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Addressing the Factors Affecting the Anxiety of Turkish Midwives During the COVID-19 Pandemic: A Cross-sectional Study

Filiz Aslantekin-Özçoban[1*], Fatma Deniz Sayıner[2], Mesude Uluşen[3], Filiz Yarıcı[4], Esra Çömezoğlu[5], Seda Küçükoğlu[6] and Nesibe Uzel[7]

[1]Associate Professor, PhD. Faculty of Health Sciences, Department of Midwifery Çağış, Campus Balikesir University, Balikesir, Turkey
[2]Professor, PhD. Head of Department Midwifery Eskişehir Osmangazi University, Faculty of Health Sciences, Department of Midwifery, Eskişehir, Turkey
[3]Assistant Professor, PhD. Amasya University, Faculty of Health Sciences, Department of Midwifery, Amasya, Turkey
[4]Associate Professor, PhD. Near East University School of Health Sciences Department of Midwifery, Nicosia, Cyprus
[5]Midwife, PhD. Bigadiç Devlet Hastanesi Bigadiç Devlet Hastanesi, Balikesir, Turkey
[6]Midwife, Msc. Departman of Delivery Department, Izmir Health Sciences University Tepecik Educatıon & Research Hospital, Izmir, Turkey
[7]Midwife, Msc. President of Anatolian Midwives Association, Ankara, Turkey

***** ***Corresponding author:*** Filiz Aslantekin-Özçoban, Faculty of Health Sciences, Department of Midwifery Çağış, Campus Balikesir University, Balikesir, Turkey. Email: aslantekinfiliz@yahoo.com

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Abstract

Background: During the COVID-19 pandemic, health professionals have experienced a variety of mental health challenges. Studies on the anxiety levels of Turkish midwives during the pandemic are limited. The present research aimed to describe the anxiety levels of midwives during the COVID-19 pandemic.

Objectives: The present research aimed to describe the anxiety levels of midwives during the COVID-19 pandemic.

Methods: This cross-sectional study was conducted using a web-based basis between 08-29 June 2020. The sample of the study consisted of 606 midwives. The Generalized Anxiety Disorder 7-item (GAD-7) scale was used to measure the midwives' anxiety.

Results: The mean general anxiety disorder score of the participants in the study was found to be 7.88 ± 5.36. It was observed that 259 (42.7%) showed symptoms of generalized anxiety disorder. Risk factors for midwives generalized anxiety disorder in COVID-19 pandemi; the state of midwives experiencing anxiety disorder symptoms increases 12.182 times in individuals with a family at risk of COVID-19, and 5.458 times in cases where working hours are 45 hours or more per week (P<0.05).

Conclusion: Based on the findings of the present research, symptoms of generalized anxiety disorder were observed in nearly half of the midwives. Major reasons for anxiety among midwives included having family members in the COVID-19 risk group that they were responsible for and working over standard working hours. Midwives should be protected from the risk of contamination and provided with adequate personal protective equipment, working hours should be improved, and personal empowerment programs should be offered to support them in coping with anxiety.

Keywords: Anxiety, COVID-19, Midwife, Pandemic, Work life

1. Background

After first report of COVID-19 infection in Wuhan on December 12, 2019, the World Health Organization (WHO) declared an international public health emergency due to the global spread (1). As of 20 April 2022, there had been 50.4 million confirmed cases of COVID-19, including 6.2 million deaths directly attributable to COVID-19. The WHO Region of the America and the European Region accounted for almost 72% of all reported cases and 75% of reported COVID-19 deaths (2). According to the reported data, more than 3.5 million confirmed cases and more than 12,000 deaths were reported between 2-8 May 2022 in Turkey (3). As in the rest of the world, a process of rapid adaptation was initiated in the Turkish healthcare system as soon as the first confirmed case was observed (11th March 2020) in Turkey. Many inpatient clinics in hospitals were converted to COVID-19 treatment units. In addition, healthcare professionals from different specialisms and units were recruited to the frontline positions, and emergency leaves of all healthcare professionals were canceled (4, 5).

Despite following all the precautions, COVID-19 infection rapidly spread among society and healthcare personnel because of its rapid transmission characteristics. While the number of patients increased, the number of working health personnel decreased (6). During these pandemic periods, midwives were taken from their assigned maternity and prenatal service units and reassigned to COVID services, intensive-care units, and filiation services (7). In some countries, midwives could not live with their families while working in a unit where COVID-19 patients were cared for (8). In addition to restrictions, such as social life restrictions, curfews, and closure of schools and public nurseries, midwives faced difficulties in their family lives as wives, mothers, and sisters, accompanied by difficulties in their work lives. Thus, in this process, they experienced a high risk of infection, fear of inadequate care, general uncertainty, job changes, increased workload, and intense stress related to

performing social roles (9,10,11).

Studies on the mental health status of health personnel during the pandemic period reported high levels of mental distress, anxiety symptoms, as well as nutritional, sleep, and fatigue problems (9, 12, 13). In a study conducted by Royal College, 35% of midwives felt insecure at work, and 61% stated that this was due to the inadequacy of personal protective equipment (14). There is an increasing number of studies examining the effects of the COVID-19 pandemic on mental health in nurses, doctors, and intensive care healthcare professionals (15, 16). However, the number of studies dealing with the mental health of midwives and the effects of changing work conditions and family life is limited. Whereas it remained essential that they provided family-centred care, established good communication with mothers and offered emotional support and stress management, the environment in which midwives had to provide this care gradually changed to help prevent the spread of the virus (7). Women-centered care has been restricted due to situations such as having to provide distant care due to the risk of contamination and limiting antenatal follow-ups. In particular, midwives who were concerned about the exposure of vulnerable women to high risks experienced increased levels of stress and anxiety (17, 18). The tension and anxiety of the midwife can affect the birth environment and the mother's behavior. In this context, evaluating the mental health of midwives and developing and supporting solution strategies will have significant benefits in terms of employee health and service quality (19).

It is stated that in the fight against the pandemic, the ability to cope increases with the support of the social environment and colleagues, and the satisfaction of the belief in doing a sacred profession (5). In this context, the support received by midwives from the social environment during the COVID process, their professional perspectives and belonging, and the anxiety experienced by them its should be evaluations/ assessment. The CDC (2020) emphasized the importance of listening to and learning from healthcare professionals' experiences as they respond to COVID-19 (20).

2. Objectives

It is considered that protecting the physical health of midwives and predicting their mental health needs are important to optimize midwifery services. The increase in the number of COVID-19 patients cared for by midwives, the risk of infection, and the increase in working hours and intensity may cause psychological problems during the COVID-19 pandemic. In this context, changes in the mental health, family life, emotions, and working conditions of midwives should be defined.

The present study aimed to define the anxiety levels of midwives and the affecting factors in the COVID-19 pandemic.

3. Methods

3.1. Study Design

This cross-sectional research was carried out on a web-based basis between 08-29 June 2020. All midwives in Turkey (aproximately n=57,000) constituted the study population. The sample size was calculated using Open Epi Version 3.01, an open-source calculator (https://www.openepi.com/SampleSize/SSPropor.htm). The sample size was aimed to reach at least 468 people with a 50% unknown prevalence, 5% absolute, and 97 % confidence level. However, 677 midwives participated in the study. A total of 27 participants were excluded from the study due to filling out the missing questionnaire, and 44 of them filled out the repeated questionnaire. The study sample consisted of 606 midwives. Midwives in Turkey work both in treatment services and preventive health services. In addition, they were assigned to COVID units during the COVID-19 process. The study was approved by the Non-Interventional Clinical Research Ethics Committee of Amasya University (Date 2020/06/08 Number:8/ 77).

3.2. Data Collection

Due to the travel restrictions as a part of the mandatory quarantine enforcement in the country, the survey was managed via a web link. An online survey was developed with Google Drive's online service system. The data was shared electronically using Facebook, WhatsApp, and Instagram of the Anatolian Midwives Association. The survey was published for three weeks between 8-29 June 2020. The changes in this period were as follows: public health measures were implemented on 16 March (Closure of schools, cafes, mosques, and parks; curfew, travel ban; and priority of COVID-19 treatment services). The research was conducted between 1 June, when the daily number of cases was 827, and the total number of deaths was 4.563, and the end of June, when the daily number of cases increased to 1,293, and the total number of deaths increased to 5.167 cases (21).

The required data was collected online. The online questionnaire form, which takes an average of 5 minutes to fill, consisted of two parts. In the first part, there are questions about the descriptive characteristics, and the second part includes the "Generalized Anxiety Scale".

Demographics Form: This form consists of questions about the sociodemographic characteristics of midwives (e.g., marital status, age, education, and childbearing status), their work experiences (e.g., working years, the situation of changing tasks in the pandemic, changes in working conditions, providing protective

equipment, and weekly working hours), changes in their family life (e.g., working status of their husband, the effect of the COVID-19 process on family relations, the effect of having children, and the COVID risk group they are responsible for), and their emotional state (e.g., emotional state created by the pandemic and being a healthcare worker in pandemic). The researchers developed the form based on the literature (12,14,15), and two midwives and four academician midwives were consulted for the semantic validity test. The questionnaire was filled by 10 randomly selected midwives for the pilot application, and the accuracy of the questionnaire was evaluated.

Generalized Anxiety Disorder-7 (GAD-7) Test: It is a seven-item four-point Likert self-report scale developed by Spitzer et al. (2006) according to DSM-IV-TR criteria (22). It evaluates the generalized anxiety disorder in the last two weeks. It was adapted to Turkish by Konkan et al. (2013), and its validity and reliability were demonstrated (Cronbach's α=0.90). In the Turkish version, the acceptable cut-off value was found to be 8. It is accepted as a generalized anxiety disorder over 8 points (23). The Cronbach's α in this study was 0.91.

3.3. Statistical Analysis

The collected data was analyzed using the SPSS software (version 21). Shapiro-Wilk tests of normality were used to determine whether the data showed normal distribution.

The dependence between variables was examined by Chi-square analysis. The relationship between variables was analyzed using correlation analysis. Logistic Regression (Enter method) Analysis was used to determine the risk status that explains the presence of the "Generalized Anxiety Disorder". A $P < 0.05$ was considered statistically significant.

4. Results

It was found that 296 (48.8%) of the midwives who participated in the study were within the 18-29 age group, 285 (55.5%) were married, 464 (76.6%) had a bachelor's degree, and 167 (28.0%) had been working for two years or less, 167 (28%) had been working for 15 years or more, 324 (53.5%) of them had no children, and 409 (67.5%) had core family type, 205 (33.8%) of midwives stated that there were individuals in the COVID-19 risk group among the family members they were responsible for and 472 (77.9%) did not suffer from a chronic disease. Around 428 (70.7%) of midwives worked in curative health services, 35.1% were reassigned to another unit from their standard unit during the pandemic period. About 241 (46.6%) midwives worked 45 hours or more per week during the COVID-19 pandemic (Table 1).

It was noted that the average point of the generalized anxiety disorder of the participants in the study was 7.88 ± 5.36. It was observed that 347 (57.3%) participants had no anxiety disorder, and 259 (42.7%) displayed symptoms of generalized anxiety disorder.
As seen in Table 2, no significant difference was

Table 1. Sociodemographic and Working Life Characteristics

Variables		Number	Frequency
Age	18-29	296	48.8
	30-49	285	47.0
	50 Years and Above	25	4.1
Marital Status	Married	336	55.5
	Single	270	44.4
Educational Status	High School	8	1.3
	Associate Degree	36	5.9
	Licence	464	76.6
	MSc and PhD	98	26.2
Occupational Experience	2 Years or Less	167	28.0
	3-6 Years	126	21.1
	7-10 Years	83	13.9
	11-14 Years	53	8.9
	15 Years and Above	167	28.0
Having a Child	Yes	282	46.5
	No	324	53.5
Family Type	I live Alone	163	26.9
	Core Family	409	67.5
	Extended Family	34	5.6
Being responsible for the care of a family member who is in the COVID-19 risk group	Yes	205	33.8
	No	401	66.2
Chronicle Illness State	Yes	134	221
	No	472	77.9
Work Area	Preventive Health Service	178	29.3
	Curative Health Services	428	70.7
Have You Experienced a Unit/Task Change Due to the COVID-19 Pandemic?	Yes	213	35.1
	No	393	64.9
How Many Hours a Week Do You Work During the COVID-19 Pandemic Process?	45 hours and Under	276	53.4
	45 hours and Above	241	46.6

found between the anxiety disorder symptoms observed in midwives and their age, marital status, educational status, occupational experience, having a child, family type, and chronic illness state. However, anxiety symptoms were found to be significantly higher if the families they were responsible for had one of the COVID-19 risk groups (P<0.05). Those whose relationships with their husbands were adversely affected during the pandemic period, as well as those who did not take care of sleep, nutrition, and physical exercise as usual, showed significantly more symptoms of anxiety than those who paid more attention during the pandemic period (P<0.05).

As seen in Table 3, the anxiety symptoms of those who regretted being a health worker during the pandemic period were significantly higher than those who said that their professional belonging had increased (P<0.001). In addition, the anxiety score of those who sometimes experienced anger, tension, unhappiness, and hate during the pandemic period was significantly higher than those who never experienced those feelings (P<0.001).

As presented in Table 4, no significant difference was observed between unit/task changes due to the COVID-19 pandemic, working hours changes, and assigned work during this period with anxiety (P<0.05). As indicated in Table 4, during the pandemic process, no difference was seen between anxiety and the workplace,

Table 2. Anxiety Status according to the Descriptive Characteristics of Midwives

Variables		Had Anxietyn (%)	Had No Anxietyn (%)	*P*-value*
Age	18-29	171 (57.8)	125 (42.2)	0.726
	30-49	160 (56.1)	125 (43.9)	
	50 Years and	16 (64.0)	9 (36.0)	
Marital Status	Married	190 (56.5)	146 (43.5)	0.692
	Single	157 (58.1)	113 (41.9)	
Educational Status	Highschool	4 (50.0)	4 (50.0)	0.801
	Associate	23 (63.9)	13 (36.1)	
	Undergraduate	266 (57.3)	198 (42.7)	
	Graduate	54 (55.1)	44 (44.9)	
Occupational Experience	2 Years or Less	110 (62.1)	67 (37.9)	0.051
	3-6 Years	66 (52.4)	60 (47.6)	
	7-10 Years	37 (44.6)	46 (55.4)	
	11-14 Years	32 (60.4)	21 (39.6)	
	15 Years and	102 (61.1)	65 (38.9)	
Having a Child	Yes	161 (57.5)	119 (42.5)	0.986
	No	186 (57.1)	140 (42.9)	
Family Type	I live Alone	100 (61.3)	63 (38.7)	0.264
	Nuclear Family	231 (56.5)	178 (43.5)	
	Extended Family	16 (47.1)	18 (52.9)	
Being responsible for the care of a family member who is in the COVID-19 risk group	Yes	97 (47.3)	108 (52.7)	0.001
	No	250 (62.3)	151 (37.7)	
Chronicle Illness State	Yes	76 (58.84)	58 (41.16)	0.684
	No	271 (57.4)	201 (42.6)	
How COVID-19 affected your relationship with your spouse?	Positive	10 (21.7)	36 (78.3)	0.001
	Negative	73 (57.5)	54 (42.5)	
	Neutral	62 (39.5)	95 (60.5)	
Spouse having Night Shift Task	Yes	53 (48.2)	57 (51.8)	0.176
	No	103 (42.2)	141 (57.8)	
Having trouble Sleeping and Resting	Yes	170 (55.2)	138 (44.8)	0.001
	No	89 (29.9)	209 (70.1)	
Having trouble in Eating Habits	Yes	139 (57.7)	102 (42.3)	0.001
	No	120 (32.9)	245 (67.1)	
Physical Activity / Exercise Status	Yes	180 (52.0)	166 (48.0)	0.001
	No	79 (30.4)	181 (69.6)	

*Chi square test, Bold indicates statistical significance (P<0.05)

Table 3. Relationship between Emotional Status and Anxiety of Midwives during the Pandemic

Variables		Had Anxiety n (%)	Had No Anxiety n (%)	*P*-value*
The emotional state of being a Health Worker during the Pandemic	I have felt honored	67 (33.7)	132 (66.3)	0.001
	I regretted it	114 (62.6)	68 (37.4)	
	My professional belonging increased	34 (30.1)	79 (69.9)	
	I have felt worthless	34 (43.6)	44 (56.4)	
	Neutral	10 (29.4)	24 (70.6)	
Experiencing Anger during the Pandemic	I have experienced it sometimes	229 (51.3)	217 (48.7)	0.001
	I have never experienced it	30 (18.8)	130 (81.3)	
Experiencing Tension in the Pandemic	I have experienced it sometimes	255 (44.9)	313 (55.1)	0.001
	I have never experienced it	4 (10.5)	34 (89.5)	
Experiencing Unhappiness during the Pandemic	I have experienced it sometimes	254 (47.7)	278 (52.3)	0.001
	I have never experienced it	5 (6.8)	69 (93.2)	
Experiencing Hate during the Pandemic	I have experienced it sometimes	170 (58.2)	122 (41.8)	0.001
	I have never experienced it	89 (28.3)	225 (71.7)	

*Chi square test, Bold indicates statistical significance (P<0.05)

Table 4. Relationship between Midwives' Work Life Characteristics and Anxiety During the Pandemic

Work Life Characteristics		Had Anxiety n (%)	Had No Anxiety n (%)	*P*-value*
Unit/Task Change Due to COVID-19 Pandemic	Yes No	113 (53.1) 234 (59.5)	100 (46.9) 159 (40.5)	0.123
Change in Emotions of Those Who Have a Change of Task	Affirmative Negative	48 (69.6) 65 (45.1)	21 (30.4) 79 (54.9)	<0.001
Change in Working Hours Due to COVID-19	Didn't happen Did happen	256 (58.2) 91 (52.8)	184 (41.8) 75 (47.2)	0.663
Assigned Works During COVID-19	Surveillance. Filiation COVID-19 Patient Follow-up Other + Missed	49 (55.7) 85 (50.6) 213 (60.9)	39 (44.3) 83 (49.4) 137 (39.1)	0.083
Weekly Working Hours During COVID-19 Pandemic Process	45 hours and less 45 hours and above	171 (62.0) 123 (91.0)	105 (38.0) 18 (9.0)	0.012
Working area in the Pandemic Process	Preventive Health Services Curative Health Services	82 (56.6) 265 (57.5)	63 (43.4) 196 42.5 ()	0.843
Training About COVID-19	Yes No	274 (57.9) 73 (54.9)	199 (42.1) 60 (45.1)	0.531
Following a Patient with COVID-19 Positive Patient So Far	Yes No	192 (52.6) 155 (64.3)	173 (47.4) 86 (35.7)	0.004
What Jobs Are You Doing in the COVID-19 Pandemic?	Surveillance. Filiation COVID-19 Patient Follow-up Other + Missed	39 (44.3) 83 (49.4) 137 (39.1)	49 (55.7) 85 (50.6) 213 (60.9)	0.088
Being Tested for COVID-19	Yes No	137 (50.7) 210 (62.5)	133 (49.3) 126 (37.5)	0.004
Undergoing COVID-19	Yes No	24 (47.1) 323 (58.2)	27 (52.9) 232 (41.8)	0.124
Having Colleagues Who Has COVID-19	Yes No	207 (55.5) 140 (60.1)	166 (44.5) 93 (39.9)	0.267
Adequate Personal Protection Equipment Access	Yes No	240 (59.3) 107 (53.2)	165 (40.7) 94 (46.8)	0.158

*Chi square test, Bold indicates statistical significance (P<0.05)

being trained about COVID-19, having COVID-19 or a friend having it, and the availability of sufficient personal protection equipment. The anxiety rate of those who experienced negativity in their emotional state due to the change of assignment during the pandemic period was observed to be significantly higher (P<0.05). During the COVID-19 pandemic process, the anxiety rate of those who worked 45 hours or more per week was significantly higher (P<0.05). It was determined that the anxiety levels of those who followed Covid-19 positive patients and those who had Covid-19 tests were significantly higher. (p<0.05).

The predictive level of the related factors affecting the incidence of anxiety disorder symptoms of midwives was examined by logistic regression analysis. The condition of midwives who experienced symptoms of anxiety disorder increased 12.182 times in situations where there was a family member in the COVID-19 risk group and 5.458 times when working hours were 45 hours or more per week (P<0.05).

Discussion

In the study where we examined the relationship between anxiety levels and changes in the family lives and work conditions of midwives during the COVID-19 pandemic, it was found that generalized anxiety symptoms were observed in about half. This rate represents a significantly high value. Similarly, in a study conducted with healthcare professionals during COVID-19, generalized anxiety symptoms were found at the rate of 52.3% (GAD-7) in healthcare workers with anxiety disorder (24). Studies conducted in many different countries have also reported that healthcare workers experienced high rates of anxiety, depression, stress, and insomnia during the COVID-19 pandemic (9, 15, 25). The results of the research were found to be compatible with the literature. Adapting to an unfamiliar environment or care system during COVID-19 creates high levels of stress and anxiety (26, 27). Since healthcare personnel are on the frontlines in the fight against disease, it may explain why healthcare professionals are highly anxious about their exposure to great risk. Therefore, it is important to establish psychological interventions and early support systems, and facilitate the adaptation process to cope with this issue (27).

Generalized anxiety disorder symptoms are reported more frequently in midwives with severe working conditions due to the fact that the working hours are above the weekly legal period and the workload increases. Midwives carried out nursing services and worked as public health nurses.
They had to work constantly. Without going home. While they normally work 8 hours a day, the situation has changed in COVID-19 pandemic. In this context, increased workload, prolonged fatigue, threat of infection, and disappointment with the death of the patients they care for may cause unhappiness and

increase the risk of anxiety symptoms. It was seen that all health professionals experience similar situations during the pandemic period (15, 4).

In Turkey, midwives also worked in surveillance and COVID intensive care services, COVID polyclinic, and other services apart from obstetric and reproductive health services. Midwives both played an active role in the COVID-19 pandemic and became the most quickly forgotten profession in this process (28). As the largest professional group (24,000 thousand) working in preventive health services in Turkey, 57 thousand midwives (the third largest professional group in the health system) work in other fields of work and in the health system (29). In all statements made, when referring to health workers, doctors and nurses are mentioned. However, midwives who worked with other healthcare professionals, regardless of the concept of 24/7 overtime, were separated from their families and had to be isolated because they could not go home (30).

These findings are very important to understand what midwives have experienced during the pandemic period. Generalized anxiety disorder symptoms are more common in midwives with a negative perspective during the COVID-19 process. These negative emotional states of midwives are very important in terms of subjective well-being. Increasing anxiety affects mental health (31). Social acceptance during the pandemic process is a motivational power (5), but the opposite may have a negative impact. Ensuring the visibility of the labor of midwives is an important element in terms of professional motivation.

Less common anxiety symptoms are seen in midwives who have positive feelings, such as increased professional belonging and honor during the pandemic process. The heroism of healthcare professionals in positively influencing the lives of patients and fighting like pioneer soldiers in the pandemic increases their motivation. In a study by Jiang et al., it was stated that nurses served patients with humane feelings in the fight against COVID-19 (32). Having professional values and philosophy and a spirit of professional dedication is an important factor in overcoming the challenges of COVID-19 outbreak (5,12).

In addition, receiving multi-faceted support from their environment increases their power to cope with the struggle. Social support plays a critical role in the fight against epidemics and is considered to serve a mediating role in psychological rehabilitation (25). In this context, the empowering feature of social acceptance should be activated by institutional structures, and social awareness should be created to support health workers in this intensely stressful and difficult process.

If midwives had a relative in the COVID-19 risk group in their family, the risk of generalized anxiety symptoms increased. These problems have been reported especially among those working health professionals in the fight against SARS (33, 34). Similar concerns are reported in the COVID-19 process as in the SARS period. The psychological distress may be increased because health professionals are worried about the fear of transmitting the infection to family members. (35, 36). Kisely et al. (2020) also reported that healthcare workers experience fears of carrying the infection to their families, friends, colleagues, and individuals they are in close contact with (37). Toker et al. (2022) indicated that 87.3% of midwives feared transmitting the virus to their families and children at home during the COVID-19 pandemic (38).

To overcome the negativities related to the mental health of healthcare professionals, it is recommended to provide appropriate shifts and breaks and working order, alternative accommodation for personnel who are worried about infecting their families, and providing digital communication infrastructure for these personnel to be in contact with their families (39). The leading roles of midwives in difficult pandemic conditions affect mental health with both the atmosphere change in work life and its effects on family and social life. Therefore, improving the working hours and conditions of midwives, strengthening their professional values and philosophies, and taking initiatives to increase social status may be protective and improving initiatives for midwives' mental health.

Based on the obtained results, we can say that in order to increase the productivity of employees in epidemic or disaster situations, first of all, measures should be taken to reduce their anxiety levels. Planning should be done, and adequate precautions should be taken by considering problems, such as health risks related to the families of midwives, care responsibilities, or long working hours.

The findings of this study provides inputs for policy-makers and midwifery managers on how to effectively support the mental health of frontline midwives and plan maternal and child health services, especially during the pandemics, to maintain a good midwifery workforce.

The most important limitation of the present research was the lack of easy access to the target group due to the spread of COVID-19. In this research, an online questionnaire was used to collect data. The study sample was a nonprobability purposive sampling approach, which resulted in some bias in the selection process. However, the difficulty in conducting face-to-face surveys during pandemic was the main reason for this situation. The most powerful feature of the study is that it is the first study to deal with the family and work lives of midwives during the pandemic in Turkey.

6. Conclusion

In the present study, generalized anxiety disorder was observed in nearly half of the midwives. The condition of midwives experiencing symptoms of

anxiety disorder increases more than 12 times in situations where there is a family member in the COVID-19 risk group and more than 5 times when working hours are 45 hours or more per week. For this reason, it is critical to monitor the mental health status of midwives. Midwives are health professionals who provide one-to-one care to mothers in delivery rooms, are in close contact, and work in surveillance services, providing community-based care in preventive health services.

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Footnotes

Conflicts of Interest: There is no conflict of interest.
Author Contribution: All authors participated in this study; FAÖ is the principal investigator and the main author who supervised the process of study.
FAÖ, FDS, MU, FY, EÇ, SK and NU collected data
FAÖ, FDS and MU analyzed the data and wrote the final draft of the manuscript.
FAÖ, FDS, MU, FY, EÇ, SK and NU revised the manuscript and finally approved the manuscript before submission. The authors read and approved the final manuscript.
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