ORIGINAL ARTICLE

Interpersonal cognitive distortions and family role performances in spouses during COVID-19 pandemic process in Turkey

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Abstract

Purpose: This study aimed to examine the relationship between interpersonal cognitive distortions and family role performances in spouses during the pandemic process.

Design and Methods: This cross-sectional study was conducted on 402 married individuals.

Findings: The total score of interpersonal cognitive distortions and task performance scores were higher in males. The individuals who go to the workplace during the Coronavirus disease 2019 (COVID-19) process have higher unrealistic relationship expectancy score and total score of interpersonal cognitive distortion. Interpersonal cognitive distortions were determined to explain 5% of task and relationship performance in family role performance.

Practice Implications: It was determined that the relationships in the spouses were associated with cognitive distortions and family role performance. Interpersonal cognitive distortions in spouses were found to affect role performance in the family.

KEYWORDS
cognitive distortions, family, pandemic, relationships, roles, spouses

1 | INTRODUCTION

The Coronavirus disease 2019 (COVID-19) pandemic, which has emerged as a global health problem in the world, directly affects the individual, family, and society.[1]

Countries are trying to reduce the spread to reduce their health, economic, and social effects. The effects of the pandemic on society, work-life, and family are not clear.[2] Many people have died during the pandemic and many others have been struggling with the negative effects of the disease. It is not only individuals who struggle against threats to their health by trying to stay away from infectious agents; the pandemic also has significant implications for families and leads to various life alterations.[3]

The COVID-19 pandemic can lead to an increase in perceived stress in families as well as health, social, and financial consequences.[4] The virus can cause anxiety, indecision, fear, grief, and panic in families. The fact that families are affected by the pandemic process does not occur in the same way in every family. Vulnerable groups and families with special needs may have less strength than other groups.[5] Considering the social effects of the pandemic, it can reach out to families' homes and affect not only the individuals in contact but also other members who take protective measures. The closure of workplaces was allowed and there was an opportunity for many people to work from home in order to contain the pandemic.[6,7] This situation may cause individuals to increase their time spent with their families and to have more intense relationships with each other.[8] In contrast, in an environment of domestic violence due to the restriction imposed on the freedom to act, negative reflections of the pandemic, such as fear and lack of self-confidence can be mentioned.[9]

The pandemic process may also affect family interaction and role performance. Family role performance means meeting the expectations and responsibilities of individuals in being a member of the family in terms of task and relation.[10] It is possible for members of the family to realize their roles and participate, by providing emotional and social support for the individuals in the family. The need for this support is increasing, especially during the pandemic process. If families cannot keep up with the role change, this can have the characteristics of a

crisis in terms of sources of support. In studies examining family lives and relationships during the COVID-19 process, it has been determined that family interaction with family members increased during the pandemic process, they cared about being in harmony with each other and supported each other.[11,12]

Considering the life cycle and internal balance of the family, the family may face various difficulties and demands in adaptation against changes and developments.[13] Especially, together with the responsibilities of the institution of marriage, unrealistic beliefs, and expectations between spouses bring disappointment and despair.[14] In the literature review, it was determined that as the interpersonal cognitive distortions were increased in married individuals, tolerance and marital adjustment were decreased, while marital conflicts were increased.[15–17] In addition, interpersonal cognitive distortions have been found to increase stress, anger, and aggression.[18–21]

Like all countries around the world, the Turkish population has also been seriously affected by the COVID-19 pandemic.[22,23] After the first case of COVID-19 was confirmed in Turkey, schools were quickly closed down, and social and cultural activities were canceled. These quarantine measures affected families as well as individuals.[24] There is a change toward the nuclear family type in Turkish culture, and the close-knit families with strong foundations are in constant interaction within themselves.[25] The restrictions brought about by the pandemic have disturbed this structure and deeply affected the relationships. People spent more time at home as they tried to adapt to the changes introduced by the pandemic, which resulted in issues, such as family anger, communication difficulties between partners, and tension between parents and children.[26] Individuals and families are having a hard time during the COVID-19 pandemic process. Quarantine, one of the protection measures, has created changes in the lives of individuals and has affected their roles, which directly affects their relationships and family life. The limitations in social life can lead to unwanted irrational thoughts in interpersonal relationships. This situation can affect mental health and even family continuity. This study aimed to examine the effect of unrealistic beliefs in relationships on roles in family life. It was thought that the findings to be obtained would constitute a step for future intervention studies. It was also believed that it would provide information about family life and relationships during the COVID-19 process.

2 | AIMS

This study aimed to examine the relationship between interpersonal cognitive distortions and family role performance in spouses during the COVID-19 pandemic process. Research questions are listed below.

(a) How are the levels of interpersonal cognitive distortion and family role performance in spouses?
(b) How do interpersonal cognitive distortions and family role performance in spouses show distribution by demographic characteristics?
(c) Is there any relationship between interpersonal cognitive distortions and family role performance?

(d) What are the variables that predict interpersonal cognitive distortions and family role performance?

3 | METHOD

The research is of a descriptive cross-sectional type and the study was conducted in May 2020. Since the normalization process in the COVID-19 pandemic in Turkey started on June 01, 2020, the period before this date was applied in the study. The study sample consisted of married couples living in Turkey. Being married and living with their spouses were determined as the criterion. This is an online study. Because the COVID-19 infection is transmitted through close contact, the researchers created an online questionnaire link using Google Forms to prevent the risk of transmission. Therefore, the snowball sampling technique was used in the study. Only people with internet access were able to participate in the study. The researchers collected the data by sending an online questionnaire link to different chat groups via WhatsApp, the most popular messaging app in Turkey, and Facebook. A large number of individuals were encouraged to participate in the study to ensure the diversity of the data. The researchers presented specific information about the study's intent and inclusion requirements at the start of the online questionnaire used in the application process, as well as the fact that the study was conducted for scientific purposes and that participation was voluntary. Individuals who volunteered to participate in the study were included in the study. The inclusion criteria were being married, being literate in Turkish, and voluntary participation. The exclusion criteria were being single, being illiterate, and having any cognitive and/or visual impairments. Of the people meeting the research criteria, 402 participants were attended in the study.

Since there was no study in which both scales used in this study were studied, the power of the study was calculated after data collection by using the G*Power-3.1.9.7 program. Accordingly, the effect size of the study was calculated as 0.5, the α value as 0.05, and the power as 0.99.

3.1 | Data collection tools

Introductory Information Form, Interpersonal Cognitive Distortions Scale, and Family Role Performance Scale were used in the study.

3.2 | Introductory information form

It consisted of questions, including age, occupation, gender, number of children, and the COVID-19 process.

3.3 | Interpersonal cognitive distortions scale

The scale consisted of 19 items in 5-point Likert-type and three subscales, which were unrealistic relationship expectancy, avoiding intimacy, and

mind-reading. High scores indicated that individuals have cognitive distortions. In the validity and reliability study conducted by Hamamcı and Büyüköztürk[27] the Cronbach's α coefficient has been found to be 0.67, and in the subscales, avoiding intimacy has been found to be 0.73, unrealistic relationship expectation 0.66, and mind reading 0. 49. Test-retest reliability coefficient was found to be 0.74.

3.4 | Family Role Performance Scale

The scale was developed by Chen et al.[10] and its validity and reliability in Turkish were carried out by Akın and Uğur.[28] The scale consisted of eight items and two subscales. Its subscales were task performance and relationship performance. The factor loads of the items were ranked between 0.21 and 0.83. Cronbach's α internal consistency reliability coefficients of the scale were found as 0.58 for the task performance subscale of the scale and 0.86 for the relationship performance subscale. The corrected item-test correlations of the scale were ranked between 0.26 and 0.75. There was no reverse item in the scoring of the scale.[28]

3.5 | Evaluation of data

The entry and evaluation of the data were performed with the SPSS-version 25.0 program. Numbers, percentages, and averages were given in the listing of the data. Since it met the parametric test assumptions of the data, the statistical analysis, the significance test for the difference between two averages, one-way analysis of variance, and Pearson correlation analysis were performed. Multiple regression analysis was used to determine the effect of the predictive effect of independent variables on interpersonal cognitive distortions and family role performance.

3.6 | Ethical consideration

The study was evaluated by the Human Research Ethics Committee before the application and it was decided to be ethically appropriate (Issue: 2020/64; Date 20.05.2020). It was also evaluated by the Scientific Research Board of the Ministry of Health and the necessary approvals for the research were obtained.

3.7 | Data collection

Participants were invited to the research via the online survey link. In the first part of the online survey, information about the study was given. The next part consisted of sociodemographic questions, and the last part consisted of questions of the Interpersonal Cognitive Distortions Scale and Family Role Performance Scale.

4 | RESULTS

4.1 | Characteristics of the participants

The mean age of the participants participating in the study was 38.66 ± 8.96. Of the participants, 75.6% were female, 81.6% had children, and 42.3% were college graduates. Of the participants, 69.2% stated that they worked, 14.9% went to the workplace, and 18.7% stated that they were at the workplace on certain days of the week.

4.1.1 | Mean scores of married individuals and relations between them

The mean scores and min–max scores of the married individuals participating in the study obtained from the Interpersonal Cognitive Distortions Scale and Family Role Performance Scale are given in Table 1. It was seen that the mean total score of the Interpersonal Cognitive Distortions Scale was above the mean value (50.21 ± 10.28; min–max = 24–82). The mean score of the subscale avoiding intimacy was determined as 19.86 ± 5.31, as 21.22 ± 5.79 for unrealistic relationship expectancy, as 9.12 ± 2.58 for mind reading subscale. The relationship performance score (18.22 ± 2.33) in family role performance was found to be higher than the mean task performance score (15.45 ± 2.33).

When the relationships between interpersonal cognitive distortions and family role performance subscales were examined, it was seen that as task performance increased, the total score of unrealistic relationship expectancy, mind reading, and cognitive distortions increased. A negative relationship was found between relationship performance and avoiding intimacy score.

4.1.2 | Interpersonal cognitive distortions and family role performance by sociodemographic variables

When interpersonal cognitive distortions and family role performance by gender were examined, it was determined that the total score of interpersonal cognitive distortions and task performance scores were higher in males than in females (Table 2).

It was determined that individuals who go to the workplace during the COVID-19 process have a higher total score of unrealistic relationship expectancy and interpersonal cognitive distortions compared to other individuals (Table 2).

When the subscales of both scales were compared by educational status, it was seen that primary and secondary school graduates have higher scores of avoiding intimacy compared to undergraduate, college graduates and postgraduates. Additionally, it was determined that primary school graduates had a higher total score of interpersonal cognitive distortions than college graduates and postgraduates (Table 2).

No difference was found in both scales' subscales by working status and having children ($p > 0.05$).

TABLE 1 Descriptive statistics and correlations analyses among variables

		$X \pm SD$	Min–Max	1	2	3	4	5	6
Interpersonal cognitive	Distortions Scale	1. Avoiding intimacy	$19,86 \pm 5,31$	9–39	–					
		2. Unrealistic relationship expectancy	$21,22 \pm 5,79$	8–37	0.334*	–				
		3. Mind reading	$9,12 \pm 2,58$	3–15	0.287*	0.296*	–			
		4. Total score	$50,21 \pm 10,28$	24–82	0.777*	0.810*	0.567*	–		
Family role	Performance Scale	5. Task Performance	$15,45 \pm 2,83$	6–20	0.070	0.208*	0.164*	0.194*	–	
		6. Relationship Performance	$18,22 \pm 2,33$	10–20	−0.103**	−0.012	0.094	−0.036	0.328*	–

*Correlation is significant at the 0.01 level (two-tailed).

**Correlation is significant at the 0.05 level (two-tailed).

4.1.3 | Predictive variables of interpersonal cognitive distortions and family role performance

Hierarchical multiple regression analysis is presented in Table 3. In the regression analysis, at the first stage, avoiding intimacy subscale was examined as a dependent variable, and educational status and working status were examined as independent variables. It was seen that it explained 6% avoiding intimacy score education status ($b = −0.24$, $p < 0.001$), and 7% education and working status. In the second stage, it was determined that 1% task performance was explained for males.

TABLE 2 Mean scores of interpersonal cognitive distortion and family role performance according to spouses' characteristics

		Family Role Performance Scale					
		Avoiding intimacy	Unrealistic relationship expectancy	Mind reading	Total score	Task performance	Relationship performance
Gender	Female ($n = 304$)	19.71 ± 5.19	20.91 ± 5.83	9.01 ± 2.55	$49.63 \pm 10,16$	15.26 ± 2.87	18.24 ± 2.34
	Male ($n = 98$)	20.34 ± 5.67	22.19 ± 5.58	9.49 ± 2.67	52.02 ± 10.50	16.04 ± 2.62	18.15 ± 2.30
	Statistical	$t = −1.020$	$t = −1.914$	$t = −1.614$	$t = −2.013$	$t = −2.379$	$t = 0.333$
	Analysis	$p = 0.308$	$p = 0.056$	$p = 0.107$	**$p = 0.045$**	**$p = 0.018$**	$p = 0.739$
Workplace during pandemic	At work on certain days of the week[a] ($n = 75$)	19.48 ± 4.72	22.15 ± 5.61	9.15 ± 2.50	50.77 ± 9.35	15.95 ± 2.57	18.20 ± 2.14
	Going to work[b] ($n = 60$)	21.02 ± 5.09	22.78 ± 5.90	9.55 ± 2.57	53.35 ± 10.09	16.02 ± 2.61	18.02 ± 2.53
	Other[c] ($n = 267$)	19.71 ± 5.50	20.61 ± 5.73	9.02 ± 2.61	49.34 ± 10.46	15.19 ± 2.92	18.27 ± 2.34
	Statistical analysis	$F = 1.730$	$F = 4.694$	$F = 1.0025$	$F = 3.913$	$F = 3.553$	$F = 0.300$
		$p = 0.179$	**$p = 0.010$**	$p = 0.360$	**$p = 0.021$**	**$p = 0.030$**	$p = 0.741$
	Tukey HSD test		**b–c**		**b–c**		
Educational Status	Primary school[a] ($n = 27$)	22.74 ± 5.95	23.15 ± 5.94	9.33 ± 3.08	55.22 ± 9.58	15.93 ± 3.01	17.15 ± 3.34
	Middle school[b] ($n = 21$)	23.43 ± 6.43	22.19 ± 6.04	9.00 ± 3.44	54.62 ± 12.23	15.10 ± 2.99	18.38 ± 1.83
	High school[c] ($n = 59$)	$20.92 \pm 4,.98$	21.66 ± 6.07	9.56 ± 2.64	52.14 ± 9.83	15.61 ± 2.86	18.28 ± 2.48
	Associate degree[d] ($n = 39$)	19.97 ± 4.52	19.15 ± 4.75	8.95 ± 2.41	48.08 ± 7.91	15.85 ± 2.77	18.21 ± 2.34
	College graduates[e] ($n = 170$)	19.08 ± 4.81	21.65 ± 5.73	9.16 ± 2.46	49.90 ± 10.03	15.64 ± 2.76	18.31 ± 2.19
	Postgraduate[f] ($n = 86$)	18.85 ± 5.62	20.17 ± 5.76	8.79 ± 2.49	$47.81 \pm 10,87$	14.74 ± 2.83	18.22 ± 233
	Statistical	$F = 5.610$	$F = 2.580$	$F = 0.708$	$F = 3.907$	$F = 1.638$	$F = 1.407$
	Analysis	**$p = 0.000$**	**$p = 0.026$**	$p = 0.617$	**$p = 0.002$**	$p = 0.149$	$p = 0.221$
	Tukey HSD test	**a–e, b–e, a–f, b–f**			**a–f**		

Interpersonal cognitive distortions were determined to explain 5% of task and relationship performance in family role performance.

5 | DISCUSSION

In this study, interpersonal cognitive distortions and family role performance in spouses at the COVID-19 process in Turkey were examined. The pandemic process causes various threats by affecting the life, relationships, and mental health of the individual, family, and society. When the role performance of the family was examined in our study, it was determined that the relationship performance was higher than the mean of the task performance. According to the family system theory, the family system consists of the members of the family and their interactions and relationships with each other, so a stressor occurring in one of the family members directly affects the other family members.[29,30] Uncertainty and life changes caused by the COVID-19 pandemic outside the family system can create stress for parents.[31] On the other hand, the increase in the time spent at home and confronting the difficulties together can result in the strengthening of family ties. Therefore, it can be said that relations are at the forefront during the COVID-19 process. A study examining mental health and quality of relationships during the pandemic found that individuals with a good quality of relationship had higher mental health scores.[32] Families with higher strengths in relationships are able to maintain closeness in the face of stress, establish close relationships with other sources of social support, and develop coping skills in the face of the situation.[33] On the other hand, external stressors caused by the pandemic (illness in the family, inadequacy regarding child care, job loss, etc.) prevent

the development of compatible behavior in relationships and which, in turn, lowers the quality and stability of relationships.[34]

It has been determined that changes in roles in the pandemic lead to changes in the relationships with their spouses. Interpersonal cognitive distortion scores were found to be higher in males than females. Masculine gender roles can cause cognitive distortions and relational and emotional problems.[35] When the roles attributed to gender in our society traditionally were examined, it was seen that the characteristics as power and determination were attributed to males, and love and interest to females. It can be said that females use interpersonal cognitive errors in relationships less because of their ability to facilitate interpersonal relationships and understand emotions, and their ability to manage relationships.[36] In studies conducted with a different group, it has been determined that males have higher levels of interpersonal cognitive distortions.[37,38] Unlike the findings of our study, there are also studies that have not found a difference by gender.[15,18,39] A study conducted with couples revealed that the structure of a couple's relationship affected the amount of conflict and satisfaction in that relationship; whereas couples with functional relationships experienced an increase in satisfaction and compatibility compared to the time before the pandemic, couples with nonfunctional relationships experienced an increase in conflict and a decrease in satisfaction.[40]

Another finding was that males have higher task performance than females in role performance in the family. Both genders were affected by the pandemic. When the roles of females in the pandemic were examined, it was seen that changes in education and working life, such as the closure of schools and the use of homes as home offices in this process, lead to an increase in the indoor burden and the burden of care.[41,42] Males undertake

TABLE 3 Hierarchical multiple regression analysis predicting variables of interpersonal cognitive distortions and family role performance

Predictor	B	SE	β	t	p
Dependent variable: Avoiding intimacy					
Educational status	−0.899	0.178	−0.244	−5.040	0.000
$F = 25.404$; $R = 0.244$; $R^2 = 0.060$					
Educational status	−1.147	0.208	−0.312	−5.505	0.000
Working status	−1.477	0.651	−0.129	−2.271	0.024
$F = 15.412$; $R = 0.268$; $R^2 = 0.072$					
Dependent variable: Task performance					
Gender (male)*	0.778	0.327	0.118	2.379	0.018
$F = 5.661$; $R = 0.118$; $R^2 = 0.014$					
Gender (male)*	0.594	0.342	0.090	1.737	0.083
Working place during pandemic	−0.334	0.186	−0.093	−1.799	0.073
$F = 4,465$; $R = 0.148$; $R^2 = 0.022$, $p = 0.012$					
Dependent variable: Interpersonal cognitive distortions total score					
Task performance	0.839	0.188	0.231	4.468	0.001
Relationship performance	−0.494	0.228	−0.112	−2.167	0.031
$F = 10.258$; $R = 0.221$; $R^2 = 0.049$, $p = 0.001$					

to meet the needs of their family members by ensuring the continuity of the family institution and take responsibilities in working life. During the COVID-19 process, it may be caused by required social distance changes in working life.

When the interpersonal cognitive distortions were examined at the education level, significant differences were found, and it was determined that college graduates had lower points of avoiding intimacy than primary and secondary school graduates. In the study of Dönmez and Tunç,[15] it has been determined that college graduates have lower interpersonal cognitive distortion scores than high school graduates. It can be mentioned that as the level of education increases, there is a decrease in attributing negative meanings to relationships in individuals.

This study found that unrealistic relationship expectations and interpersonal cognitive distortions were higher among working individuals. The pandemic has had an impact on daily functions and professional lives as well. Individuals were provided with the opportunity to work from home to prevent the virus from spreading during the pandemic. Individuals who prioritized their health preferred to work from home.[43] However, working at an actual workplace provides more opportunities to interact face-to-face with colleagues and clients.[44] Additionally, although many employers have implemented flexible working arrangements, there are still individuals who have to work from their workplaces during the pandemic. However, individuals in workplaces worry about the transmission of the virus. The risk factors affect individuals psychosocially, which can induce feelings of stress, pressure, and a feeling of vulnerability.[45] These conditions affect the interpersonal relationships and interactions among individuals.

In another finding of our study, when the effect of independent variables on dependent variables was examined, it was seen that 6% avoiding intimacy score educational status and 7% for education and employment status were explained. Cognitive dysfunctional thinking styles in individuals during the pandemic process threaten the health and leads to anxiety by increasing the frequency of these thoughts.[46] Thus, in terms of relationships, a decrease in close relationships or even avoidance of relationships occurs behaviorally and the cognitive structure can be directly affected. Especially, working status and educational status reveal that avoiding intimacy in relationships is negatively affected.

6 │ IMPLICATIONS FOR NURSING PRACTICE

During the COVID-19 pandemic process, there may be changes in the roles and relationships in the family, as well as health, economic, and social impacts. Therefore, healthcare professionals should consider the individual as a whole with their family. Interpersonal cognitive distortions and family role performance were examined in this study conducted with married individuals and partners living together. It was determined that the average relationship performance was higher than the family role performance level in the COVID-19 process. A positive relationship between task performance and interpersonal cognitive distortions, and a negative relationship between relationship performance and avoiding intimacy were found. It was determined that task performance was higher in males, and interpersonal cognitive

distortion scores were higher among those who went to the workplace according to the way of working and primary school graduates according to their education level. It was determined that avoiding intimacy score explained education and employment status 7%, cognitive distortion in relationships score explained family role performance 5%.

The results obtained from the study revealed the roles and relationships in families during the pandemic process. It was seen that the relationships of families vary according to various variables. It is very important to work on changes in family structure to increase family commitment in pandemic stressors and to cope with life changes by strengthening. It can be suggested for future studies to address the impact of the pandemic process on the spouses and other members of the family through qualitative research. During a pandemic, families endure the risk of illness and death, as well as uncertainty about the future, the possibility of receiving bad news at any given moment, and many other stress-inducing factors. While experiencing such stressful conditions, families may find opportunities to thoroughly review their roles and support each other, but they may also find themselves in places of conflict.[45] Therefore, while working with an individual during the pandemic, mental health professionals should consider the individual's family, the family's role in this process, and the relationships within the family as a whole. Communication and problem-oriented online programs carried out with couples who had been having relationship problems during the pandemic have proven to be effective and successful in solving problems.[48] Therefore, based on the conclusion that shifts in family role performances affect the relationships between spouses, the psychiatry team will be able to demonstrate the importance of protecting family stability and community health by implementing counseling programs for couples and families.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions. The data used to support the findings of this study are available from the corresponding author upon request.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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