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Effects of Climate Changes on Anxiety and Quality of Life in Pregnant Women

Serap ÖZTÜRK ALTINAYAK[1], Tuğçe SÖYLEMEZ[1]

[1] Ondokuz Mayıs University, Faculty of Health Sciences, Department of Midwifery
[2] Ondokuz Mayıs University, Institute of Graduate Education, Department of Midwifery

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ABSTRACT
Objective: This study aims to examine the effects of climate change on anxiety levels and quality of life among pregnant women. **Materials and Methods:** This descriptive and relational study was conducted with 313 pregnant women who voluntarily agreed to participate and met the inclusion criteria. The study population included pregnant women over 18 who applied to a university hospital. Data were collected using a Pregnancy Diagnosis Form, Climate Change Anxiety Scale (CCAS), and Quality of Life Pregnancy Scale (QLPS). In addition to descriptive statistics, independent groups t test, one-way ANOVA, Pearson correlation analysis and simple linear regression analysis were used to evaluate the data. **Results:** The average age of the 313 pregnant women who participated in the study was 28, with 45% having a university degree or higher and 71.9% not working. It was observed that as the education level of the participants increased, their climate change anxiety scores also increased. A statistically significant and positive correlation was found between the CCAS and the QLPS ($p<0.05$). **Conclusion:** There was a significant relationship between pregnant women's their views on climate change and quality of life during pregnancy. It was found that as climate change anxiety increased, so did the quality of life. Midwives and all other healthcare professionals working in the field should be aware of the effects of climate change on pregnant women, children, and women and develop solutions to raise awareness in society.
Keywords: Climate Change, Pregnancy, Anxiety, Quality of Life.

İklim Değişikliklerinin Gebelerde Kaygı ve Yaşam Kalitesi Üzerine Etkileri

ÖZ
Amaç: Bu araştırmanın amacı, iklim değişikliklerinin gebelerdeki kaygı düzeyi ve yaşam kalitesi üzerindeki etkilerini incelemektir. **Gereç ve Yöntem:** Tanımlayıcı ve ilişkisel nitelikteki bu çalışmanın evrenini, bir üniversite hastanesine başvuran 18 yaş ve üzeri gebe kadınlar oluşturmuştur. Araştırmanın örneklemi, çalışmaya katılmayı gönüllü olarak kabul eden ve dahil edilme kriterlerini sağlayan 313 gebe kadından oluşmaktadır. Veriler, Gebe Tanılama Formu, İklim Değişikliği Kaygı Ölçeği (İDKÖ) ve Gebelikte Yaşam Kalitesi Ölçeği (GYKÖ) kullanılarak toplanmıştır. Verilerin değerlendirilmesinde tanımlayıcı istatistiklerin yanı sıra, bağımsız gruplarda t testi, tek yönlü ANOVA, Pearson korelasyon analizi ve basit doğrusal regresyon analizi kullanılmıştır. **Bulgular:** Araştırmaya katılan 313 gebenin yaş ortalaması 28 olup, %45'inin üniversite ve üzeri mezun olduğu, %71.9'unun herhangi bir işte çalışmadığı belirlenmiştir. Gebenin eğitim düzeyinin artması ile iklim değişikliği kaygı düzeyi puanlarının arttığı gözlemlenmiştir. İDKÖ ile GYKÖ arasında istatistiksel olarak anlamlı ve pozitif bir ilişki bulunmuştur ($p<0.05$). **Sonuç:** Gebe kadınların iklim değişikliğine ilişkin görüşleri ile gebelikteki yaşam kalitesi arasında anlamlı bir ilişki bulunmuştur. Araştırmaya katılan gebelerde iklim değişikliği kaygısı arttıkça yaşam kalitesinin de arttığı sonucuna ulaşılmıştır. Sahada aktif görev alan ebeler ve diğer sağlık profesyonellerinin, toplumu bilinçlendirebilmek adına iklim değişikliğinin gebeler, çocuklar ve kadınlar üzerindeki etkilerini bilmeleri ve çözüm yolları geliştirmeleri önemlidir.
Anahtar Kelimeler: İklim Değişikliği, Gebelik, Kaygı, Yaşam Kalitesi.

Sorumlu Yazar / Corresponding Author: Tuğçe SÖYLEMEZ, Ondokuz Mayıs University, Institute of Graduate Education, Department of Midwifery, Samsun, Türkiye.
E-mail: tugceesoylemez@hotmail.com

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INTRODUCTION

Climate change refers to long-term alterations in the average weather conditions, directly or indirectly influenced by human activities (Hacısalihoğlu & Balcı, 2023; Öztürk & Dönmez, 2023). Humanity has been facing the effects of climate change for many years. The acceleration of industrialization, technological advancements, population growth, deforestation, urbanization, and environmental pollution have all contributed to the problem of global climate change. Due to the influence of geographical factors, the temperature distribution is not uniform across the Earth's surface (Çeçen & Güvenç, 2022). Furthermore, one of the primary causes of climate change is the increased concentration of greenhouse gases in the atmosphere as a result of the burning of fossil fuels by humans (Hacısalihoğlu & Balcı, 2023; WHO, 2024; UNEP, 2024). Over time, the effects of global warming and climate change negatively impact the health and lives of many living beings on Earth, particularly humans (Çeçen & Güvenç, 2022). The World Health Organization (WHO, 2024) defines climate change as a significant global issue that severely threatens human health and life. Climate change, which leads to profound long-term effects, has begun to manifest its impacts noticeably today (Hacısalihoğlu & Balcı, 2023). Global warming and climate change constitute a fundamental threat affecting the lives of all living beings on Earth, particularly human health and the future of the planet (Çeçen & Güvenç, 2022). Furthermore, climate change exerts comprehensive impacts on both natural and human systems, including the physical environment, social and economic conditions, and the functioning of healthcare systems (WHO, 2024).

Climate change predominantly affects pregnant women, children, people with low incomes, the elderly, migrants, and individuals with chronic illnesses. Global warming and climate change can lead to outbreaks of infectious diseases, respiratory disorders, cardiovascular conditions, maternal and infant mortality, and psychological illnesses (CDC, 2024). A review of the literature reveals that Borroni et al. (2022), through their meta-analysis, demonstrated that increased air pollution heightens the risk of anxiety and depression. Similarly, Schwartz et al. (2022) and Reyes et al. (2021) reported a negative relationship between climate change anxiety and mental health (Borroni et al., 2022; Reyes et al., 2021; Schwartz et al., 2022). Pregnancy, being a critical phase in a woman's life, can itself be a source of anxiety. Additionally, another meta-analysis study indicated that elevated air temperatures increase the risk of preterm birth (Chersich et al., 2020). The literature further suggests that pregnant women have insufficient awareness of climate change and needs to be improved (Edis, 2024; Kaya et al., 2024; Toptaş Acar & Gerçek Öter, 2024). The literature indicates “that climate change leads to stress and anxiety in pregnant women, increasing the risk of pregnancy complications such as preeclampsia, gestational diabetes, and intrauterine growth restriction. Consequently, it contributes to adverse pregnancy outcomes, including low birth weight, spontaneous miscarriage, fetal complications, and preterm birth (Bilgiç & Demir, 2024; Chersich et al., 2020; Gök & Ertem, 2022; Ha, 2022; Kaya et al., 2024). Studies have demonstrated that these conditions create stress and anxiety in women, negatively impacting the quality of life of pregnant individuals. In this context, this study aims to examine the effects of climate change on anxiety levels and quality of life among pregnant women.

Research Questions:

- Does climate change affect the anxiety levels of pregnant women?
- Does climate change have an impact on the quality of life of pregnant women?
- Is there a relationship between climate change anxiety and quality of life in pregnant women?

MATERIALS AND METHODS

Type and purpose of the study

This study was conducted using a descriptive and relational study. The study aimed to examine the effects of climate change on anxiety levels and quality of life among pregnant women.

Population and sample of the study

The study population consisted of pregnant women who applied to Samsun Ondokuz Mayıs University Health Practice and Research Center between November 2024 and January 2025. The sample included 313 pregnant women who voluntarily agreed to participate and met the inclusion criteria.

Inclusion criteria:

- Being 18 years of age or older,
- Being literate,
- Being able to speak and understand Turkish,
- Having no mental disabilities,
- Voluntarily agreeing to participate in the study.

Data collection tools

The "Pregnancy Identification Form", "Climate Change Anxiety Scale", and "Quality of Life in Pregnancy Scale" were used as data collection tools in this study.

Pregnancy Identification Form

This form, prepared by the researchers, includes the socio-demographic characteristics (age, education, employment status) of women and their husbands and pregnancy-related information (gestational age, number of pregnancies, planned pregnancy status, etc.). (Çelik,2021; Kaya et al., 2024).

Climate Change Anxiety Scale (CCAS)

This scale was developed by Stewart in 2021, and Özbay and Alcı conducted its Turkish validity and reliability study in the same year. The scale is unidimensional and consists of 10 items. The total

score is obtained by summing the points from each item, and higher scores indicate more significant climate change anxiety. The Cronbach's Alpha coefficient of the scale is 0.98, and in this study, it was found to be 0.92.

Quality of Life in Pregnancy Scale (QLPS)

The Quality of Life in Pregnancy Scale was developed by Vachkova et al. in 2013. Its Turkish validity and reliability study was conducted by Ayan in 2022. The scale, which is in a five-point Likert format, consists of 9 items. The total score obtained by summing up the scores from all items ranges between 9 and 45. According to the total score: 9-18 points: Excellent, 19-27 points: Very good, 28-36 points: Good, 37-45 points: Not very good (Ayan, 2022). The Cronbach's Alpha coefficients of the scale by trimester are as follows: 1. Trimester: α=0.628, 2. Trimester: α=0.727, 3. Trimester: α=0.698. In this study, the Cronbach's Alpha coefficient was 0.83.

Data collection

The researcher administered the data collection tools used in the study face-to-face in a suitable environment where the participants could express themselves, and the process lasted approximately 10-15 minutes.

Data analysis

Data was analyzed using SPSS (Statistical Package for Social Sciences) for Windows 25.0 software. To determine the normality of the data, skewness and kurtosis values were examined (+1, -1). For normally distributed data, parametric tests such as independent samples t-test and One-Way ANOVA were used. To examine the relationship between variables, Pearson Correlation analysis was conducted. A simple linear regression analysis was applied to determine the predictive power. A 95% confidence interval and a significance level of $p<0.05$ were set for all statistical tests.

Ethical considerations

The study's ethical approval was obtained from the Ondokuz Mayıs University Social and Human Sciences Research Ethics Committee (Decision No: 832). Institutional permission was granted by the Ondokuz Mayıs University Rectorate Health Practice and Research Center Directorate (E-15374210-044-2400236414). The participants were informed that the data collected would be used solely for scientific purposes, that the data would remain anonymous, and that they could withdraw from the study at any time. Verbal consent was obtained from the participants. The study adhered to the principles of the Helsinki Declaration throughout the research process."

RESULTS

The average age of pregnant women participating in the study was found to be 28.7±5.89. A comparison of the CCAS and QLPS according to Sociodemographic and some obstetric characteristics of pregnant women is presented in Table 1.

According to the study results, 45% of the pregnant women and 48.9% of their husbands were found to have university or higher education. It was determined that 71.9% of the pregnant women were not working, 93% had social security, 64.5% had income equal to their expenses, and 91.7% were living in nuclear families. Additionally, 72.8% of the pregnant women were in the third trimester, 36.7% were experiencing their first pregnancy, 68.7% had no history of abortion, and 55.6% had at least one living child (Table 1).

A statistically significant difference was found between the average scores of the CCAS and the sociodemographic characteristics of pregnant women, including their education level, their spouse's education level, employment status, social security status, income, family type, pregnancy number, and number of living children ($p<0.05$).

Pregnant women whose education level and their husbands' education level were university or higher had higher average scores on the CCAS compared to others. Employed individuals, those with social security, and those living in nuclear families had higher average scores on the CCAS than unemployed individuals, those without social security, and those living in extended families. Pregnant women with income lower than their expenses had lower average scores on the CCAS compared to others. Those experiencing their first pregnancy and those without living children had higher average scores on the CCAS compared to others (Table 1).

A statistically significant difference was found between the average scores of the QLPS and the sociodemographic characteristics of the pregnant women, including their education level, employment status, social security status, income, family type, gestational week, abortion status, and number of living children ($p<0.05$).

Accordingly, pregnant women with a university or higher education level had higher average scores on the QLPS than others. Those whose husbands had a university or higher education level had higher average scores than those with only primary school education. Employed individuals, those with social security, and those living in nuclear families had higher average scores than unemployed individuals, those without social security, and those living in extended families. Pregnant women whose income was less than their expenses had lower average scores on the QLPS.

Women in the first trimester had higher average scores compared to those in the third trimester, those who had had an abortion had higher scores compared to those who had not, and those without living children had higher scores compared to those with living children (Table 1).

Table 1. Comparison of the average scores of the CCAS and the QLPS Based on the sociodemographic and some obstetric characteristics of pregnant women (n=313).

Variables		n	%	CCAS		QLPS	
				Mean ± SD	Test Statistics	Mean ± SD	Test Statistics
Education Level	Primary School (1)	43	13.8	19.60±4.61	**F=100.539 p=0.000 (1-2;1-3;2-3)**	20.55±5.50	**F=35.432 p=0.000 (1-3;2-3)**
	High School (2)	129	41.2	23.54±4.48		21.23±4.20	
	University and above (3)	141	45.0	30.05±5.35		25.22±4.14	
Husbands Education Level	Primary School (1)	53	16.9	21.56±5.16 (1)	**F=60.885 p=0.000 (1-3;2-3)**	22.73±4.13	**F=4.468 p=0.012 (1-3)**
	High School (2)	107	34.2	23.29±4.94 (2)		23.83±5.22	
	University and above (3)	153	48.9	29.29±5.66 (3)		25.18±5.43	
Employment Status	Yes	88	28.1	30.61±5.40	**t=9.283 p=0.000**	25.60±4.20	**t=6.481 p=0.000**
	No	225	71.9	24.10±5.64		21.89±4.67	
Social Security	Available	291	93.0	26.32±6.25	**t=4.055 p=0.000**	23.17±4.79	**t=3.233 p=0.001**
	Not available	22	7.0	20.81±4.27		19.77±4.33	
Income Status	Income < Expenses	89	28.5	22.82±5.21 (1)	**F=20.277 p=0.000 (1-2;1-3)**	21.32±4.82	**F=8.137 p=0.000 (1-2;1-3)**
	Income = Expenses	202	64.5	26.84±5.98 (2)		23.44±4.56	
	Income > Expenses	22	7.0	30.18±7.95 (3)		24.86±5.75	
Family Type	Nuclear Family	287	91.7	26.24±6.24	**t=2.877 p=0.004**	23.14±4.81	**t=2.539 p=0.012**
	Extended Family	26	8.3	22.57±5.94		20.65±4.53	
Pregnancy Week	1st Trimester (1)	40	12.8	26.65±6.15	F=0.347 p=0.707	26.90±5.53	**F=9.476 p=0.000 (1-3)**
	2nd Trimester (2)	45	14.4	26.11±6.68		25.24±5.83	
	3rd Trimester (3)	228	72.8	25.77±6.25		23.39±4.80	
Number of Pregnancies	1st Pregnancy (1)	115	36.7	27.14±5.89 (1)	**F=5.659 p=0.004 (1-3)**	23.56±4.56	F=2.258 p=0.106
	2nd Pregnancy (2)	91	29.1	26.23±6.28 (2)		23.02±5.01	
	3rd Pregnancy (3)	107	34.2	24.38±6.43 (3)		22.19±4.90	
Abortion	No	215	68.7	26.20±5.99	t=1.119 p=0.264	23.49±4.98	**t=3.168 p=0.002**
	Yes	98	31.3	25.34±6.88		25.46±5.39	
Living Child	No	139	44.4	27.17±6.07	**t=3.172 p=0.002**	23.58±4.80	**t=2.140 p=0.033**
	Yes	174	55.6	24.94±6.30		22.41±4.81	

The comparison of the average scores of the CCAS and the QLPS based on pregnant women's views on climate change is shown in Table 2. A statistically significant difference was found between the average CCAS scores and the QLPS concerning the perception of climate change as a problem and hearing that climate change affects human health ($p<0.05$). Pregnant women who view climate change as a problem and have heard that it affects human health have higher average scores on both the CCAS and the QLPS compared to others (Table 2).

Table 2. Comparison of the mean scores of the the CCAS the QLPS according to the opinions of pregnant women about climate change (n=313).

Variables		n	%	CCAS		QLPS	
				Mean ± SD	Test Statistics	Mean ± SD	Test Statistics
Do you think climate change poses a problem today or in the future?	Yes	266	85.0	26.97±5.94	**t=7.538 p=0.000**	23.53±4.52	**t=5.441 p=0.000**
	No	47	15.0	20.06±4.79		19.55±5.17	
Have you heard that climate change affects human health?	Yes	202	64.5	28.26±5.88	**t=10.173 p=0.000**	24.57±4.25	**t=9.091 p=0.000**
	No	111	35.5	21.70±4.58		19.95±4.38	

The relationship between the mean scores of the CCAS and the QLPS is shown in Table 3. A statistically significant and positive relationship was found between the mean scores of the CCAS and the QLPS ($p<0.05$). Accordingly, as the mean scores of the CCAS increase, the mean scores of the QLPS also increase (Table 3).

Table 3. The relationship between the mean scores of the CCAS and the QLPS.

		Pregnancy Quality of Life Scale
Climate Change Anxiety Scale	r	0.686**
	p	**0.000**
** Correlation is significant at the 0.01 level (2-tailed).		

Table 4 presents the results of the simple linear regression analysis performed to determine the effect of climate anxiety on pregnant women's quality of life scores. Upon examining the table, it is observed that the climate anxiety score has a significant positive effect on the quality of life score of pregnant women ($p=0.000$). According to this result, 47% of the quality of life score is explained by climate anxiety. A 1-unit increase in climate anxiety leads to a 0.538-unit increase in pregnant women's quality of life scores (Table 4).

Table 4: Regression analysis findings on the predictive power of climate anxiety on the quality of life scores of pregnant women

	β	t	p
Climate anxiety	0.538	16.63	**0.000**
			R^2=0.47 F=275.983 **p=0.000**

DISCUSSION

This study aimed to investigate the effects of climate change on anxiety levels and quality of life in pregnant women. The findings of the study are discussed in the existing literature.

According to the results of the study, when examining the sociodemographic characteristics of the participants, it was observed that the majority of the pregnant women had a university degree or higher, lived in a nuclear family structure, had a balanced income and expenditure situation, and were experiencing their first pregnancy. This finding indicates that the participants were highly educated, economically stable, and mostly in their first pregnancy.

This study examined the relationship between education level and climate change anxiety levels. It was found that pregnant women whose education level and their husbands' education level were university graduates or higher had higher average scores on the CCAS compared to other pregnant women. This finding suggests that higher education might enhance an individual's awareness and sensitivity toward climate change, leading to increased anxiety. Additionally, pregnant women who were employed had higher average scores on the CCAS compared to those who were unemployed. This finding could be attributed to the higher exposure to environmental discussions and potential job-related concerns regarding climate change. Pregnant women with income exceeding their expenses also exhibited higher anxiety scores. This finding could indicate that economic stability, while beneficial in some areas, may heighten concerns about the future, especially climate change. Furthermore, pregnant women living in nuclear families had higher scores compared to those living in extended families. This finding might reflect different social dynamics and the support systems available in different family structures, with nuclear families potentially facing more isolation or increased responsibility, thus influencing their anxiety levels. Kaya et al. (2024) conducted a study with 1126 pregnant women. They found that providing climate change education increased the awareness of climate

change among pregnant women. As a result, they experienced more anxiety (Kaya et al., 2024). This result confirms that climate change education can elevate awareness and anxiety. Several studies have shown a positive relationship between climate change anxiety and education level (Bilgiç & Demir, 2024; Borroni et al., 2022; Davoud & Abazari, 2020; Kaya et al., 2024). These findings support the results of the current study. The increase in an individual's awareness and education level, along with age, may contribute to higher anxiety levels. As individuals become more educated, their understanding of climate change and its potential impacts grows, leading to a heightened sense of concern. Moreover, as age increases, so does the sense of responsibility towards future generations, which may amplify anxiety levels.

In this study, when the relationship between the number of pregnancies, the number of living children, and climate change anxiety levels was compared, it was found that the mean scores on the CCAS were higher in pregnant women experiencing their first pregnancy and those without living children compared to others. The higher anxiety levels observed in women experiencing their first pregnancy might be explained by the unknown situations related to pregnancy and the hormonal changes associated with it. Similarly, the increased anxiety levels in women without living children could be attributed to the uncertainty and anxieties related to the prospect of having a child. This finding suggests that anxiety levels may be higher in pregnant women due to the various factors associated with pregnancy. On the other hand, no statistically significant difference was found between the mean scores of the CCAS and abortion status or pregnancy week. This situation indicates that no definitive conclusion can be drawn about whether abortion experiences or pregnancy week affect anxiety levels. Toptaş Acar and Gerçek Öter (2024), in their study investigating climate change awareness in pregnant women, stated that the awareness of pregnant women regarding climate change was not at a sufficient level (Toptaş Acar & Gerçek Öter, 2024). Another study conducted by Edis in 2024 examined the thoughts of pregnant women about the effects of climate change on maternal and child health. It revealed that pregnant women's awareness of climate change was insufficient (Edis, 2024). These results suggest that pregnant women lack adequate awareness of climate change.

In this study, the relationship between education level and quality of life during pregnancy was compared, and it was observed that pregnant women whose education level and their spouses' education level were university or higher had higher mean scores on the QLPS compared to those whose education level or their spouses' education level was primary or secondary school. Similarly, pregnant women who were employed, those with social security, those whose income exceeded their expenses, and those living in nuclear families had higher mean scores on the QLPS compared to their counterparts in different social and economic situations. These findings suggest that higher education levels and improved social conditions positively influence the quality of life during pregnancy.

A review of the literature indicates that studies by Borroni et al. (2022) and Davoud & Abazari (2020) reported that an increase in education level raises anxiety, which negatively affects the quality of life (Borroni et al., 2022; Davoud & Abazari, 2020). However, the findings of this study suggest a positive relationship between education level and quality of life, which contrasts with some of the existing literature.

Looking at the literature on climate change, studies by Toptaş Acar & Gerçek Öter (2024) and Edis (2024) reported that pregnant women's awareness of climate change was insufficient, while studies by Kaya et al. (2024) and Bilgiç & Demir (2024) found that climate change education increased awareness and reduced anxiety among women (Bilgiç & Demir, 2024; Edis, 2024; Kaya et al., 2024; Toptaş Acar & Gerçek Öter, 2024). These findings suggest that increasing education levels and improving social conditions positively impact the quality of life during pregnancy. The development of awareness as education levels rise, the support factor created by the education levels of spouses, the improvement of social conditions, and the enhancement of coping skills are considered important factors in explaining the findings of this study.

In the study, when the relationship between obstetric characteristics of pregnant women and quality of life during pregnancy was compared, it was found that women with a history of abortion had higher average scores on the QLPS compared to those without an abortion history. This may be related to the increased awareness of the women, the strengthening of social support factors, and the development of various coping mechanisms. When the average scores on the QLPS were examined according to gestational week, it was found that the scores of women in the third trimester were lower. This finding may be linked to the impact of air pollution, a result of climate change, on the respiratory system, leading to sleep problems and negatively affecting quality of life (Chersich et al., 2020). Polo-Kantola et al. (2017) indicated in their study that as pregnancy progresses, sleep quality declines, and anxiety symptoms seen in the third trimester are associated with sleep problems (Polo-Kantola et al., 2017). Other studies in the literature have shown that as pregnant women's awareness of climate change increases, they experience more anxiety and encounter sleep problems. As their education and knowledge levels increase, their expectations rise. Consequently, mental health is negatively affected, impacting the quality of life (Bilgiç&Demir, 2024; Borroni et al., 2022; Chersich et al., 2020; Davoud&Abazari, 2020; Kaya et al., 2024; Polo-Kantola et al., 2017; Reyes et al., 2021;

Schwartz et al., 2022). These findings support the results of this research. It is thought that the quality of life of pregnant women is affected by their place of residence and exposure to climate change consequences (residing near industrial areas), along with sleep problems, increased stress, and anxiety as pregnancy progresses.

The study shows that the average QLPS scores varied according to pregnant women's views on climate change. Most participants believed that climate change would pose a problem in the future, and more than half reported hearing that it affects human health. Pregnant women who viewed climate change as a problem and who had heard that it affects human health had higher average scores on both the CCAS and the QLPS compared to others. These findings suggest that environmental awareness and anxiety levels are significant factors affecting quality of life. In particular, as pregnant women's awareness of climate change increases, both their anxiety levels and quality of life are observed to be higher. This finding suggests that factors such as higher education level, social support, and coping strategies likely contribute to the development of these abilities among pregnant women.

The study found a statistically significant positive relationship between the CCAS scores and the QLPS. As a result, as the average scores on the CCAS increase, the average scores on the QLPS also increase. When the literature is examined, studies show that the anxiety of pregnant women increases as their level of education increases, and accordingly, they experience negative psychological processes and their quality of life is affected (Borroni et al., 2022; Davoud&Abazari, 2020; Kaya et al., 2024; Reyes et al., 2021; Schwartz et al., 2022). In a simple linear regression analysis conducted to determine the effect of climate anxiety on pregnant women's quality of life scores, an increase in climate anxiety levels was found to cause an increase in the quality of life scores. This finding suggests that as the educational level and awareness of pregnant women increase, they develop more effective coping strategies, and the increase in social support and social status, along with the development of various measures, help them cope with climate change anxiety and improve their quality of life.

Limitations of the Study

One of the study's limitations is that it was conducted with pregnant women who visited the Health Application and Research Center of Ondokuz Mayıs University in Samsun during a specific period. This limitation may restrict the generalizability of the findings, as studies conducted only on pregnant women from a specific geographical area and time frame may not provide conclusive results for a broader population. Furthermore, limiting the study to a single health center means that the perspectives of pregnant women with different access to healthcare services and varying health conditions are not reflected. Future studies could address this limitation using more extensive and diverse samples from different geographical regions and healthcare centers.

CONCLUSION AND RECOMMENDATIONS

According to the results of the study, it was found that pregnant women have a low level of climate change anxiety, and factors such as education level, employment status, income level, and family type affect climate change anxiety. Pregnant women whose education level and their husbands' education level are university graduates or higher had higher levels of climate change anxiety compared to other groups. Employed pregnant women, those with social security, those whose income is higher than their expenses, and those living in nuclear families were found to have higher climate change anxiety levels than others. When examining obstetric characteristics, pregnant women experiencing their first pregnancy or those who do not have living children were found to have higher levels of climate change anxiety compared to others. It was determined that pregnant women in the first trimester had higher quality-of-life scores than those in the second and third trimesters. It was concluded that as climate change anxiety increased among pregnant women, their quality of life also increased.

Although climate change affects all people, pregnant women are “one of the most vulnerable groups to its negative consequences. Pregnant women should be supported through prenatal education programs that enhance their awareness and help them learn about the impacts of climate change on maternal and infant health and coping mechanisms. More studies are needed to raise awareness about climate change across society. In this regard, climate change should be included in the elementary, high school, and university curricula and educational program contents should be developed accordingly to increase awareness. All healthcare professionals, especially midwives and midwifery students who are actively involved in the field, should be knowledgeable about the effects of climate change on pregnant women, children, and women and should be able to develop solutions and raise public awareness. Academic midwives should research climate change's effects on pregnant women and other vulnerable groups and plan training and interventions to increase women's awareness of climate change. By doing so, it is believed that the adverse effects of climate change on women, maternal-infant health, and children's health can be reduced, contributing to developing a healthy societal structure.

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Conflict of Interest
All authors have adhered to ethical guidelines throughout every phase of the study and declare no financial or personal conflicts of interest.

Author Contributions
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