Medical Journal of Bakırköy

Med J Bakirkoy 2023;19:129-136
DOI: 10.4274/BMJ.galenos.2023.2023.1-1

Research

Parental Gender Role Attitudes and Depression/Anxiety Symptoms Under COVID-19 Outbreak Restrictions: An Investigation of School-aged Children and Their Parents

COVİD-19 Kısıtlamaları Altında Ebeveynlerin Cinsiyet Rol Tutumları ve Depresyon/Anksiyete Belirtileri: Okul Çağı Çocukları ve Ebeveynleri Üzerine Bir Araştırma

Zehra Koyuncu[1], Nevin Cambaz Kurt[2], Sadık Toprak[3], Burak Doğangün[1]

[1]İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Child and Adolescent Psychiatry, İstanbul, Türkiye
[2]University of Health Sciences Türkiye, Başakşehir Çam and Sakura City Hospital, Clinic of Pediatry, İstanbul, Türkiye
[3]İstanbul University, İstanbul Faculty of Medicine, Department of Forensic Medicine, İstanbul, Türkiye

ABSTRACT

Objective: This study aimed to investigate the relationships between gender role attitudes, depression/anxiety symptoms, and coronavirus disease-2019 (COVID-19) pandemic restrictions in families with school-aged children.

Methods: Couples with school-aged children were included in the study. Couples who were fully restricted due to the COVID-19 pandemic (group 1) are compared with couples who were partially restricted due to the COVID-19 pandemic (group 2). Both parents were assessed by Gender Role Attitudes scale (GRAS), Depression Anxiety and Stress scale-21 (DASS), and Life Events Checklist. Revised Child Anxiety and Depression scale-Parent Version (RCADS-P) was completed by mothers for children's assessment.

Results: In group 1, mother's GRAS scores were negatively correlated with mother's DASS Depression (r=-0.598, p=0.004) and RCADS-P scores (r=-0.69, p=0.005). In group 2, fathers' GRAS scores were positively correlated with fathers' DASS depression (r=0.56, p=0.006), stress (r=0.62, p=0.002) and anxiety (r=0.61, p=0.002). In addition, mother's GRAS scores are a negative determinant of mother's DASS depression, father's DASS total, and RCADS-P scores. Father's GRAS scores are a positive predictor of father's DASS total.

Conclusion: This study shows that while maternal gender-type attitudes were associated with psychiatric symptoms in mothers, fathers, and children, the relationship between paternal gender role attitudes and mental health is controversial. In addition, the restrictions of the COVID-19 pandemic impact mental symptoms related to gender role attitudes.

Keywords: Depression, anxiety, gender role attitude, child, mother, father

ÖZ

Amaç: Bu çalışmada, okul çağında çocuğu olan ailelerde, ebeveynlerin cinsiyet rol tutumları, ebeveyn ve çocuktaki depresyon/anksiyete semptomları ve koronavirüs hastalığı-2019 (COVİD-19) pandemisine bağlı kısıtlamaların ilişkisini incelemek amaçlanmıştır.

Gereç ve Yöntem: Okul çağında çocuğu olan çiftler çalışmaya dahil edilmiştir. COVİD-19 pandemisi nedeniyle tam kısıtlanan ebeveynler (grup 1), kısmi kısıtlanan ebeveynlerle (grup 2) karşılaştırılmıştır. Hem anne hem de babalar Toplumsal Cinsiyet Rolleri Tutum ölçeği (TCRT), Depresyon Anksiyete Stres ölçeği-21 (DASÖ-21) ve Yaşam Olayları ölçeğini doldurmuştur. Çocukların değerlendirmesi için ise Çocuk Ergen Anksiyete Depresyon ölçeği-Yenilenmiş-Ebeveyn Formu (ÇADÖ-Y-E) anneler tarafından doldurulmuştur.

Bulgular: Grup 1'de annelerin TCRT puanları anne DASÖ-21-depresyon alt ölçeği puanlarıyla (r=-0,598; p=0,004) ve ÇADÖ-Y-E puanlarıyla (r=-0,69; p=0,005) negatif yönde korelasyon göstermiştir. Grup 2'de babaların TCRT puanları babaların DASÖ-21 depresyon (r:0,56; p=0,006), stres (r:0,62; p=0,002) ve anksiyete (r=0,61; p=0,002) puanlarıyla pozitif yönde korele bulunmuştur. Ayrıca, annelerin TCRT puanları anne DASÖ-

Address for Correspondence: Zehra Koyuncu, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, Department of Child and Adolescent Psychiatry, İstanbul, Türkiye
Phone: +90 507 706 92 80 E-mail: zboybay@gmail.com ORCID ID: orcid.org/0000-0001-6458-1826

Cite as: Koyuncu Z, Cambaz Kurt N, Toprak S, Doğangün B. Parental Gender Role Attitudes and Depression/Anxiety Symptoms Under COVID-19 Outbreak Restrictions: An Investigation of School-aged Children and Their Parents. Med J Bakirkoy 2023;19:129-136

Received: 05.01.2023
Accepted: 22.02.2023

21 depresyon, baba DASÖ-21 toplam ve ÇADÖ-Y-E puanlarının negatif yönde belirleyicisi olarak bulunmuştur. Babaların TCRT puanları ise, babaların DASÖ-21 toplam puanlarının pozitif yönde belirleyicisi olarak bulunmuştur.

Sonuç: Bu çalışma, annelerin cinsiyete dayalı tutumlarının anne, baba ve çocuktaki psikiyatrik semptomlarla ilişkili olduğunu göstermiştir. Babaların cinsiyete dayalı tutumları ile psikiyatrik semptomlar arasındaki ilişki ise tartışmalıdır. Ayrıca, COVİD-19 pandemisine bağlı kısıtlamaların, cinsiyet rol tutumları ile ilişkili psikiyatrik semptomlar üzerinde etkisi olduğu düşünülmektedir.

Anahtar Kelimeler: Depresyon, anksiyete, cinsiyet rol tutumları, çocuk, anne, baba

INTRODUCTION

Gender roles refer to the roles expected from men and women in social and cultural terms (1). The development and socialization of gender roles begin in the family environment (2). Some of the most important aspects of human life are heavily regulated by the gender roles and gender development is vital in human life (3,4).

Gender roles are not only regarded as a difference but also indicate power inequality and imbalance mostly against women (5,6). Therefore, it has been reported that there is a relationship between mental health and gender roles (7). In another study which was conducted with a large sample of adults in Russia showed that traditional gender roles based on gender inequality are associated with depression and anxiety disorder (8). It has been reported that characteristics related to gender roles can also affect adolescent mental health. Gender inequalities were associated with a tendency to depression and conduct disorder (9,10).

The coronavirus disease-2019 (COVID-19) pandemic and quarantine have psychological effects on people (11-13). It is estimated that mental problems and the need for support increase in this period (14). In addition, face- to-face education was suspended in schools, out-of-home activities decreased, and the time spent at home increased (15-17). During the pandemic period, parents reported difficulties in balancing their responsibilities and providing motivation for learning due to practices such as distance education (18). In a study examining the effects of distance education on parenting activities during the pandemic period (17), it was reported that two out of five parents met the criteria for depression or anxiety disorder. In another study, depression and anxiety symptoms of parents with children in education were investigated in terms of variables such as marital relationship, perceived social support, and the school that child attended (19). During the pandemic, gendered power relations between spouses working from home were investigated and examined in a qualitative study. In that study, attention was drawn to the disadvantaged position of women (20). However, to the best of our knowledge, there is no study that examines the relationship between gender roles and depressive or anxiety symptoms in the COVID-19 pandemic period when parents' domestic responsibilities increase.

Gender role-related responsibilities in the family are important for the development of gender role attitudes in individuals (2). Also, gender - type attitudes are associated with mental problems (8). In the COVID-19 pandemic period, when the domestic responsibilities of parents increase (18), it is possible that the unequal role distribution may affect the mental health of the parents and indirectly the mental health of the children. Therefore, the purposes of this study were determined:

i. To study the effect of COVID-19 pandemic restrictions on depression/anxiety symptoms in the family,

ii. To investigate the relationship between parental gender role attitudes and children's depression/anxiety symptoms,

iii. To investigate the relationship between gender role attitudes and depression/anxiety symptoms in parents with school-aged children.

For these purposes, two study groups were formed on the basis of the severity of their experience with COVID-19 pandemic restrictions. Study groups were compared in terms of maternal gender role attitudes, paternal gender role attitudes, maternal depression/anxiety/stress symptoms, paternal depression/anxiety/stress symptoms, and depression/anxiety symptoms in children.

METHODS

This study is a cross-sectional comparative survey study. Only parents with school-aged children were included. To examine the impact of COVID-19 restrictions, two distinct groups of families were formed. Study groups were determined by participants' responses to three questions. Families that suspended all social, economic or educational face-to-face activities are grouped as group 1. On the other hand, families that maintain their face-to-face activities with minimal restrictions are grouped as group 2.

Hence, families in group 1 are affected more by restrictions. Both parents mostly stayed home for the entire period and suspended almost all face- to-face social, economic and educational activities. This criteria has particular importance

in our study, as having both parents affected by restrictions, the outcome could be more prominent. Therefore, if the parents had different restriction experiences, they were not included in the study.

Families in group 2 are significantly less affected by the restrictions compared with those in group 1. Both parents maintained face-to-face activities during COVID-19 pandemic restrictions. Couples in group 2 kept going out and continued their daily life because of their professions, and duties were considered less affected by restrictions.

Participants were recruited from Pediatric Outpatient Clinics in University of Health Sciences Türkiye, Başakşehir Çam and Sakura City Hospital between June 16 and July 16 2021. The target number is determined based on statistical significance and is explained in section 2.2.

All parents included in the study had at least one child between the ages of 6 and 18. Single parents were excluded. Due to the potential impacts on depression and anxiety symptoms, a history of chronic disease in oneself or a child, a history of loss of a loved one in the last six months, and being unemployed due to the pandemic were determined as exclusion criteria. Traumatic event history was also evaluated by the Life Events Checklist (LEC) as traumatic events are considered a risk factor for depression (21).

The minimum sample size (n) was found to be 21 patients and 21 controls (details can be found in the statistical analysis section). Group 1 consists of 21 couples, whereas group 2 consists of 22 couples.

The Declaration of Helsinki is used as the standard of medical ethics in the study design. University of Health Sciences Türkiye, Başakşehir Çam and Sakura City Hospital reviewed and approved all study materials (no: 2021.06.109, date: 02.07.2021). Informed consent was obtained from the parents who agreed to participate in the study.

Instruments

The sociodemographic data form was created by integrating the measurement tool developed by Kalaycıoğlu et al. (22). A socioeconomic status index (SES) is calculated as quantitative data. Higher scores mean higher socioeconomic level (22). Also, there were questions on the child's gender, parent's age, the number of children and education level.

The Gender Role Attitudes scale (GRAS) was developed by García-Cueto et al. (23). The scale was adapted to the Turkish population by Bakioğlu and Türküm (24). Higher scores mean egalitarian attitudes toward gender. Lower scores signified a gender-type attitude in this study. Depression Anxiety and Stress scale-21 (DASS-21) was developed by (Henry and Crawford, 2005) (25). It is widely used to assess depression, anxiety, and stress. DASS-21 was adapted to the Turkish population in community and clinical samples by Sarıçam (26) and found to be reliable. It is a self-report scale consisting of 21 questions on depression, anxiety, and stress subscales. In this study, clinical threshold levels are accepted as 9 for depression subscale, 7 for anxiety subscale, and 14 for stress subscale (27).

Revised Child Anxiety and Depression scale-Parent Version (RCADS-P) assesses parent reports of children's depression and anxiety symptoms and was renovated in 2000 by Chorpita et al. (28). The Turkish validity study was carried out by Gormez et al. (29). In this study, mothers were asked to complete the RCADS-P for their school-age children evaluated in the pediatric outpatient clinic.

The LEC was used to screen potentially traumatic events in the subject's lifetime (30). LEC is a 17-item self-report measure. For each question, subjects select one of the following answers: "happened to me", "witnessed it", "learned about it" and "part of my job". A past traumatic experiences score was calculated for each subject based on their answers, with a possible range of 0 to 68 points.

Statistical Analysis

Statistical analyses were conducted using SPSS 21.0 software (IBM Corp., Armonk, NY, USA; licensed to Istanbul University). The sample size was estimated using Epi Info 2000 Statcalc software (Centers for Disease Control, Atlanta, GA) with a predicted exposure of 10% and 50% for controls (group 2) and patients (group 1), respectively (31-33). Accordingly, the minimum sample size (n) based on the statistical power 0.80 was found to be 21 patients and 21 controls. The normal distribution of continuous variables was assessed using the skewness-kurtosis and the Kolmogorov-Smirnov test or Shapiro-Wilk test. The logarithmic transformation was used for nonnormal data. Pearson's chi-square test or Fisher's Exact test was used to compare categorical data. The Student t-test was performed on the continuous data with normally distributed. Spearman's rank correlation test was used to compare nonnormally distributed continuous variables. Finally, linear regression analysis was performed. A p-value of <0.05 was considered significant.

RESULTS

Descriptive Data of Study Groups

Demographic Variables

In this sample, 9 (42.9%) of the children in group 1 and 11 (50,0%) of the children in group 2 were female. Mean education level by years was 13.4 (±4.6) in group 1 and

significantly lower than that in group 2 (16.2±4.0, p=0.04). Mean parent ages were 40.2 (±4.3) in group 1 and 41.2 (±6.6) in group 2. The number of school-aged children that parents have were 1.6 (±0.6) in group 1 and 1.59 (±0.6) in group 2. The mean ages of children were 10.0 (±3.1) in group 1 and 10.9 (±4.1) in group 2. The child's gender, parent and child's mean ages and number of school-aged children that parents have were similar in the study groups (p=0.63; p=0.56; p=0.43; p=0.89). Mean SES is 70 (±20.8) in group 1 and 73.2 (±14.0) in group 2. There was no significant difference between SES of groups (Table 1).

Psychiatric Parameters

Fifteen (71.4%) mothers in group 1 and 12 (54.5%) mothers in group 2 had depressive symptoms higher than the clinical threshold. Seventeen (81.0%) mothers in group 1 and 20 (90,9%) mothers in group 2 had stress symptoms higher than the clinical threshold. Twenty one (100.0%) mothers in group 1 and 22 (100.0%) mothers in group 2 had anxiety symptoms higher than the clinical threshold. Nine (42.9%) fathers in group 1 and 8 (36.4%) fathers in Group 2 had depression symptoms higher than the clinical threshold. 12 (57.1%) fathers in group 1 and 11 (50.0%) fathers in group 2 had stress symptoms higher than the clinical threshold. Nine (42.9%) fathers in group 1 and 4 (18.2%) fathers in group 2 had depression symptoms higher than the clinical threshold. Differences between groups 1 and 2 were not statistically significant in terms of maternal depression (p=0.25), stress (p=0.34), anxiety and paternal depression (p=0.66), stress (p=0.63), and anxiety at the clinical level (p=0.07) (Table 1).

Comparison of DASS, RCADS-P, and LEC Scores Between Groups

The mean mother DASS anxiety score was 13.1±2.5 and mean father DASS anxiety score was 4.3±4.5 in group 1 and both of which were significantly higher than group 2 (Mother DASS: 11.7±3.9; p=0.09, Father DASS: 1.59±2.1, p=0.04). While mean mother GRAS scores were significantly lower in group 1 (47.5±18.4) compared to group 2 (56.0±11.3, p=0.03), mean father GRAS scores did not show significant difference between the groups (group 1: 64.9±19.4, group 2: 57.5±9.5, p=0.18). Mother LEC, mother DASS depression, mother DASS stress, father LEC, father depression, father stress, and RCADS-P scores were similar for both groups (p=0.50, p=0.24, p=0.94, p=0.95, p=0.18, p=0.38, p=0.14, p=0.27) (Table 2).

Correlational Relations Between GRAS, DASS, and RCADS-P Within Groups

In group 1, mother's GRAS scores were negatively and moderately correlated with mother's DASS depression scores (r=-0.598, p=0.004) and were also negatively and highly correlated with RCADS-P scores (r=-0.69, p=0.005). There was also a positive and moderate correlation between RCADS-P scores and father's GRAS scores (r=0.48, p<0.001).

Table 1. Comparison of sociodemographic variables between the groups

		Group 1 (21)		Group 2 (22)		p
	Mean ± SD/n-%		Mean ± SD/n-%			
Gender of child	Male	12	57.1%	11	50.0%	0.63*
	Female	9	42.9%	11	50.0%	
Parent's age		40.2	±4.3	41.2	±6.6	0.56+
Education level (year)		**13.4**	**±4.6**	**16.2**	**±4.0**	**0.04+**
Number of children (6-18)		1.6	±0.6	1.59	±0.6	0.89+
Child's age		10.0	±3.1	10.9	±4.1	0.43+
Mother depression		15	71.4%	12	54.5%	0.25*
Mother stress		17	81.0%	20	90.9%	0.41**
Mother anxiety		21	100%	22	100%	
Father depression		9	42.9%	8	36.4%	0.66*
Father stress		12	57.1%	11	50.0%	0.63*
Father anxiety		9	42.9%	4	18.2%	0.07*
SES		70.2	20.8	73.2	14.0	0.40+

*Chi-square, +Student t-test, **Fisher Exact test
Group 1: Fully restricted due to the COVID-19 pandemic, Group 2: Partially restricted due to the COVID-19 pandemic, t: Student t-test, SD: Standard deviation, SES: Socioeconomic status index, COVID-19: Coronavirus disease-2019

In group 2, while there was no association between mother's GRAS scores, DASS and RCADS-P scores; father's GRAS scores were positively and moderately correlated with father's DASS depression scores (r=0.56, p=0.006). Also, father's GRAS scores were positively and highly correlated with father's DASS stress and anxiety scores (r=0.62, p=0.002; r=0.61, p=0.002) (Table 3).

Predictors of DASS and RCADS-P Scores

Predictors of parameters that were defined as the scores significantly correlated with GRAS scores were investigated by stepwise regression analysis (Table 4).

First, father's DASS depression subscale scores were positive [β: 0.55, 95% confidence interval (CI): 0.20-0.54, p=0.001] and mother's GRAS scores were negative (β: -0.8, 95% CI: -0.92--0.03, p= 0.034) predictors of mother's DASS depression subscale scores. Mother's DASS total scores (β: 0.34, 95% CI: 0.31-1.34, p=0.002) and father's GRAS scores were positive (β: 0.62, 95% CI: 1.43-3.15, p=0.001) and mother's GRAS scores were negative (β: -0.35, 95% CI: -1.31-0.28, p=0.003) predictors of the father's DASS total scores. Mother's DASS total scores were positive (β: 0.49, 95% CI: 0.60-1.74, p=0.001) and mother's GRAS scores (β: -0.43, 95% CI: -1.53- -0.45, p=0.001) were negative predictors of the RCADS-P scores (Table 4).

Table 2. Comparison of DASS, LEC and RCADS-P scores between the groups

	Group 1 (21)		Group 2 (22)		p
	Mean ± SD/n-%		Mean ± SD/n-%		
Mother LEC	8.52	±3.6	12.6	±9.9	0.50⁺
Mother GRAS	**47.5**	**±18.4**	**56.0**	**±11.3**	**0.03⁺**
Mother DASS depression	7.8	±4.2	6.2	±4.4	0.24⁺
Mother DASS stress	11.4	±3.8	11.4	±3.9	0.94⁺
Mother DASS anxiety	**13.1**	**±2.5**	**11.7**	**±3.9**	**0.09⁺**
Father LEC	12.3	±8.0	15.1	±11.7	0.95⁺
Father GRAS	64.9	±19.4	57.5	±9.5	0.18⁺
Father DASS depression	5.6	±5.5	3.6	±3.3	0.38⁺
Father DASS stress	10.1	±5.4	7.6	±3.5	0.14⁺
Father DASS anxiety	**4.3**	**±4.5**	**1.59**	**±2.1**	**0.04⁺**
RCADS-P	38.2	±24.6	26.4	±15.3	0.27⁺

⁺Student t-test
Group 1: Fully restricted due to the COVID-19 pandemic, Group 2: Partially restricted due to the COVID-19 pandemic, t: Student t-test, SD: Standard deviation, GRAS: Gender Role Attitudes scale, DASS: Depression Anxiety and Stress scale-21, RCADS-P: Revised Child Anxiety and Depression scale-Parent Version, LEC: Life Events Checklist, COVID-19: Coronavirus disease-2019

Table 3. Intragroup correlations of GRAS, DASS and RCADS-P scores

Spearman correlation group 1		M. DASS depression	M. DASS stress	M. DASS anxiety	F. DASS depression	F. DASS stress	F. DASS anxiety	RCADS-P
M. GRAS	r	**-0.598**	-0.14	-0.17	-0.25	-0.30	-0.39	**-0.69**
	p	**0.004**	0.53	0.44	0.27	0.18	0.07	**0.005**
F. GRAS	r	-0.23	0.15	0.30	0.34	0.42	0.34	**0.48**
	p	0.31	0.50	0.17	0.12	0.05	0.12	**<0.001**
Spearman correlation group 2		**M. DASS depression**	**M. DASS stress**	**M. DASS anxiety**	**F. DASS depression**	**F. DASS stress**	**F. DASS anxiety**	**RCADS-P**
M. GRAS	r	-0.36	0.40	0.32	0.17	0.28	0.16	-0.20
	p	0.87	0.06	0.13	0.44	0.19	046	0.37
F. GRAS	r	0.18	0.33	0.38	**0.56**	**0.62**	**0.61**	0.20
	p	0.41	0.12	0.07	**0.006**	**0.002**	**0.002**	0.36

Group 1: Fully restricted due to the COVID-19 pandemic, Group 2: Partially restricted due to the COVID-19 pandemic, GRAS: Gender Role Attitudes scale, DASS: Depression Anxiety and Stress scale-21, RCADS-P: Revised Child Anxiety and Depression scale-Parent Version, M.: Mother, F.: Father, COVID-19: Coronavirus disease-2019

Table 4. Association of mother's DASS depression father's DASS total and RCADS-P with possible risk factors (adjusted for age)

Regression number	Dependent variable	Predictor variables	p	Exp β	95% CI
1-	M. DASS depression	F. DASS depression	0.001	0.55	0.20-0.54
		M. GRAS	0.034	-0.28	-0.92- -0.03
2-	F. DASS total	M. DASS total	0.002	0.34	0.31-1.34
		F. GRAS	0.001	0.62	1.43-3.15
		M. GRAS	0.003	-0.35	-1.31- -0.28
3-	RCADS-P	M. DASS total	0.001	0.49	0.60-1.74
		M. GRAS	0.001	-0.43	-1.53- -0.45

GRAS: Gender Role Attitudes scale, DASS: Depression Anxiety and Stress scale-21, RCADS-P: Revised Child Anxiety and Depression scale-Parent Version, M.: Mother, F.: Father, CI: Confidence interval

DISCUSSION

In this study, it was found that in group 1 both mothers and fathers had higher anxiety levels than in group 2. Gender-type attitudes of mothers are positively and moderately associated with maternal anxiety and are also positively and highly associated with child depression/anxiety symptoms. On the other hand, egalitarian attitudes of fathers in group 2 were positively associated with depression, stress, and anxiety symptoms in fathers. In regression analysis, maternal gender-type attitudes were found to be a predictor of maternal anxiety and depression/anxiety symptoms in children. Moreover, paternal egalitarian attitudes are found to be a predictor of paternal depression, stress, and anxiety symptoms.

Differences Related to COVID-19 Restrictions

Similar to our results, it was previously reported that parents with children younger than 18 years had very high rates of depression and anxiety disorders during the COVID-19 pandemic (34). In our sample, it is observed that parental anxiety levels in group 1 are higher than those in group 2. Social isolation and changes in daily routines may affect anxiety management (14) and cause parents to report higher anxiety. However, it can also be challenging to continue going out and working in pandemic conditions. As a matter of fact, parental depression and stress levels in group 2 do not show differences compared with those in group 1.

Gender-typed Attitudes and Depression/Anxiety/Stress Symptoms in Mothers

Although symptom levels are similar in the groups, associated factors might be different. In our study, gender role attitudes are examined among these factors. In group 1, maternal gender-type attitudes were associated with maternal anxiety and depression/anxiety symptoms in children. This relationship may have been found in group 1 as gender-type attitudes impose more domestic labor on women (35). Recently, gender inequality and mental health problems were investigated in a large sample in Russia, and traditional gender role attitudes were found to be associated with depressive symptoms in adults (8). Parallel to that study, in group 1, gender-type attitudes and depressive symptoms are associated in mothers. Additionally, gender-type attitudes were found to be predictors of mother depression. Consistent with interpersonal theory (36), spouse depression is also observed as a predictor of mother depression.

Gender-typed Attitudes and Depression/Anxiety/Stress Symptoms in Fathers

It has been claimed that most traditional gender roles create disadvantages for women (5,6). In our study, while gender-type attitudes were associated with mother's depression, egalitarian attitudes were significantly associated with fathers' depression, stress and anxiety. It has been reported in the literature that men who internalize traditional gender roles seek less psychological help and have limited emotional expression (37). Therefore, it can be suggested that in our sample, fathers who internalized egalitarian attitudes could recognize and express their symptoms more, while fathers with more gender-type attitudes may have masked the symptoms. However, the relationships between egalitarian attitudes and fathers' depression, stress, and anxiety symptoms were observed only in group 2. Therefore, it can be concluded that fathers have difficulties in domestic responsibilities while working with the COVID-19 pandemic conditions outside their homes.

Parental Gender Role Attitudes and Depression/Anxiety Symptoms in Children

Maternal gender-type attitudes were related to children's depression and anxiety symptoms. Although the relationship

between gender role attitudes and psychological symptoms in adolescents has been reported in the literature (10), no study investigating parental attitudes and child symptoms has been found. The positive association between maternal gender-type attitudes and child depression/anxiety symptoms can be explained by the fact that children with maternal depression are at risk for psychopathology. Our findings showing that gender-typed mothers have more depressive symptoms and that maternal depression and maternal gender-typed attitudes predict child depression/anxiety symptoms are consistent with this data. Gender role attitudes are reported to be transmitted from generation to generation; therefore, it is possible that children with gender-type mothers have more gender-type attitudes. However, as a limitation, children's gender role attitudes are not examined in this study, so we cannon make any comments about children's gender role attitudes. Based on the literature and these findings, it can be suggested that maternal gender-type attitudes are related with depression and anxiety symptoms in both children and mothers. On the other hand, fathers' egalitarian attitudes were positively associated with children's depression/anxiety symptoms in group 1. Before the pandemic, it was pointed out that paternal adaptive strategies are associated with children's emotional symptoms in a well-educated sample (38). After the pandemic, it was found that parental dynamics and children's well-being were negatively affected by COVID-19 pandemic restrictions (39). In parallel, in our study, differences between study groups were obtained in this term. Risks and protective factors such as individual characteristics, family relations, and family characteristics (39). Because of our study, it can be considered that gender-type attitudes may be one of these risk factors. A trancendecent perspective claimed that domestic labor must not be allocated by sex (40). More egalitarian fathers may have had more difficulty balancing their domestic responsibilities in the event of confinement due to restrictions. In addition, family dynamics may have been more affected.

The significance and contribution of this study can be summarized in four major points. First, this is the first study that investigates the relationship between gender role attitudes, mental health, and COVID-19 restrictions. Also, the relationship between parents' gender role attitudes and the child's mental symptoms has not been investigated before. Second, although psychiatric disorders have multifactorial etiologies, moderate/high correlation results are obtained through the study's exclusion criteria. Third, parents are included in the study as couples and a multidimensional evaluation is made. Fourth, by comparing families who were fully restricted with those who were partially restricted, it is shown that psychiatric symptoms associated with gender-type attitudes may differ according to living conditions. There are also some limitations to our study. The first limitation is that the gender role attitudes of children were not evaluated. Second, depression/anxiety symptoms in children were evaluated only from mothers. Lastly, participants were recruited from the pediatric outpatient clinic. Therefore, the generalization of the results is limited.

CONCLUSION

This study investigated the relationship between COVID-19 restrictions and gender role-associated psychiatric symptoms for the first time. Our findings showed that the restrictions of the COVID-19 pandemic impact mental symptoms related to gender role attitudes. The association between parental gender role attitudes and the child's psychological symptoms was also investigated for the first time in this study. Our results emphasize the importance of attitudes toward gender equality in terms of women's mental health. On the other hand, the relationship between gender role attitudes and men's mental health is controversial, and further investigation in this area is needed.

Acknowledgments

The authors would like to thank Dr. Muhammed Said Boybay and Saadet Boybay for providing language help, proof reading of the article, and data entry.

ETHICS

Ethics Committee Approval: University of Health Sciences Türkiye, Başakşehir Çam and Sakura City Hospital reviewed and approved all study materials (no: 2021.06.109, date: 02.07.2021).

Informed Consent: Informed consent was obtained from the parents who agreed to participate in the study.

Authorship Contributions

Surgical and Medical Practices: Z.K., N.C.K., S.T., B.D., Concept: N.C.K., S.T., Design: Z.K., N.C.K., S.T., B.D., Data Collection or Processing: Z.K., N.C.K., S.T., B.D., Analysis or Interpretation: Z.K., N.C.K., S.T., Literature Search: Z.K., N.C.K., S.T., Writing: Z.K., N.C.K., S.T., B.D.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declare that this study received no financial support.

REFERENCES

1. Fagot BI, Rodgers CS, Leinbach MD, Eckes T, Trautner HM. The Developmental Social Psychology of Gender. Nueva Yersey: Lawrence Erlbaum Associates Publishers; 2000.
2. Eccles JS, Freedman-Doan C, Frome P, Jacobs J, Yoon KS. Gender-role socialization in the family: A longitudinal approach. Dev Soc Psychol Gend 2000:333-60.
3. Leung NM, Henry KSNg. Sex Role Development and Education. In: Wright JD, editor. International Encyclopedia of the Social & Behavioral Sciences. 2nd ed. Oxford: Elsevier; 2015. p. 678-85.
4. Sharepour M. Gender role stereotypes among Iranian adolescents. J Soc Psychol 2005;145:491-6.
5. Un Women. Gendered power inequalities [Internet]. 2020. Available from: https://www.endvawnow.org/en/articles/1930-gendered-power-inequalities-.html
6. Jain S. Human Development, Gender and Capability Approach. Indian J Hum Dev 2020;14:320-32.
7. Upmanyu VV, Upmanyu S, Lester D. Depressive symptoms among U.S. and Indian college students: the effects of gender and gender role. J Soc Psychol 2000;140:669-71.
8. Jaehn P, Bobrova N, Saburova L, Kudryavtsev AV, Malyutina S, Cook S. The relation of gender role attitudes with depression and generalised anxiety disorder in two Russian cities. J Affect Disord 2020;264:348-57.
9. Bone JK, Lewis G, Lewis G. The role of gender inequalities in adolescent depression. Lancet psychiatry 2020;7:471-2.
10. King TL, Singh A, Milner A. Associations Between Gender-Role Attitudes and Mental Health Outcomes in a Nationally Representative Sample of Australian Adolescents. J Adolesc Health 2019;65:72-8.
11. Xiong J, Lipsitz O, Nasri F, Lui LMW, Gill H, Phan L, et al. Impact of COVID-19 pandemic on mental health in the general population: A systematic review. J Affect Disord 2020;277:55-64.
12. Luo Y, Chua CR, Xiong Z, Ho RC, Ho CSH. A Systematic Review of the Impact of Viral Respiratory Epidemics on Mental Health: An Implication on the Coronavirus Disease 2019 Pandemic. Front Psychiatry 2020;11:565098.
13. Wang C, Tee M, Roy AE, Fardin MA, Srichokchatchawan W, Habib HA, et al. The impact of COVID-19 pandemic on physical and mental health of Asians: A study of seven middle-income countries in Asia. PLoS One. 2021;16:e0246824.
14. Saha K, Torous J, Caine ED, De Choudhury M. Psychosocial Effects of the COVID-19 Pandemic: Large-scale Quasi-Experimental Study on Social Media. J Med Internet Res 2020;22:e22600.
15. F Francisco R, Pedro M, Delvecchio E, Espada JP, Morales A, Mazzeschi C, et al. Psychological Symptoms and Behavioral Changes in Children and Adolescents During the Early Phase of COVID-19 Quarantine in Three European Countries. Front Psychiatry 2020;11:570164.
16. Bates LC, Zieff G, Stanford K, Moore JB, Kerr ZY, Hanson ED, et al. COVID-19 Impact on behaviors across the 24-hour day in children and adolescents: physical activity, sedentary behavior, and sleep. Children (Basel) 2020;7:138.
17. Lee SJ, Ward KP, Chang OD, Downing KM. Parenting activities and the transition to home-based education during the COVID-19 pandemic. Child Youth Serv Rev 2021;122:105585.
18. Garbe A, Ogurlu U, Logan N, Cook P. COVID-19 and remote learning: Experiences of parents with children during the pandemic. Am J Qual Res 2020;4:45-65.
19. Wu M, Xu W, Yao Y, Zhang L, Guo L, Fan J, et al. Mental health status of students' parents during COVID-19 pandemic and its influence factors. Gen Psychiatry 2020;33:e100250.
20. Waismel-Manor R, Wasserman V, Shamir-Balderman O. No Room of her Own: Married Couples' Negotiation of Workspace at Home During COVID-19. Sex Roles 2021;85:636-9.
21. Saveanu RV, Nemeroff CB. Etiology of depression: genetic and environmental factors. Psychiatr Clin Nort Am 2012;35:51-71.
22. Kalaycıoğlu S, Çelik K, Çelen Ü, Türkyılmaz S. Developing A Tool For The Measurement Of Socio - Economic Status (Ses) From A Representative Sample: The Case Of Ankara City Center. Journal of Sociological Research 2010;13:182-220.
23. García-Cueto E, Rodríguez-Díaz FJ, Bringas-Molleda C, López-Cepero J, Paíno-Quesada S, Rodríguez-Franco L. Development of the Gender Role Attitudes Scale (GRAS) amongst young Spanish people. Int J Clin Health Psychol 2015;15:61-8.
24. Bakioğlu F, Türküm AS. Adaptation of Gender Role Attitudes Scale to Turkish: A Study of Validity and Reliability. Kastamonu Education Journal 2019;27:717-25.
25. Henry JD, Crawford JR. The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. Br J Clin Psychol 2005;44:227-39.
26. Sarıçam H. The psychometric properties of Turkish version of Depression Anxiety Stress Scale-21 (DASS-21) in health control and clinical samples. J Cogn Psychother Res 2018;7:19-30.
27. Gomez F. A guide to the depression, anxiety and stress scale (DASS 21). Cent East Sydney Prim Heal Networks. 2016.
28. Chorpita BF, Yim L, Moffitt C, Umemoto LA, Francis SE. Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. Behav Res Ther 2000;38:835-55.
29. Gormez V, Kilincaslan A, Ebesutani C, Orengul AC, Kaya I, Ceri V, et al. Psychometric Properties of the Parent Version of the Revised Child Anxiety and Depression Scale in a Clinical Sample of Turkish Children and Adolescents. Child Psychiatry Hum Dev. 2017;48:922-33.
30. Gray MJ, Litz BT, Hsu JL, Lombardo TW. Psychometric properties of the life events checklist. Assessment 2004;11:330-41.
31. Brehaut E, Neupane D, Levis B, Wu Y, Sun Y, Krishnan A, et al. Depression prevalence using the HADS-D compared to SCID major depression classification: An individual participant data meta-analysis. J Psychosom Res 2020;139:110256.
32. Bandelow B, Michaelis S. Epidemiology of anxiety disorders in the 21st century. Dialogues Clin Neurosci 2015;17:327-35.
33. Newby JM, O'Moore K, Tang S, Christensen H, Faasse K. Acute mental health responses during the COVID-19 pandemic in Australia. PLoS One 2020;15:e0236562.
34. Brown SM, Doom JR, Lechuga-Peña S, Watamura SE, Koppels T. Stress and parenting during the global COVID-19 pandemic. Child Abuse Negl 2020;110:104699.
35. Fetterolf JC, Rudman LA. Gender inequality in the home: The role of relative income, support for traditional gender roles, and perceived entitlement. Gender Issues 2014;31:219-37.
36. Klerman GL, Weissman MM. Interpersonal psychotherapy of depression: A brief, focused, specific strategy. Jason Aronson, Incorporated; 1994.
37. Seidler ZE, Dawes AJ, Rice SM, Oliffe JL, Dhillon HM. The role of masculinity in men's help-seeking for depression: A systematic review. Clin Psychol Rev 2016;49:106-18.
38. Psychogiou L, Moberly NJ, Parry E, Russell AE, Nath S, Kallitsoglou A. Does fathers' and mothers' rumination predict emotional symptoms in their children? Br J Clin Psychol? Br J Clin Psychol 2017;56:431-42.
39. Pérez JC, Aldoney D, Vivanco-Carlevari A, Coo S, Guzmán EJ, Silva JR. Adapting to Adversity: Effects of COVID-19 on Parenting in Chile. Front Psychol 2022;13:868817.
40. Baber KM, Tucker CJ. The social roles questionnaire: A new approach to measuring attitudes toward gender. Sex Roles 2006;54:459-67.