

# Factors Affecting Perceived Stress and Self-Care Agency Pregnant Women

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## Abstract

Studies have been conducted to investigate the factors affecting perceived stress in pregnancy and to identify attempts to reduce it. However, it has been determined that there is a gap in the literature on the studies conducted to determine the effects of stress on the ability to use self-care. Aim: This study was to assess the effect of the developmental stress perceived by pregnant admitted to outpatient clinics on their "self-care agency". Sample: The data were collected from the pregnant women who presented to the pregnancy outpatient clinics of three hospitals in Turkey. The study sample included 1022 pregnant women. Tools: The data were collected with the Socio-demographic Questionnaire, Perceived Stress Scale and Exercise of Self-Care Agency Scale. In the analysis of the data, the SPSS program. Permissions needed to perform the study were obtained. Results: The mean total score from the Perceived Stress Scale was  $25.89 \pm 6.70$  and from the Exercise of Self-Care Agency Scale was  $103.57 \pm 19.35$ . There was a significant negative difference between the mean total Perceived Stress Scale score and the mean total Exercises of Self-Care Agency Scale score. Conclusion: It was determined that the perceived stress of the pregnant women affected their self-care agency and that the self-care agency decreased as stress increased. Recommendation: Clinical nurses should support pregnant women to reduce perceived stress and increase self-care. Obstetric and psychiatric nurses should cooperate in the care of pregnant patients.

**Keywords:** Perceived developmental stress, perceived stress, self-care agency, pregnancy.

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## 1. Introduction

The period of pregnancy is a developmental phase. Pregnancy and childbirth are physiological events in which endocrine changes occur, factors such as changes in the family life cycle, personal experiences, educational level, life philosophy of the woman, intra-family relationships, family members' attitudes towards pregnancy, the socioeconomic status of the family, and whether the pregnancy is intended or unintended can cause pregnancy to become a major stressful life event for the pregnant woman (Ayoubi, Bostan, Sharifipour, 2017; Bussières et al., 2015; Cardwell, 2013; Guardino & Schetter, 2014; Hundley et al., 1998; World Health Organization, 2014). The psychological state and lifestyle of the woman affects not only the pregnancy but also her psychological and emotional state during pregnancy and the postpartum period. Risks that may adversely affect her for the sake of both her own health and that of her baby (Barua, Junaid, 2015; Eryilmaz, Erci, Engin, 1999; Hart, 1995; Saydam et al., 2007). It has also been reported that stress and anxiety in pregnancy adversely affects maternal and neonatal health, and even the behavioral and cognitive development of the child (Cardwell, 2013; Entringer, Buss & Wadhwa, 2015; Glover, 2014; Khashan et al., 2012; Krabbendam et al., 2005; Salacz et al., 2012; Staneva et al., 2015). The life cycle is caused by pregnancy-induced stress, premature birth, low birth weight fetus and with a smaller head circumference. This situation is negatively affects cognitive development (Glover, 2014; Huijink et al., 2003; Staneva, et.al., 2015). Also, a prospective epidemiological study found that prenatal maternal anxiety predicted behavioral and emotional problems in children at 4 years (O'Connor et al., 2002).

A stressful event or situation is only a problem when it is perceived as a threat by an individual. For this reason, the stress perceived by the individual is important (Lobel et al., 2008). There are several factors leading to stress. The stressors may be physiological (trauma, excessive heat and cold), psychological (emotional tensions, internal and external conflicts, problems with the spouse), social (environmental factors, cultural change etc.) and socioeconomic (Guardino & Schetter, 2014; Lobel et al., 2008). The developmental state of an individual (pregnancy, childbirth, menopause etc.) also causes developmental stresses. It is known that stress in pregnancy is mainly caused by psychosocial stressors. Pregnancy-related risk factors and the personality traits of the pregnant woman also affect stress in pregnancy (Ayoubi, Bostan, Sharifipour, 2017; Krabbendam et al., 2005; Orem, 2001). As a result of the physiological changes that occur in pregnancy, a pregnant woman's healthcare needs increase and she is thus required to take greater care of herself (Eryilmaz, Erci, Engin, 1999). In recent years, the concept of self-care has come to the forefront in the philosophy of primary health care for pregnancy. While the protection and maintenance of health refer to the avoidance of attitudes and behaviors that adversely affect health, improvement of health refers to an individual's ability to use his/her potential and energy in order to lead a

satisfying life, to be reproductive, and to use his/her health-related skills thoroughly (Hart, 1995). On the other hand, self-care is one of the basic human needs that everybody should be able to meet. When this need is not met, a lack of care and deterioration of health may occur. "Self-care", one of the main concepts in Dorothea Orem's general theory of nursing, is defined as "individuals' performing activities they are to do to protect their lives, health and well-being" (Orem, 2001).

Self-care is a continuous activity initiated and carried out by an individual to maintain her life, health and well-being. Individuals themselves must do something and make efforts to look after their own health without expecting others to do what should be done. In this sense, "self-care agency" is the combination of elements, such as activities undertaken and the ability to carry out these activities, that determine how an individual cares for him/herself to maintain and promote his/her health (Jenny, 1991; Hart, 1995; Orem, 2001; Pektekin, 2013). In order to care for themselves, individuals need to maintain a balance between their ability to act and their various needs. One of these needs is to practice self-care at different developmental stages. A pregnant woman should practice self-care behaviors in order to protect herself against diseases during pregnancy, have a healthy pregnancy, and give birth to a healthy baby. In addition, factors such as age, the number of pregnancies, experience gained during prior pregnancies, and the number of living children can also influence self-care (Eryilmaz, Erci, Engin, 1999).

Studies in the pertinent literature were conducted to investigate the effects of stress perceived during pregnancy and the factors affecting the perceived stress, and to identify attempts to reduce it (Jenny, 1991; Krabbendam et al., 2005; Onah, 2003; Balk et al., 2010). However, there is a gap in the literature related to studies conducted to determine the effects of the stress perceived on the ability to practice self-care. Therefore, the present study is of importance because it presents results obtained from a point of view that is new to the literature.

### **1.1. Aim of the study**

The purpose of this study is to assess the effects of self-care on developmental stress and the factors that affect them.

### **1.2. Research contribution:**

- It was determined that the perceived stress of the pregnant women affected their self-care agency and that the self-care agency decreased as stress increased.
- Further research is needed to determine the impact of perceived stress on self-care skills
- The sociodemographic characteristics of pregnant women affected the perceived stress and self-care skills.

## **2. Methods**

### **2.1. Design**

The study is a cross-sectional descriptive study. It was conducted in outpatient clinic of public hospitals in the provinces of three city in the western part of Turkey.

### **2.2. Sample**

The minimum sample size required was calculated at the 95% level of confidence with a 5% margin of error using the Statecalc (Epi Info Version 6) (Aksakoglu, 2013). Women to be included in the sample of the present study were identified by the improbable sampling method, and of them, those who volunteered to participate in the study were included in the study ( $n=1022$ ). Of the pregnant women who had no fetal and/or maternal health problems diagnosed before and during pregnancy, and who had no speech or comprehension disorders were included in the study

### **2.3. Variables and Instrument**

The study data were collected with the Sociodemographic Characteristics Questionnaire, Perceived Stress Scale and Exercise of Self-Care Agency Scale before the health examination through face-to-face interviews.

**Sociodemographic Characteristics Questionnaire:** This questionnaire, developed by the researchers through a literature review, includes 14 items questioning the participants' sociodemographic characteristics such as age, education, income and employment status, and fertility characteristics.

**Perceived Stress Scale (PSS):** This scale was developed by Cohen et al. in 1983. The validity and reliability study for first Turkish version was conducted by Erci in 2006 with adults who presented to a primary health care center. The first version of the scale had 14 items. Then, in 1988, Cohen and Williamson developed a 10-item version of the scale. A validity and reliability study for Turkish was conducted on this 10-item version (Cohen, Kamarck & Mermelstein, 1983; Erci, 2006).

The scale was also adapted to Turkish by Eskin et al., (2013). Another version of the scale including the subscales "Inadequate Self-Efficacy Perception" and "Perception of Stress/Discomfort" is also used in research. The scale is used to determine the level of stress perceived within the last month. The scale is a five-point Likert-

type scale. The minimum and maximum possible scores obtainable from the scale are 1 and 50 respectively. The assessment of the scale is based on the total score. The higher the total score is, the higher the level of the perceived stress (Cohen, Kamarck & Mermelstein, 1983; Eskin et al., 2013; Erci, 2006). In a study conducted by Schneider (2002), the cut-off value was reported as > 13 (Schneider, 2002).

**Exercise of Self-Care Agency Scale (ESCAS):** This scale was developed by Kearney and Fleischer in 1979 to assess an individual's ability to practice self-care, or "self-care agency" (Kearney & Fleischeder, 1979). The items on the scale are rated on a five-point Likert type scale. The scale, which focuses on evaluating the self-care behaviors of individuals, consists of 35 items. The highest score obtainable is 140. The scale is based on four features. These are listed as active or passive responses to situations, motivation, knowledge of health practices, and the value that an individual places on him/herself. The higher the score is the higher the self-care agency. The validity and reliability study of the Turkish version of the ESCAS was conducted with healthy young people by Nahcivan (Nahcivan, 2004). In the present study, a reliability coefficient was 0.800 for the ten-item PSS and 0.905 for the ESCAS. The scales were found to be highly reliable. The comparison of the intrascale consistency of the mean item scores revealed that the mean scores for both scales were significantly different from each other.

#### 2.4. Statistical Data Analysis

The study data were analyzed using the Statistical Package for Social Sciences (SPSS) for Windows 16.0 statistical program. p value of  $<0.05$  was considered statistically significant. Cronbach's alpha, Hotelling's T<sup>2</sup>, the Pearson Correlation, the t Test, One way ANOVA, Regression, Tamhane's T2 test in heterogeneous groups and the Chi square test (Fisher) were used in the study.

Dependent variables; Perceived Stress Scale and the Exercise of Self-Care Agency Scale. Independent variables; age, educational level, perception of income and expenditure, employment status, social security status, gestational age and the number of pregnancies.

#### 2.5. Ethics

To conduct the study, approval was obtained from the Local Ethics Committee, Tepecik Training and Research Hospital, Ministry of Health, Republic of Turkey (dated and numbered April 24, 2013 / 28). In addition, written informed consent was obtained from the pregnant women who participated in the study.

#### 3. Results

The mean age of the participating pregnant women was  $27.30 \pm 4.90$  (Min.=16, Max.=42) and their mean gestational age was  $29.86 \pm 9.34$  weeks (Min.=5, Max.=42) and 65.3% of them were in the third trimester of pregnancy. Of the participants, 59.6% had had two to four pregnancies.

The mean total score the pregnant women obtained from the PSS was  $25.89 \pm 6.70$  (Min.=10.00, Max.=47.00). The mean total score the pregnant women obtained from the ESCAS was  $103.57 \pm 19.35$  (Min.=42.00, Max.=136.00) (Table 1).

Table 1. The mean total scores the pregnant women obtained from the Perceived Stress Scale (PSS) and Exercise of Self Care Agency Scale (ESCAS)

Scales (n=1022)	Mean $\pm$ SD	Min.- Max.	Min.-Max. (Possible Scores to from the Scale)
Total Score for the Perceived Stress Scale	$25.89 \pm 6.70$	10.00-47.00	1-50
Total Score for the Exercise of Self Care Agency Scale	$103.57 \pm 19.35$	42.00-136.00	35- 140

There was a significant difference between the participants' mean PSS scores and their mean ESCAS scores in terms of their age groups, educational status, their perception of income/expenditure and gestational week ( $p<0.05$ ). There was a significant difference between the participants' mean PSS scores and between their mean ESCAS scores in terms of their employment status and social security status ( $p<0.05$ ), while the participants who were not currently working and had no social security had the highest mean PSS scores and the lowest mean ESCAS scores. However, no statistically significant difference was determined between the participants' mean PSS scores and between their mean ESCAS scores in the number of pregnancies ( $p>0.05$ ) (Table 2).

The regression analysis showed that the age of the subjects was below 19 years of age (OR: 1.671.67 (-0.57 - 3.92), non-illiterate (OR: 8.83 (5.89-11.77), income less than expenses (OR: 4.39 (3.46 - 5.32) and second trimester (OR: -3,496 (-4,41--2,57) for PSS. It was determined that employment status (OR: 1.88 (0.95 - 2.80) and social security (OR:-2.50 (-2.90 --2.10) increased PSS ( Table 2).

The age of the pregnant women was below 19 (OR: -5.48 (-12.00-1.03), non-illiterate (OR: -30.31 (-38.87 - 21.75) and income less than expenses (OR: -13.80 (-16.46- -11.15), first pregnancy (OR: 8.035 (.05-16.01), second trimester (OR: 7.000 (4.30-9.69), unemployed (OR: -7.23 (-9.93- -4.53) and no social security (OR: 6.15 (4.97- 7.33) were found to decrease ESCAS ( Table 2).

The participants who were younger than 19 years old, were illiterate, had an income less than their expenditure, had had five or more pregnancies and were in the first trimester of pregnancy, obtained the highest PSS scores. In addition, the same participants had the lowest ESCAS scores (Table 2).

Table 2. Comparisons of the participants' mean PSS and ESCAS Scores in terms of some variables

Variables	PSS				ESCAS					
	Mean ± SD	F	p	OR (95% CI*)	p	Mean ± SD	F	p	OR (95% CI*)	
<b>Age Groups</b>										
≤19 years	28.95±5.79	9.284	0.000	1.67 (-0.57 - 3.92)	0.036	95.66±20.74	6.566	0.001	-5.48 (-12.00- 1.03)	0.099
20-34 years	25.55±6.80			-1.70 (-3.30- -0.10)	0.145	104.32±19.29			3.17 (-1.45- 7.80)	0.178
≥35 years	27.27±5.78			1.0 (Ref.)	0.000	101.15±17.30			1.0 (Ref.)	0.000
<b>Education Status</b>										
Non- Illiterate	29.94±3.83	65.124	0.000	8.83 (5.89 -11.77)	0.000	86.00±21.87	59.112	0.000	-30.31 (-38.87- -21.75)	0.000
Elementary school	27.67±5.29			6.56 (5.50-7.63)	0.000	96.51±19.23			-19.79 (-22.89- -16.69)	0.000
Junior high school	28.18±6.09			7.07 (6.03 -8.12)	0.000	97.23±19.32			-19.07 (-22.12- -16.03)	0.000
Senior high school	27.36±6.18			6.26 (5.27 -7.25)	0.000	102.05±18.65			-14.26 (-17.14- -11.37)	0.000
University	21.10±6.32			1.0 (Ref.)	0.000	116.31±12.32			1.0 (Ref.)	0.000
<b>Perception of income / expenses</b>										
Income equal to expenses	24.62±6.56	43.146	0.000	1.0 (Ref.)	0.000	107.13±18.00	54.320	0.000	1.0 (Ref.)	0.000
Income less than expenses	29.02±6.23			4.39 (3.46 - 5.32)	0.000	93.31±19.97			-13.80 (-16.46- -11.15)	0.000
Income more than expenses	25.91±6.26			1.28 (0.01- 2.55)	0.047	106.87±16.99			-0.25 (-3.88- 3.37)	0.890
<b>The number of the pregnancies</b>										
First pregnancy	26.40±6.44	2.257	0.105	-.425 (-3.18-2.34)	0.763	103.29±19.20	2.479	0.084	8.035 (.05-16.01)	0.048
2-4 pregnancies	25.53±6.88			-1.298 (-4.03-1.43)	0.352	104.08±19.53			8.832 (.93-16.72)	0.028
≥5 pregnancies	26.83±5.75			1.0 (Ref.)	0.000	95.25±15.60			1.0 (Ref.)	0.000
<b>Gestational week</b>										
First Trimester	27.34±5.52	30.047	0.000	.554 (-.95-2.06)	0.471	102.05±17.70	13.283	0.000	.385 (-4.03-4.80)	0.864
Second Trimester	23.29±7.76			-3.496 (-4.41-2.57)	0.000	108.66±19.68			7.000 (4.30-9.69)	0.000
Third Trimester	26.79±6.06			1.0 (Ref.)	0.000	101.66±19.05			1.0 (Ref.)	0.000
<b>Employment Status</b>										
Employed	22.66±6.66	-9.841	0.000	1.88 (0.95 - 2.80)	0.000	113.43±15.53	10.435	0.000	-7.23 (-9.93- -4.53)	0.000
Unemployed	27.10±6.31					99.90±19.36				
<b>Social Security</b>										
Yes	25.67±5.25	4.765	0.000	-2.50 (-2.90 - -2.10)	0.000	104.28±19.04	-5.320	0.000	6.15 (4.97- 7.33)	0.000
No	30.35±6.69					89.25±20.32				
<b>TOTAL</b>	<b>25.88±6.73</b>					<b>103.57±19.35</b>				

The pregnant women's mean age was significantly negatively correlated with their mean PSS scores ( $r = -0.208$ ), and significantly positively correlated with their gestational week ( $r = 0.106$ ) ( $p < 0.05$ ). But, the relationship between their PSS scores and the number of their pregnancies was not significant ( $p > 0.05$ ) (Table 3, Fig.1.). While there was a significant positive relationship between the participants' ESCAS scores and their mean age ( $p < 0.05$ ). There was a significant negative relationship between their ESCAS scores and their gestational week, and the number of their pregnancies ( $p < 0.05$ ). Finally, the relationship between the participants' mean PSS total scores and their mean ESCAS total scores was significantly strong and negative ( $p < 0.05$ ) (Table 3, Fig.1.).

Table 3. The Relationship between the participants' Mean PSS and ESCAS Scores, and variables such as Age, Gestational week, the number of pregnancies and PSS

VARIABLES	PSS	ESCAS
Age	r -0.208	0.179
	p <b>0.000</b>	<b>0.000</b>
Gestational week	r <b>0.106</b>	<b>-0.098</b>
	p <b>0.001</b>	<b>0.002</b>
The Number of Pregnancies	r 0.029	<b>-0.092</b>
	p 0.353	<b>0.003</b>
PSS	r <b>-0.598</b>	
	p <b>0.000</b>	

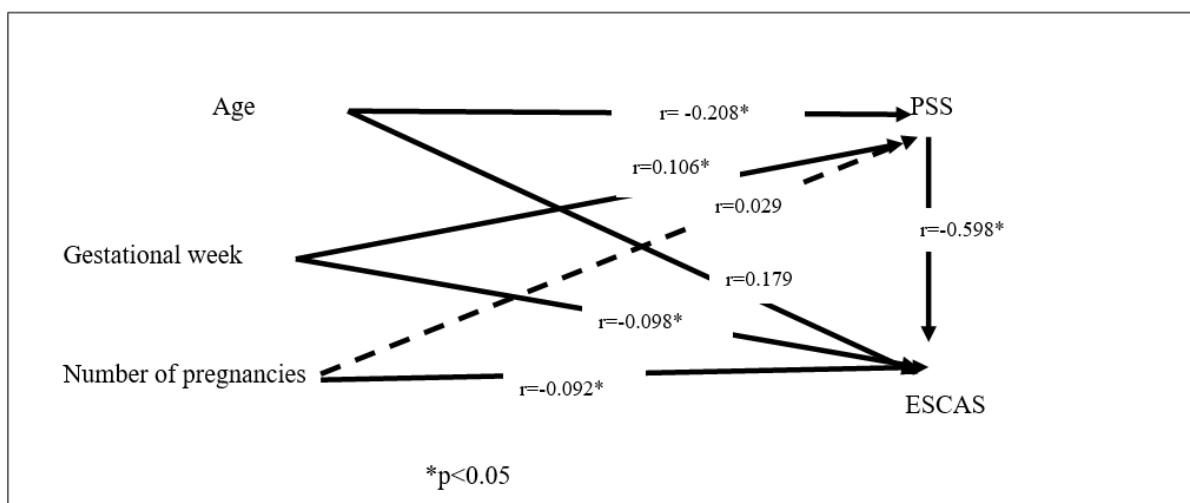


Fig.1.The relationship between the participants' mean PSS and ESCAS scores, and variables such as age, gestational week, the number of pregnancies and PSS

#### 4. Discussion

In the present study, the effects of the developmental stress perceived by pregnant women on their self-care agency and the factors affecting this were investigated. In this study, which was conducted in three different provinces located in the Aegean Region of Turkey, the majority of the participants were in the 20-34 year old age group, which is the appropriate age range for pregnancy, were in the third trimester of pregnancy, and the highest number of pregnancies among these participants ranged between two and four. In the study, the participants' mean PSS total score was  $25.89 \pm 6.70$ . The PSS score indicates that the higher the total score, the higher the level of perceived stress (Cohen, Kamarck & Mermelstein, 1983; Erci, 2006). According to the results obtained from the study, the participants' stress level was moderate. On the other hand, the participants' mean PSS total score was  $12.0 \pm 5.8$  in Krabbendam et al.'s study (2005) conducted with 5511 pregnant women, and  $12.27 \pm 5.87$  in Salacz et al.'s study (2012). High levels of perceived stress in these studies were considered to increase the risks of preterm delivery and of prematurity (Krabbendam et al., 2005; Glover, 2014), and stress perceived during pregnancy was considered to be associated with depression and anxiety (Glover, 2014; Salacz et al., 2012). These results show that the pregnant women in the present study were more stressed. The causes of higher levels of perceived stress among pregnant women are thought to be associated with cultural differences between countries, regional differences within a country and differences between the characteristics of the study samples. High levels of perceived stress in these studies were considered to increase preterm delivery risk and prematurity risk (Krabbendam et al., 2005), and stress perceived during pregnancy was considered to be associated with depression and anxiety (Salacz et al., 2012).

In the present study, there was a statistically significant difference between the participants' mean PSS scores in terms of variables such as age groups, educational status, perception of income/expenditure and gestational age. In addition, there was a statistically significant difference between the participants' mean PSS scores in terms of their employment and social security status. It was determined that the women age is young, the education levels are low, the income is equal to the expense, unemployed and the lack of social security increases the PSS. On the other hand, while the relationship between the participants' mean PSS scores in terms of the number of their mean age was negative and significant, it was significant and positive in terms of the participants' gestational age. Lobel et al. (2008) and Rini et al. (1999) found an association between gestational anxiety and gestational age. Conditions such as stress and depression were also considered to be associated with the gestational age. In a study conducted with young pregnant women, it was stated that their stress levels decreased in the third trimester of pregnancy and that the number of pregnancies did not affect their distress (Rallis et al., 2014). In study with Nigerian women, it was reported that stress levels of pregnant women were influenced by factors such as socioeconomic status, educational level, pregnancy and religion during the last days of pregnancy (Onah, 2003). They also found that racial differences affected the perception of stress (Simon et al., 2016).

In their study conducted in China, Lau and Yin (2011) found that perceived stress levels were high in women who had low levels of education, were living alone, had long working hours and had unplanned pregnancies, and that these factors affected those women's quality of life. In the study conducted by Schneider (2002), most of the prospective mothers were worried as a result of the physical and emotional symptoms of pregnancy. In Field, Hernandez, Diego's study (2006), 29.6% of the prospective mothers who were not normally stressed became stressed during pregnancy. In another systematic review article, stress was found to be higher in groups with a low

income (Guardino & Schetter, 2014). In the literature, it has been reported that depression, worries, anxiety and perceived stress experienced in pregnancy increase the risk of adverse pregnancy outcomes, including preterm delivery and delivery of low birth-weight infants (Staneva et al., 2015; Entringer, Buss & Wadhwa, 2015). Data in the literature often reveals different socioeconomic variables and obstetric risks (Lobel et al., 2008; Rini et al., 1999). While maternal depression, anxiety or stress in pregnancy can increase the risk of negative outcomes for the child, interventions to reduce this stress may cause adverse outcomes to change for the better (Balk et al., 2010). Therefore, although it is a good idea to initiate interventions as early as possible, subsequent interventions are also thought to be beneficial (Glover, 2014).

The relationship between the participants' PSS and ESCAS scores was significant and negative. The most striking result of the study findings was that the ability to practice self-care decreased significantly with the increase in the stress perceived by the pregnant women ( $p<0.05$ ). Entringer, Buss and Wadhwa (2015) reported that stress experienced before or during pregnancy constituted a risk for obesity and Type II diabetes, and resulted in adverse health outcomes in the long term. Women with high stress levels are less likely to maintain optimal health behaviors during pregnancy (Guardino & Schetter, 2014), which suggests that pregnant women lack the ability to practice self-care.

In the present study, the mean total score the participants obtained from the ESCAS was  $103.57\pm19.35$  (Min.=42.00, Max.=136.00). This suggests that the participants had a high level of self-care agency. In Dereli & Beji's study (2010), carried out with 282 pregnant women, the participants' mean self-care agency score was  $92.0\pm18.9$ . A statistically significant difference was determined between the participants' mean ESCAS scores in terms of variables such as age group, educational status, perception of income/expenditure, gestational age, employment and social security status ( $p<0.05$ ). However, the difference between the participants' mean ESCAS scores in terms of the number of their pregnancies was not significant ( $p>0.05$ ). There was a significant relationship between the participants' mean total score for the ESCAS and the mean values for age, gestational age, the number of pregnancies ( $p<0.05$ ) and the relationship between the ESCAS scores and variables such as the gestational age and the number of pregnancies was negative. In Puspita, Jerayyingmongkol, Sanguanprasit's study (2015), conducted with 263 pregnant women in Indonesia, factors such as knowledge of self-care, perceived benefits of self-care, and satisfaction with social support were determined to affect women's self-care behaviors during pregnancy. In another study conducted with 172 pregnant women in Taiwan, it was determined that the pregnant women's health behaviors affected their self-efficacy and that their health status affected their health-related behaviors (Lin et al., 2009). The study with pregnant women in Turkey, of the participating women and husband's educational level (Altiparmak, 2006; Dereli & Beji, 2010; Tortumluoglu, Okanlı & Erci, 2003), had a good level of income (Altiparmak, 2006), have a job and social security (Altiparmak, 2006; Tortumluoglu, Okanlı & Erci, 2003), nuclear families (Altiparmak, 2006) were primiparous (Altiparmak, 2006; Dereli & Beji, 2010; Tortumluoglu, Okanlı & Erci, 2003) had better self-care agency (Altiparmak, 2006). In the present study, there was a significant negative correlation between the gestational age and the total ESCAS scores, which suggests that self-care agency decreases as the number of pregnancies increases. This finding is similar to the findings obtained in the present study. They also determined that there was no statistically significant difference between the participants' self-care agency scores in terms of variables such as social security status, income perception, family type and length of marriage. But, Pasinlioglu (2004) pointed out that self-care agency scores were higher in women who had social security. The results of the studies are consistent with those of the present study. Saydam et al. (2007) found that there was no difference between the self-care agency scores of the participants in terms of their perception of income status.

In their study (2012) conducted with 206 primiparous young women in Thailand, Panthumans et al (2012). investigated the mean scores for personal care behaviors in a specific trimester and found that the score obtained in the second trimester was lower than those obtained in the first and third trimesters. In the same study, the factors determined to be related to general self-care behaviors were self-efficacy, perceived social support from the family, level of knowledge about self-care during pregnancy, accessibility to health services, self-esteem and age. In contrast to this study, we found that the self-care scores of the second-trimester geographers were higher. It is thought that during this period of pregnancy, the mother has performed the self-care well because it adapts to the pregnancy and the physiological changes. General anxiety values measured during the third trimester of pregnancy indicated a positive correlation with the baby's displaying difficult temperament at 10 weeks and seven months postpartum (Van den Bergh, 1990). In their study, reported that adverse birth outcomes decreased as self-care practices increased (Gomora et al., 2015).

## 5. Conclusion And Recommendations

The evaluation of all the findings of the present study reveals that the developmental stresses that women perceived affected their self-care agency, and that self-care agency decreased as the level of stress increased. Thus the determination of factors likely to increase perceived stress and to affect the self-care agency of pregnant women gains in importance. For this reason, it is of great importance that a sensitive approach is displayed by health

personnel towards pregnant women in order to reduce their stress. In addition, raising nurses' awareness of the early detection of risks and complications that may be caused by stress in the first stages of pregnancy is also important.

It is recommended that more studies be conducted on this issue. It should be kept in mind that pregnancy is a developmental period. Studies on training and counseling with regard to the characteristics of different stages of pregnancy and studies aiming to reduce stress and improve women's ability to practice self-care during pregnancy should be carried out.

#### **6.Implications for nursing/midwifery practice.**

- Clinical nurses/midwife should support pregnant women to reduce perceived stress and increase self-care.
- Obstetric and psychiatric nurses or/and midwife should cooperate in the care of pregnant patients

**7. Limitations:** PSS and ESCAS used in the research are scales based on personal notifications. For this reason, it is assumed that the statements of the geologists reflect the real situation. Moreover, the reason for this research to be an analytical study is that pregnancy processes and delivery results of pregnancies have not been followed.

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