



The Relationship of Personality Traits on Pregnant Women on Stress and Adaptation to Pregnancy Gebe Kadınların Kişilik Özelliklerinin Stres ve Gebelik Uyumu ile İlişkisi

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| Article Information | ABSTRACT |
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| <p><i>Received:</i> 15.03.2022</p> <p><i>Accepted:</i> 17.06.2022</p> | <p>Aim: This study examined the relationship of personality traits on pregnant women on stress and adaptation to pregnancy. Subjects and Method: The study is of descriptive type and the sample of the study consisted of 250 pregnant women who applied to the obstetrics clinic of a state hospital. Data were collected using the Introductory Information Form, Cervantes Personality Scale (CPS), Prenatal Distress Scale (PDS), and Prenatal Self-Evaluation Scale (PSES). The data were evaluated with descriptive statistics, 't-test' and 'pearson correlation analysis' in the SPSS program. Results: It was found that the mean age of the pregnant women was 28.65±5.22 and the mean gestational week was 32.94±5.18, 68.4% of them were at least secondary school graduates and 82.4% of them did not work in any job. It was found that pregnant women were more introverted and emotionally stable, answered questions consistently, had low prenatal distress levels, and showed good pregnancy adjustment. A significant relationship was found between the PDS and PSES (p<0,001). Moreover, a significant relationship was also present between the sub-dimensions of emotional balance/neuroticism and consistency/inconsistency, and PDS and PSES scores (p<0,001). Conclusion: It was observed that as the stress level of pregnant women increased, their adaptation to pregnancy decreased, especially women with neurotic personality traits had higher prenatal distress levels and lower adaptation to pregnancy. It can be suggested that all health professionals serving pregnant women should consider the basic personality traits of women in their attempts to reduce prenatal stress and increase compliance with pregnancy.</p> <p>Keywords: Adaptation to pregnancy, personality, pregnancy, stress</p> |
| Makale Bilgisi | ÖZ |
| <p><i>Geliş Tarihi:</i> 15.03.2022</p> <p><i>Kabul Tarihi:</i> 17.06.2022</p> | <p>Amaç: Bu çalışmada gebe kadınların kişilik özelliklerinin stres ve gebelik uyumu ile ilişkisinin incelenmesi amaçlanmıştır. Örneklem ve Yöntem: Araştırma tanımlayıcı tipte olup, örneklemini bir devlet hastanesinin kadın doğum polikliniğine başvuran 250 gebe kadın oluşturmuştur. Veriler Tanıtıcı Bilgi Formu, Cervantes Kişilik Ölçeği (CKÖ), Prenatal Distress Ölçeği (PDÖ) ve Prenatal Kendini Değerlendirme Ölçeği (PKDÖ) kullanılarak toplanmıştır. Veriler SPSS programında betimsel istatistikler, 't-testi' ve 'pearson korelasyon analizi' ile değerlendirilmiştir. Bulgular: Gebelerin yaş ortalaması 28,65+5,22 olup ortalama gebelik haftasının 32,94+5,18 olduğu, %68,4'ünün en az ortaokul mezunu olduğu ve %82,4'ünün herhangi bir işte çalışmadığı saptanmıştır. Gebe kadınların daha içe dönük ve duygusal olarak dengeli yapıda olduğu, sorulara tutarlı şekilde yanıt verdiği, prenatal distres düzeylerinin düşük olduğu ve iyi gebelik uyumu gösterdikleri belirlenmiştir. PDÖ ile PKDÖ toplam puanı arasında pozitif yönde anlamlı bir ilişki olduğu saptanmıştır (p<0,001). Ayrıca CKÖ duygusal denge/nörotizm ve tutarlı/tutarsız olma boyutları ile hem PDÖ hem de PKDÖ toplam puanı arasında pozitif yönde anlamlı bir ilişki olduğu bulunmuştur (p<0,001). Sonuç: Gebe kadınların yaşadıkları stres düzeyi arttıkça gebelik uyumlarının azaldığı, özellikle nörotik kişilik özelliğine sahip kadınların prenatal distres düzeylerinin daha yüksek, gebelik uyumlarının daha düşük olduğu görülmüştür. Gebelere hizmet veren tüm sağlık profesyonellerinin prenatal stresin azaltılması ve gebeliğe uyumun artırılmasına yönelik girişimlerinde kadınların temel kişilik özelliklerini göz önünde bulundurmaları önerilebilir.</p> <p>Anahtar Kelimeler: Gebeliğe uyum, kişilik, gebelik, stres</p> |
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Introduction

Pregnancy covers the period from fertilization of an egg to delivery of a newborn. During this period, women undergo various physiological, psychological, and social changes, and make efforts to adapt accordingly. When a pregnant woman cannot adapt to these changes, pregnancy can turn into a situational and developmental crisis (Çiltaş & Tuncer, 2019); the risk of facing many factors that cause stress and anxiety increases, resulting in problems associated with adaptation to pregnancy.

Personality is a set of innate traits that can be shaped by interaction with the environment but cannot be easily changed, and that set one apart from others (Murray & O'Neill, 2019). Personality traits are defined as an individual's orientations that result in certain attitudes and behaviors in certain cases. To better understand the pregnancy period, the changes that pregnant women undergo, in addition to their personality traits, should be considered. Personality traits define an individual and serve as the basis for predicting future attitudes (Horzum et al., 2017). Individuals respond to situations based on their personality traits (Bal & Şahin, 2011). Personality traits are reported to be related to psychological health during pregnancy (Erdemoğlu et al., 2019); thus, considering basic personality traits will render nursing care more effective.

Women may be subject to many factors that cause stress during pregnancy, with personality traits constituting the most important source of personal stress. Both women and fetuses can undergo this period healthily and comfortably if women cope with stress and adapt effectively to pregnancy (Baran et al., 2020).

Adaptation is defined as the behavioral and physical reactions displayed to establish a personal balance against changes in social and psychological environments (Amanak, 2020). The term also refers to the establishment of healthy relationships with the environment and the further maintenance and development of these relationships (Baghdari et al., 2016). The most important step to take when adapting to pregnancy is to accept the pregnancy itself, which indicates women's positive response towards the changes they are experiencing (Simó et al., 2019). Personality traits and personality are the basic factors affecting pregnant women's coping mechanism against the changes and their adaptation to pregnancy. A pregnant woman's ability to cope with stress reflects how she will adapt to the new role in her life; thus, avoiding stress depends on her effective protection from stress, her personality traits, and her ability to take advantage of relevant opportunities (Evcili & Dağlar, 2019). To prevent risks and promote health, nurses should consider personality traits as potential determinants of pregnant women's health.

In the light of this information, this study examined the relationship of personality traits on pregnant women on stress and adaptation to pregnancy, aiding the planning of future studies to reduce stress and increase adaptation during pregnancy. This study is also expected to contribute to the nursing literature.

As a result of the study; What are the levels of stress and adjustment to pregnancy experienced by pregnant women, are there any relationships between personality traits and their stress and adjustment? questions will be answered.

Subjects and Method

Research Pattern

The research was planned as a descriptive and relationship seeker in order to determine the relationship of personality traits on pregnant women on stress and adaptation to pregnancy.

Population and Sample of the Research

The present study was conducted between February and May 2019 at a Gynecology Polyclinic of a state hospital in İstanbul, Turkey. The population consisted of all pregnant women who applied to the polyclinic and were aged 18 years or older. To determine the sample size, power analysis was performed using the G*Power (v3.1.9.2) program. The number of cases needed to indicate the presence of a relationship at a level of 0.200 and $\alpha = 0.05$ with 80% power was found to be 193; however, a total of 250 pregnant women were included in the study considering the probability of data loss. The sample group consisted of pregnant women who were selected using a random sampling method and who applied to the polyclinic during the same period, met the inclusion criteria, and agreed to participate in the study.

Inclusion Criteria

- Being in the 20th gestational week or later
- Experiencing a healthy pregnancy
- Having no chronic or psychiatric disorders
- Being able to communicate in Turkish
- Being able to understand the scales to be administered

Sociodemographic and Obstetric Traits of Pregnant Women

The mean age of the pregnant women in the present study ($n = 250$) was 28.6 ± 5.2 years. The mean number of pregnancies experienced by the participants was 2.36 ± 1.47 , the number of gestational weeks ranged from 20 to 41, and the mean gestational weeks of the participants were 32.9 ± 5.18 . Most of the women had a planned/desired pregnancy (71.2%), regularly went for pregnancy checks (89.2%), received no education on pregnancy or delivery (79.2%), and received support during pregnancy (74.0%) (Table 1).

Table 1. Sociodemographic and Obstetric Traits of Pregnant Women (n = 250)

| Introductory Characteristics | $\bar{X}\pm SD$ | Min–Max |
|--|-----------------------------------|----------------|
| Age | 28.6 \pm 5.22 | 19–40 |
| Years of education | 8.93 \pm 4.31 | 0–20 |
| Years of marriage | 6.06 \pm 5.14 | 1–25 |
| Number of pregnancies | 2.36 \pm 1.47 | 1–10 |
| Number of deliveries | 1.07 \pm 1.17 | 0–7 |
| Gestational weeks | 32.9 \pm 5.18 | 20–41 |
| | n | % |
| Educational Status | | |
| Illiterate | 7 | 2.8 |
| Literate | 18 | 7.2 |
| Primary School | 54 | 21.6 |
| Secondary School | 75 | 30.0 |
| High School | 53 | 21.2 |
| College/Faculty | 43 | 17.2 |
| Family Type | | |
| Nuclear family | 193 | 77.2 |
| Extended family | 57 | 22.8 |
| Employment Status | | |
| Employed | 44 | 17.6 |
| Unemployed | 206 | 82.4 |
| Economic Status | | |
| Income lower than expenses | 109 | 43.6 |
| Income equal to expenses | 127 | 50.8 |
| Income higher than expenses | 14 | 5.6 |
| Number of Pregnancies | | |
| 0–1 | 76 | 30.4 |
| 2 and higher | 174 | 69.6 |
| Miscarriage-Abortion-Stillbirth | | |
| Yes | 62 | 24.8 |
| No | 188 | 75.2 |
| Planned/Desired Pregnancy | | |
| Yes | 178 | 71.2 |
| No | 72 | 28.8 |
| Regular Visits for Pregnancy Checks | | |
| Yes | 223 | 89.2 |
| No | 27 | 10.8 |
| Education on Preparation for Pregnancy/Delivery | | |
| Yes | 52 | 20.8 |
| No | 198 | 79.2 |
| Medical Issue with the Baby During a Previous Pregnancy | | |
| Yes | 26 | 10.4 |
| No | 224 | 89.6 |
| Support During Pregnancy | | |
| Yes | 185 | 74.0 |
| No | 65 | 26.0 |

Data Collection Document

Following the approval phase, data were collected using the Introductory Information Form, Cervantes Personality Scale (CPS), Prenatal Distress Scale (PDS), and Prenatal Self-Evaluation Scale (PSES). The interviews between pregnant women and the researcher were conducted face-to-face and lasted approximately 20–25 minutes.

Introductory Information Form

It is a 35-question form developed by the researcher, using the relevant literature, which defines demographic information such as age, education, family type, employment status, and obstetric characteristics such as pregnancy, birth, miscarriage, abortion, number of stillbirths, and whether the pregnancy is planned or not.

Cervantes Personality Scale (CPS)

The Turkish validity and reliability of the Cervantes Personality Scale developed by Castelo-Branco et al. in 2008 was evaluated by Bal and Şahin in 2011. The scale consists of 20 items and the following three sub-dimensions: extroversion/introversion (7 items), emotional balance/neuroticism (7 items), and consistency/inconsistency (6 items/control) (Bal & Şahin, 2011). Cronbach's alpha coefficient was found to be 0.70 for this scale in the present study.

Extroversion/Introversion: This sub-dimension consists of seven items. The score from this sub-dimension is calculated by subtracting the total score for the 1st, 4th, 7th, 10th, and 15th items from the total score for the 12th and 18th items in the scale and adding 25 to this result. Participants can receive a score ranging from 0 to 35 in this sub-dimension, with the former indicating the most extroverted personality and the latter indicating the most introverted personality.

Emotional Balance/Neuroticism: This sub-dimension consists of seven items including the 2nd, 5th, 8th, 11th, 13th, 16th, and 19th items. Participants can receive a score ranging from 0 to 35 in this sub-dimension, with the former indicating the most emotionally balanced personality and the latter indicating the most emotionally unbalanced (neurotic) personality.

Consistency/Inconsistency: This sub-dimension consists of six items and is not a personality factor. These items include the 3rd, 6th, 9th, 14th, 17th, and 20th items. Thirty points are subtracted from the total score for these items to obtain a consistency/inconsistency score. It reflects the control group, and the rationale behind designing this sub-group was to assess answers given to the other two sub-dimensions. The score ranges from 0 to 30, with 0 indicating the personality giving the most consistent responses and 30 indicating the personality giving the most inconsistent responses (Bal & Şahin, 2011).

Prenatal Distress Scale (PDS)

This scale was developed by Yali and Lobel in 1999 and has 12 items. It was reorganized by Lobel in 2008 to form the 17-item version. The Turkish adaptation of the scale was first performed by Durna Z., Akın S. and Yüksel F. in 2012. The scale consists of 17 items in total and has four sub-dimensions. The total score for the scale ranges from 0 to 34; as the total score increases, the prenatal distress level perceived by the pregnant woman also increases (Yüksel et al., 2011). The Cronbach's alpha coefficient was found to be 0.73 for this scale in the present study.

Prenatal Self-Evaluation Scale (PSES)

This scale was developed by Lederman in 1979 to assess the adaptation displayed by women during the prenatal period toward pregnancy and maternal roles. Its Turkish validity and reliability were evaluated by Beydağ and Mete in 2008. The scale consists of 79 items, 47 of which are reversed. The scale has seven sub-dimensions. The adaptation to pregnancy is assessed according to scores ranging from 1 to 4. Scoring is performed in a reverse manner for the reversed items. The total score for the scale ranges from 79 to 316. Lower scores indicate a higher adaptation to pregnancy (Beydağ & Mete, 2008). The Cronbach's alpha coefficient was found to be 0.91 for this scale in the present study.

Data Collection Process

All pregnant women who met the inclusion criteria and showed willingness to participate were informed about the identity of the researcher and the purpose of the study and were told that their information would be kept confidential and solely used for scientific purposes. They were asked to sign the "Informed Consent Form" to indicate their written consent. Moreover, permission was asked by email from Bal, Akın, and Beydağ to use CPS, PDS and PSES, respectively.

Statistical Evaluation of Data

The data obtained in the present study were analyzed using the Statistical Package for Social Sciences (SPSS) for Windows 22.0. Descriptive statistical methods were used to assess the data, which are expressed as a number and percentage or the mean and standard deviation. The conformity of the data obtained with the measurement to the normal distribution was examined with the Kolmogorov Smirnov test. A t-test was used for comparison of the quantitative constant data between two independent groups, and Pearson's correlation analysis was performed for comparison between the constant variables. The correlation coefficient was assessed as follows: (r) 0.00–0.25 very weak relationship, 0.26–0.49 weak relationship, 0.50–0.69 moderate relationship, 0.70–0.89 strong relationship, and 0.90–1.00 very strong relationship. To determine the reliability of the scales used in the present study, Cronbach's alpha test was used. The statistical significance level was found to be $p < 0.05$ at the 95% confidence interval.

Ethics Committee Statement

Researchers obtained written approval from the Ethics Committee of Social and Human Sciences at İstanbul University (10/12/2018-112451) to conduct the present study. All pregnant women who met the inclusion criteria and showed willingness to participate were informed about the identity of the researcher and the purpose of the study and were told that their information would be kept confidential and solely used for scientific purposes. They were asked to sign the "Informed Consent Form" to indicate their written consent. Moreover, permission was asked by email from Bal, Akın, and Beydağ to use CPS, PDS and PSES, respectively.

Results

CPS, PDS, and PSES Scores

Participants' mean scores for the CPS sub-dimensions of "Extroversion/Introversion," "Emotional Balance/Neuroticism," and "Consistency/Inconsistency" were 22.1 ± 5.52 , 18.1 ± 6.53 , and 9.39 ± 4.97 , respectively. According to the mean scores for the sub-dimensions of the scale, in addition to the standard deviation and maximum values, pregnant women in the present study were more introverted and emotionally balanced, and consistently answered the items. The mean score for

the PDS was 11.2±5.10. Considering the maximum score that can be obtained from the scale, pregnant women’s prenatal distress levels were low. The mean score for the PSES was 139.3±25.9. The sub-dimension “Thoughts on Her and Her Baby’s Health” had the highest mean score (23.4±6.52) (Table 2).

Table 2. CPS, PDS, and PSES Scores (n = 250)

| | $\bar{X}\pm SD$ | Min–Max |
|---|-------------------|---------------|
| Sub-dimension of the Cervantes Personality Scale | | |
| Extroversion/Introversion | 22.1±5.52 | 8–35 |
| Emotional Balance/Neuroticism | 18.1±6.53 | 3–35 |
| Consistency/Inconsistency | 9.39±4.97 | 0–23 |
| Sub-dimension of the Prenatal Distress Scale | | |
| Physical and Social Changes due to Pregnancy Concerns Regarding the Baby and Delivery | 8.07±3.37 | 1–17 |
| Concerns Regarding Healthcare Quality and Medical Status | 0.81±1.01 | 0–4 |
| Concerns Regarding Baby Care and Postnatal Life | 1.38±1.48 | 0–6 |
| Financial Concerns | 0.93±1.13 | 0–4 |
| Total Prenatal Distress Scale Score | 11.2±5.10 | 1–25 |
| Sub-dimension of the Prenatal Self-Evaluation Scale | | |
| Thoughts on Her and Her Baby’s Health | 23.4±6.52 | 10–39 |
| Acceptance of Pregnancy | 21.1±5.86 | 14–46 |
| Acceptance of Maternal Roles | 23.1±4.99 | 15–38 |
| Readiness for Delivery | 18.4±4.30 | 10–34 |
| Fears Related to Delivery | 21.1±5.11 | 10–37 |
| Status of her Relationship with her Mother | 16.1±6.77 | 10–39 |
| Status of her Relationship with her Spouse | 15.7±5.55 | 10–40 |
| Total Prenatal Self-Evaluation Scale Score | 139.3±25.9 | 90–206 |

Comparison of the PDS and PSES Scores with Participants’ Traits

The total PDS score was significantly higher among pregnant women who performed kin marriage, experienced miscarriage, abortion, or stillbirth, witnessed a medical issue with the baby during a previous pregnancy, and did not receive support during pregnancy ($p=0.00$; $p=0.00$; $p=0.02$; and $p=0.00$, respectively) (Table 3).

The PSES score of pregnant women who had been married for six years and longer, received education for eight years or less, performed kin marriage, experienced miscarriage, abortion, or stillbirth, had an unplanned/undesired pregnancy, witnessed a medical issue with the baby during a previous pregnancy, and received no support during pregnancy was significantly higher ($p=0.01$; $p=0.03$; $p=0.04$; $p=0.03$; $p<0.001$; $p=0.00$; $p<0.001$, respectively) (Table 3).

Table 3. Comparison of the PDS and PSES Scores with Participants' Traits (n = 250)

| Variable | Total Prenatal Distress Score $\bar{X} \pm SD$ | Total Prenatal Self-Evaluation Score $\bar{x} \pm SD$ |
|--|--|---|
| Age | | |
| 29 and younger | 10.9±5.08 | 137.8±25.7 |
| 29 and older | 11.6±5.14 | 141.4±26.3 |
| Test (<i>t</i>)/ <i>p</i> | -1.03/0.30 | -1.07/0.28 |
| Years of Marriage | | |
| ≤6 | 11.0±5.14 | 136.5±25.1 |
| ≥6 | 11.5±5.05 | 144.6±26.9 |
| Test (<i>t</i>)/ <i>p</i> | -0.82/0.40 | -2.37/ 0.01* |
| Years of Education | | |
| 8 years and less | 11.3±5.12 | 142.4±25.9 |
| 8 years and more | 11.0±5.11 | 135.3±25.5 |
| Test (<i>t</i>)/ <i>p</i> | 0.54/0.58 | 2.15/ 0.03* |
| Kin Marriage | | |
| Yes | 12.8±5.10 | 145.5±26.0 |
| No | 10.7±5.03 | 137.6±25.7 |
| Test (<i>t</i>)/ <i>p</i> | 2.66/ 0.00* | 1.98/ 0.04* |
| Employed | | |
| Yes | 12.1±4.81 | 143.0±25.6 |
| No | 11.0±5.16 | 138.5±26.0 |
| Test (<i>t</i>)/ <i>p</i> | 1.29/0.19 | 1.05/0.29 |
| Number of Pregnancies | | |
| 0–1 | 10.8±4.92 | 135.1±24.2 |
| 2 or more | 11.3±5.19 | 141.1±26.5 |
| Test (<i>t</i>)/ <i>p</i> | -0.70/0.48 | -1.68/0.09 |
| Miscarriage-Abortion-Stillbirth | | |
| Yes | 12.9±5.03 | 145.3±26.2 |
| No | 10.6±5.01 | 137.3±25.6 |
| Test (<i>t</i>)/ <i>p</i> | -3.11/ 0.00* | -2.09/ 0.03* |
| Planned/Desired Pregnancy | | |
| Yes | 10.8±4.88 | 134.9±23.2 |
| No | 12.1±5.55 | 150.1±29.3 |
| Test (<i>t</i>)/ <i>p</i> | -1.91/0.05 | -4.30/ 0.00** |
| Medical Issue with the Baby During a Previous Pregnancy | | |
| Yes | 13.3±4.87 | 153.6±30.1 |
| No | 10.9±5.09 | 137.6±25.0 |
| Test (<i>t</i>)/ <i>p</i> | 2.22/ 0.02* | 3.02/ 0.00* |
| Support Received During Pregnancy | | |
| Yes | 10.4±4.67 | 133.3±23.2 |
| No | 13.4±5.67 | 156.4±25.8 |
| Test (<i>t</i>)/ <i>p</i> | -4.23/ 0.00** | -6.70/ 0.00** |

t: Independent two-group t-test **p* < 0.05, ***p* < 0.001

Relationship among the CPS, PDS, and PSES Scores

A moderate positive relationship was present between the PDS and PSES scores ($r = 0.59$; $p = 0.00$). As the PDS score increased, the PSES score also increased. Accordingly, as the stress level experienced during pregnancy increased, the adaptation to pregnancy decreased (Table 4).

A weak positive relationship was present among the PDS and PSES scores, CPS emotional balance/neuroticism sub-dimension, and consistency/inconsistency ($p < 0.001$). As the level of neuroticism increased, the pregnancy-related stress level increased, while adaptation to pregnancy decreased. An increased stress level or decreased adaptation to pregnancy caused women to give inconsistent answers to scale items ($p < 0.001$) (Table 4).

Table 4. Relationship among Participants' CPS, PDS, and PSES Scores (n =250)

| | Extroversion/Introversion | | Emotional Balance/Neuroticism | | Consistency/Inconsistency | | PSES | |
|-------------|---------------------------|------|-------------------------------|--------------|---------------------------|--------------|------|--------------|
| | r | p | r | p | r | p | r | p |
| PDS | -0.12 | 0.05 | 0.41 | 0.00* | 0.30 | 0.00* | 0.59 | 0.00* |
| PSES | -0.11 | 0.07 | 0.38 | 0.00* | 0.32 | 0.00* | | |

The correlation coefficient was assessed as follows: (r) 0.00–0.25 very weak relationship, 0.26–0.49 weak relationship, 0.50–0.69 moderate relationship, 0.70–0.89 strong relationship, and 0.90–1.00 very strong relationship. Pearson's Correlation * $p < 0.001$

Discussion

Many changes that occur during pregnancy may cause women to experience stress and difficulties related to adaptation. Having been conducted to determine the impact of Turkish women's personality traits on their stress and adaptation to pregnancy, this study and its results were discussed considering the relevant literature.

Considering the personality traits of pregnant women in the study; the mean scores for the sub-dimensions of "Extroversion/Introversion," "Emotional Balance/Neuroticism," and "Consistency/Inconsistency" were 22.1 ± 5.52 , 18.1 ± 6.53 , and 9.39 ± 4.97 , respectively. The mean PDS score of pregnant women in the present study was 11.2 ± 5.10 . The prenatal distress score of pregnant women who previously experienced miscarriage, abortion, or stillbirth and who witnessed medical issues with babies in previous pregnancies was significantly higher. In the present study, women who received support during pregnancy were found to have lower stress scores ($p < 0.001$) (Table 3); however, no significant difference was present between the number of pregnancies or planned pregnancy and prenatal distress ($p > 0.05$) (Table 3). Women who willingly became pregnant, had a good income status, received family support, and were informed about delivery in advance had significantly lower concern levels. The mean PSES score of pregnant women in the present study was 139.3 ± 25.9 , which is regarded as good adaptation to pregnancy. In the study, it was determined that there was a positive correlation between the PSES total score and the education year. The total PSES score of women who planned or desired pregnancy was lower, indicating that their adaptation was better (Table 3). As the social support perceived by pregnant women increased, adaptation to pregnancy improved ($p < 0.05$) (Table 3). Additionally, it was found that women who lived in nuclear families adapted to pregnancy easier, but no statistical difference existed between age, gestational weeks, or number of pregnancies and adaptation to pregnancy. There was no significant relationship between the PDS score and the extroversion/introversion sub-dimension of CPS; however, a significant positive relationship was present between the sub-

dimension of emotional balance/neuroticism and consistency/inconsistency (Table 4). Pregnant women who were emotionally unbalanced (neurotic) and oriented to be inconsistent had higher prenatal distress levels. Considering the total PSES score and all dimensions of the scale, a significant positive relationship was present between the CPS emotional balance/neuroticism subdimension and consistency/inconsistency (Table 4). As the neuroticism level increased, adaptation of women to pregnancy decreased.

Clinical research indicates that individuals who display neurotic personality traits are more vulnerable to both depression and stressful situations (Nath et al., 2020). The relevant literature suggests that extroverted individuals display a more positive approach and consequently generate solutions, while those displaying neurotic personality traits use defense mechanisms based on avoidance and refusal (Asselmann et al., 2020). The mean scores for the sub-dimensions of “Extroversion/Introversion,” “Emotional Balance/Neuroticism,” and “Consistency/Inconsistency” were 22.1 ± 5.52 , 18.1 ± 6.53 , and 9.39 ± 4.97 , respectively. Accordingly, pregnant women in the present study were more introverted and emotionally balanced and gave consistent answers to items in the scales. As a result of the research, in terms of emotional balance/neuroticism personality trait, Bal & Şahin (2011) conducted a study with 200 women in the menopausal period and Ölçer et al. (2017) with 645 university students, while the results of the study were similar, the difference in the mean scores of the other sub-dimensions was thought to be due to the different characteristics of the individuals included in the sample. Further, Erdemoğlu et al. (2019) found that pregnant women’s mean extroversion score was 8.62 ± 4.02 and their mean emotional balance score was 8.55 ± 2.79 .

Prenatal distress shows itself in certain periods ranging from antepartum to postpartum (Kim et al., 2018). In a study conducted with 198 pregnant women, 33% were shown to experience distress. The presence of prenatal distress during pregnancy prevents adaptation and adversely affects the relationship between mother and baby during the postpartum period (Dollberg et al., 2016). The mean PDS score of pregnant women in the present study was 11.2 ± 5.10 . Tuncel & Süt (2019) and Coşkun et al. (2020) studies, it can be said that the prenatal distress levels of pregnant women are similar and low. Moreover, the prenatal distress score of pregnant women who previously experienced miscarriage, abortion, or stillbirth and who witnessed medical issues with babies in previous pregnancies was significantly higher. Studies have shown that pregnant women who had delivery-related problems in their previous pregnancies experienced higher distress levels (Çiltaş & Tuncer, 2019). Considering the medical issues experienced during their previous pregnancies, the fears that pregnant women have during their current pregnancies may have increased their stress. Pregnant women who previously experienced miscarriage, abortion, or stillbirth had a higher stress level due to these negative experiences, which is expected.

Using positive coping strategies and receiving adequate social support during pregnancy is highly effective in reducing stress levels and emotional issues (Goletzke et al., 2017). In the present study, women who received support during pregnancy were found to have lower stress scores ($p<0.001$) (Table 3); however, no significant difference was present between the number of pregnancies or planned pregnancy and prenatal distress ($p>0.05$) (Table 3). Kaplan et al. (2007) found a significant relationship among the income status, number of pregnancies, level of knowledge, desire for pregnancy, presence of a support system, and prenatal concerns. Women who willingly became pregnant, had a good income status, received family support, and were informed about delivery in advance had significantly lower concern levels. According to another study, the mean PDS score of pregnant women who had a planned pregnancy was lower than that of women whose

pregnancy was unplanned (Çapık et al., 2015). Dündar et al. (2019) found that women who did not plan or desire their pregnancy, had experienced pregnancy multiple times, and had more than one child experienced greater levels of distress (Dündar et al., 2019). The results of the present study regarding the impact of social support on stress levels during pregnancy are in accordance with the literature.

The mean PSES score of pregnant women in the present study was 139.3 ± 25.9 , which is regarded as good adaptation to pregnancy. In a similar study by Beydağ & Mete (2008), the total mean PASS score of pregnant women was found to be higher. In their study, Demirbaş & Kadioğlu (2014) found the PKÖ total score to be similar to this study, and stated that the "acceptance of the maternal role" sub-dimension had the highest mean score. In the present study, the sub-dimension "Thoughts on Her and Her Baby's Health" had the highest mean score (23.4 ± 6.52) (Table 2). Our results are similar to those reported by Demirbaş & Kadioğlu (2014); however, the adaptation levels of pregnant women were found to be higher by Beydağ & Mete (2008).

A significant relationship was present between the total PSES score and years of education. According to another study conducted with 390 women during the prenatal period, women who were high school or university graduates were more adapted to pregnancy and motherhood (Demirtaş & Kadioğlu, 2014), suggesting that adaptation to pregnancy improves as educational level increases. Considering the data of the aforementioned studies, the results of the present study are in accordance with the literature. The total PSES score of women who planned or desired pregnancy was lower, indicating that their adaptation was better (Table 3). Demirbaş & Kadioğlu (2014) stated that women who get pregnant willingly adapt to pregnancy better, which is consistent with other relevant literature. As the social support perceived by pregnant women increased, adaptation to pregnancy improved ($p < 0.05$) (Table 3). Yılmaz & Pasinlioğlu (2014) conducted a study with 241 pregnant women and found a statistically significant relationship between the sub-dimensions of accepting the pregnancy and maternal role and receipt of social support. Social support positively affected adaptation to pregnancy, which is expected. According to the results of the present study, there was no statistically significant relationship between adaptation to pregnancy and women's age, family type, employment, or economic status. Demirbaş & Kadioğlu (2014) noted that pregnant women accepted the pregnancy and maternal role easier as their educational and income levels increased, with employed women adapting to pregnancy much easier. Additionally, it was found that women who lived in nuclear families adapted to pregnancy easier, but no statistical difference existed between age, gestational weeks, or number of pregnancies and adaptation to pregnancy.

Emotionally balanced individuals are more resilient to the struggles of daily life and can better manage their stress (Horzum et al., 2017). Individuals who are emotionally unbalanced (neurotic) are also uneasy, introverted, susceptible to suffering depression, nervous, insecure, diffident, worried, and angry (Murray & O'Neill, 2019). The interpersonal differences arising from personal traits may affect the stress experienced and adaptation to pregnancy. There was no significant relationship between the PDS score and the extroversion/introversion sub-dimension of CPS; however, a significant positive relationship was present between the sub-dimension of emotional balance/neuroticism and consistency/inconsistency (Table 4). Pregnant women who were emotionally unbalanced (neurotic) and oriented to be inconsistent had higher prenatal distress levels.

Individuals who have emotionally balanced personality traits better adapt to their environments, are more comfortable and patient, and have stronger coping skills against negative situations. Individuals with neurotic (emotionally unbalanced) personality traits are uneasy, worried, and feel unsafe (Murray & O'Neill, 2019). Considering the total PSES score and all dimensions of the scale, a significant positive relationship was present between the CPS emotional balance/neuroticism subdimension and consistency/inconsistency (Table 4). As the neuroticism level increased, adaptation of women to pregnancy decreased. There are no studies in the literature examining the impact of personality traits on stress during pregnancy and adaptation to pregnancy. Decreased adaptation to pregnancy may have caused women to give inconsistent answers to the items. Accordingly, it can be suggested that pregnant women's personality traits directly affect adaptation to pregnancy, that adaptation to pregnancy cannot solely be explained through relationships with the environment, and that personality traits are an important factor in this regard.

Since the present study was conducted in a single setting, the results cannot be generalized to all pregnant women. Additionally, the results can only be generalized to pregnant women who met the inclusion criteria.

Conclusion and Recommendations

It is inevitable that pregnant women experience many factors that may cause concern and stress during pregnancy. It was determined that pregnant women were more introverted and emotionally stable, answered questions consistently, had low prenatal distress levels, and showed good pregnancy adjustment. It was observed that as the stress level of pregnant women increased, their pregnancy adjustment decreased, especially women with neurotic personality had higher prenatal distress levels and lower pregnancy adjustment. It is thought that this study can contribute to the development of public health by providing a different perspective on the personal characteristics of pregnant women that directly affect the pregnancy period. Personality traits are always overlooked, especially when planning education for pregnant women. For this reason, it is thought that the current study will lead to new research by opening the way.

The results of the present study may be beneficial for nursing and midwifery practices. Nurses and midwives should plan prenatal care along with supportive care. For pregnant women, it is recommended that their personality traits, stress levels, and adaptation to pregnancy be evaluated during the first assessment stages, that counseling, education, and support be provided to every pregnant woman based on their individual personality traits, and that prenatal educational programs be developed and generalized.

Within the framework of this research, the personality traits of pregnant women, the relationship of their personality traits with stress and pregnancy adjustment were shed light on, and in this context, a guideline article was prepared for health professionals to protect and improve the health of pregnant women. In our country, there is no study examining the effects of the personality traits of pregnant women on stress and pregnancy adjustment. Due to limited studies on this subject, it is recommended to plan studies with larger sample groups on pregnant women living in urban and rural areas, which will determine the personality traits of pregnant women and reveal their effects on pregnancy stress and adjustment.

Ethics Committee Statement

Researchers obtained written approval from the Ethics Committee of Social and Human Sciences at İstanbul University (10/12/2018-112451) to conduct the present study.

Conflict of Interest

The authors claim no conflicts of interest.

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