Poor expression	10.49 ± 1.74	0.140	0.200
	Feeling ashamed	10.21 ± 1.94	0.108	0.200
	Neuroticism	21.01 ± 5.27	0.183	0.092
	Extraversion	25.80 ± 3.59	0.185	0.088
Personality traits	Empiricism	21.39 ± 4.17	0.067	0.200
	Compatibility	26.74 ± 4.74	0.121	0.200
	Conscientiousness	31.38 ± 5.62	0.139	0.200
	Corona anxiety	43.23 ± 9.77	0.174	0.149

SD: Standard deviation

Variance inflation factor (VIF) and tolerance were used to examine the multiple correlations between the predictor variables. There was no alignment between the variables (VIF amplitude of less than 10 and tolerance of higher than 0.1 is acceptable). By confirming the defaults, regression analysis was performed. In the first step (F = 15.73; P < 0.001), it can be said that the model is significant in the sense that emotional schemas and personality traits are able to predict corona anxiety in individuals up to 51%. According to the values obtained in the second step (P = 0.001; 22.84), it can be said that the model in the second step is also significant, and emotional schemas and personality traits are able to increase the level of corona anxiety in individuals up to 55%. In the second step, among the emotional schemas, unfaithfulness with a beta coefficient of 0.14, lack of understanding with a beta coefficient of 0.19, feeling guilty with a beta coefficient of 0.15, and neuroticism with a beta coefficient of 0.37 had a positive and significant role in explaining corona anxiety.

Table 3. Correlation of emotional schemas and personality traits with corona anxiety

Variables	Corona anxiety	Tolerance	VIF	Variables	Corona anxiety	Tolerance	VIF
Unfaithfulness	0.34[**]	0.78	1.27	Negligence	0.22[**]	0.78	1.72
Lack of understanding	0.38[**]	0.73	1.35	Rumination	0.15[**]	0.57	1.63
Feeling guilty	0.45[**]	0.69	1.44	Poor expression	0.18[**]	0.57	1.44
Emotions simplified	0.36[**]	0.70	1.43	Feeling ashamed	0.21[**]	0.61	1.52
Worthlessness	0.41[**]	0.65	1.52	Neuroticism	0.51[**]	0.74	1.35
Lack of control	0.28[**]	0.69	1.44	Extraversion	0.06	0.94	1.05
Insentience	0.25[**]	0.72	1.37	Empiricism	-0.35[**]	0.83	1.17
Logical	0.23[**]	0.73	1.36	Compatibility	-0.30[**]	0.78	1.27
Continuity of feeling	0.24[**]	0.73	1.28	Conscientiousness	0.04	0.86	1.15
Poor consciousness	0.07	0.77	1.32	-	-	-	-

[*]P < 0.05, [**]P < 0.01
VIF: Variance inflation factor

In the second step, among the personality traits, empiricism with a beta coefficient of -0.21 was introduced into the model and had a negative and significant role in explaining the variance in corona anxiety (Table 4).

Table 4. The results of stepwise regression analysis in predicting corona anxiety using emotional schemas and personality traits

Steps	R	R^2	ΔR	F	P
Step One	0.72	0.52	0.51	15.73	0.001
Step two	0.78	0.56	0.55	22.84	0.001

In the first step, among the emotional schemas, distrust with a beta coefficient of 0.18, lack of understanding with a beta coefficient of 0.22, and guilt with a beta coefficient of 0.26 had a significant role in explaining corona anxiety. Among the personality traits, neuroticism with a beta coefficient of 0.42 had a positive and significant role in explaining corona anxiety (Table 5).

Discussion

In this study, corona anxiety in nurses was examined and interpreted based on emotional schemas and personality traits.

The results showed that all emotional schemas, except poor consciousness, have a positive and significant relationship with corona anxiety. The first finding of the study was a positive relationship between emotional schemas and corona anxiety; this finding is consistent with that of Leahy et al. in 2008,[9] and Karami et al. in 2017.[12] People with corona anxiety disorder are more likely than normal people to have emotional problems such as dysfunctional expression of negative emotions and lack of proper control of these emotions. The prevalence of corona anxiety was higher among individuals with difficulty regulating emotions. In order to explain this finding, we can first refer to the definition of emotional schemas. Emotional schemas are psychological structures that shape a person's personality and affect our interaction with others, emotional experiences, and the interpretation of our ideas.[9,10,12] Anxious people have many problems with loss of control, incomprehensibility, mental rumination, and positive expression of emotion. On the other hand, according to the definition of turbulence of individual structures, the power of control of the individual as well as the predictability of the flow of life decreases.[22] This is due to the fact that, in critical situations of corona exposure, the social and individual structures of life are disrupted and a person's routine is disrupted, and as a result he/she is less able to predict and plan for his/her future. People feel that their control over the flow of life is reduced and this leads to a feeling of insecurity, which will lead to anxiety.[21-23] Thus, in the first finding of the research, the positive and significant relationship between emotional schemas and corona anxiety is explained.

Table 5. Stepwise regression model coefficients for predicting corona anxiety based on emotional schemas and personality traits

Steps	Simultaneous method model	Non-standardized coefficients		Standardized coefficients	T	P
		B	Standard error	Beta		
Step one	Fixed value	0.45	5.98	-	7.64	0.001
	Unfaithfulness	0.80	0.22	0.18	3.55	0.001
	Lack of understanding	0.96	0.23	0.22	4.17	0.001
	Feeling guilty	0.91	0.26	0.19	3.50	0.001
	Neuroticism	0.78	0.09	0.42	8.07	0.001
step one	Fixed value	0.82	2.15	-	4.42	0.001
	Unfaithfulness	0.74	0.37	0.14	3.11	0.011
	Lack of understanding	0.81	0.35	0.19	3.74	0.001
	Feeling guilty	0.66	0.48	0.15	3.21	0.008
	Neuroticism	0.72	0.16	0.37	7.54	0.001
	Empiricism	-0.51	0.13	-0.21	-4.28	0.001

The second finding of this study was that personality traits and neuroticism have a positive and significant relationship with corona anxiety. Extroverted personality traits and conscientiousness are not significantly associated with corona anxiety disorder. These findings are consistent with those of the researches by Bagherinia et al. in 2016,[14] and Ghorbani et al. in 2020.[15] Some personality traits such as conscience, extraversion, and acceptance had a significant negative relationship with corona anxiety and depression. The extent of psychological problems during corona heart disease can be predicted by neurotic, conscientious, and agreeability.[14,15] Anxiety and worry in society globally affect each person in a variable way. Recent evidence suggests that people held in isolation and quarantine experience significant distress in terms of anxiety, anger, confusion, and stress symptoms due to post-traumatic injury.[5] Mazza et al. in 2020 reported that another factor associated with anxiety is personality traits. Personality traits play a crucial role in predicting anxiety and depression.[3] Based on the five-factor model of personality, extraversion, neurosis, empiricism, agreeability, and conscientiousness are the main dimensions of personality traits. According to the definition of openness as curiosity and openness to new ways of thinking, it can be concluded that a person who has a high score of openness among the personality traits**,** finds a better way of coping with problems caused by crisis through new ways of thinking, and as a result, the level of corona anxiety will be lower in these people.

Among the personality traits, compatibility with problems and challenges, and people with this trait are more likely to cope better with problems and crises and experience less anxiety.[19] Hence, the relationship between emotional schemas and personality traits and corona anxiety will be negative. In contrast, in the case of the neurotic trait, by definition,

neuroticism is associated with low emotional stability. This feature makes people tend to have more emotional reactions and easily puts people under stress. In fact, neuroticism refers to a person's tendency to experience anxiety, impulsivity, and depression, and plays an important role in increasing anxiety in critical situations.[24] Therefore, when a person has a high score of neuroticism, his/her score of corona anxiety will also be high. Thus, the relationship between these two variables is positive. This explains the relationship between personality traits and corona anxiety.

In summary, the results showed that personality traits and emotional schemas are predictors of corona anxiety. The present study had some limitations, such as fatigue and busyness of nurses due to corona disease, and lack of cooperation in filling out questionnaires. Another limitation of the study was the impossibility of random sampling. It is suggested that in future studies, variables affecting health such as religious and spiritual views of nurses be taken into consideration and corona anxiety be compared between men and women.

Conclusion

It can be said that emotional schemas such as lack of control over negative emotions and inability to properly express emotions, and dysfunctional personality traits such as neuroticism and introversion have been effective on corona anxiety. To improve mental health among nurses, it is recommended that educational and therapeutic programs be implemented to improve nurses' anxiety and emotional schemas.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

all those who cooperated in the present study.

References

1. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. 2020; 395(10223): 497-506.
2. World Health Organization. Coronavirus disease (COVID-19): Situation report, 203. Geneva, Switzerland: WHO; 2020.
3. Mazza MG, De Lorenzo R, Conte C, Poletti S, Vai B, Bollettini I, et al. Anxiety and depression in COVID-19 survivors: Role of inflammatory and clinical predictors. Brain Behav Immun. 2020; 89: 594-600.
4. Kumar A, Somani A. Dealing with corona virus anxiety and OCD. Asian J Psychiatr. 2020; 51: 102053.
5. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. Lancet. 2020; 395(10227): 912-20.
6. Qin X, Shu K, Wang M, Chen W, Huang M, Yang A, et al. Mental health status of patients with coronavirus disease 2019 in Changsha. Zhong Nan Da Xue Xue Bao Yi Xue Ban. 2020; 45(6): 657-64.
7. Shahyad S, Mohammadi MT. Psychological impacts of Covid-19 outbreak on mental health status of society individuals: A narrative review. J Mil Med. 2020; 22(2): 184-92.
8. Huang Y, Zhao N. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: A web-based cross-sectional survey. Psychiatry Res. 2020; 288: 112954.
9. Leahy RL. Resistance: An emotional schema therapy (EST) approach. In: Simos G, editor. Cognitive behaviour therapy: A guide for the practising clinician. New York, NY: Routledge; 2009. p. 187-204.
10. COVID-19 Mental Disorders Collaborators. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. Lancet. 2021; 398(10312): 1700-12.
11. Bayazi MH, Gohari Z, Hojjat SK, Behrad A. Relationship between emotional schemas and anxiety, depression and coping stress styles in patients with coronary artery disease. J North Khorasan Univ Med Sci. 2014; 5(5): 1091-8.
12. Karami S, Banijamali S, Khosravi Z, Parhoon H. The role of emotional schemas in predicting anxiety and depression in patients with cancer. J Res Behav Sci. 2017; 15(3): 291-8.
13. Slusarska B, Nowicki GJ, Niedorys-Karczmarczyk B, Chrzan-Rodak A. Prevalence of depression and anxiety in nurses during the first eleven months of the COVID-19 pandemic: A systematic review and meta-analysis. Int J Environ Res Public Health. 2022; 19(3): 1154.
14. Bagherinia H, Yamini M, Ilderabadi Eh, Bagherinia F. Relationship between personality traits and mental health with resilience mediation in nurses. J Sabzevar Univ Med Sci. 2016; 22(6): 1063-70.
15. Ghorbani V, Jandaghiyan M, Jokar S, Zanjani Z. The Prediction of Depression, Anxiety, and Stress during the COVID-19 Outbreak Based on Personality Traits in the Residents of Kashan City from March to April 2020: A Descriptive Study. J Rafsanjan Univ Med Sci. 2021; 20(5): 503-18.
16. Aldao A, Nolen-Hoeksema S. Specificity of cognitive emotion regulation strategies: A transdiagnostic examination. Behav Res Ther. 2010; 48(10): 974-83.
17. Evans SJ, Bassis CM, Hein R, Assari S, Flowers SA, Kelly MB, et al. The gut microbiome composition associates with bipolar disorder and illness severity. J Psychiatr Res. 2017; 87: 23-9.
18. Alipour A, Ghadami A, Alipour Z, Abdollahzadeh H. Preliminary validation of the Corona Disease Anxiety Scale (CDAS) in the Iranian sample. Health Psychology. 2020; 8(32): 163-75.
19. Costa PT, McCrae RR. The Five-Factor Model of Personality and its relevance to personality disorders. J Pers Disord. 1992; 6(4): 343-59.
20. Ahmadi A, Ziapour A, Lebni JY, Mehedi N. Prediction of academic motivation based on variables of personality traits, academic self-efficacy, academic alienation and social support in paramedical students. Community Health Equity Res Policy. 2023; 43(2): 195-201.
21. Hanzadeh M, Edrisi F, Muhammadkhani S, Saidian M. Factor structure and psychometric properties of Emotional Schema Scale. Clinical Psychology Studies. 2013; 3(11): 91.
22. Rubin GJ, Wessely S. The psychological effects of quarantining a city. BMJ. 2020; 368: m313.
23. Tang T, Ibrahim A, West W. Effects of war-related stress on the satisfaction of human needs: The United States and the Middle East. Int J Manag Theory Pract. 2002; 3 (1): 35-53.
24. Aschwanden D, Strickhouser JE, Sesker AA, Lee JH, Luchetti M, Stephan Y, et al. Psychological and behavioural responses to coronavirus disease 2019: The role of personality. Eur J Pers. 2021; 35(1): 51-66.