

Relationship between emotional intelligence and prenatal attachment levels of women with healthy and high-risk pregnancies

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ABSTRACT

Objectives: Emotional intelligence enables pregnant women to effectively cope with environmental effects and stressors in a dynamic and changing process. This research was planned for evaluating the relationship between emotional intelligence and prenatal attachment levels of women with healthy and high-risk pregnancies.

Methods: Based on the descriptive research design and regression analysis, the research was performed with the participation of 281 pregnant women. Research data were collected through Information Form, Emotional Intelligence Self-Evaluation Scale (EISES) and Prenatal Attachment Inventory (PAI).

Results: As per means of scores obtained from the EISES and PAI by women with healthy (133.34 ± 32.30) and high-risk (126.81 ± 35.80) pregnancies, it was found that pregnant women had high levels of emotional intelligence and medium levels of prenatal attachment. Based on research variables, there were no statistically significant differences in means of scores obtained from the Scale and the Inventory by women with healthy and high-risk pregnancies ($p > 0.05$). It was found that women who voluntarily got pregnant had higher prenatal attachment levels and this difference was statistically significant ($\chi^2 = 102.81, p < 0.001$). It was identified that there was no statistically significant difference in means of scores obtained by pregnant women from the EISES and PAI ($r = -0.060, p = 0.318$).

Conclusions: It was found that there was no statistically significant difference in prenatal attachment levels of women with healthy and high-risk pregnancies and their prenatal attachment levels had no statistically significant association with their emotional intelligence levels.

Keywords: Attachment, emotional intelligence, pregnant woman, prenatal attachment

In order to continue to have a healthy pregnancy period, the women must adapt to physiological, psychological and social changes which are experienced during pregnancy [1]. In this process, the pregnant

women are guided by both conscious and unconscious motives such as happiness, joy, liking, being liked and narcissism. Pregnancy is a developmental crisis which obliges the woman to cope with feelings of ambiva-

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lence and to adapt to the new role definition [2, 3]. The adaptation of the woman to the pregnancy period is not only affected by environmental factors but also associated with several internal dynamics such as feelings, thoughts, motives, and desires. By virtue of emotional intelligence, it is possible to adapt to changes and to cope with stressors emerging in such a dynamic process as pregnancy. Particularly in a case such as high-risk pregnancy which adversely affects the maternal and fetal health, there are several factors which the pregnant woman should cope with and adapt to [2, 3]. The concept of emotional intelligence is the amalgamation of emotion and intelligence. Goleman [4] defines the emotional intelligence as “the person’s ability to be aware of his/her own and other individuals’ emotions, to differentiate between emotions, to utilize emotions in his/her behaviors and thoughts”. Upon the review of definitions proposed by different theorists on emotional intelligence, it is discerned that the common theme is to get to know and be aware of the self and the environment, to establish effective relations and to cope with the problem [5]. In light of the above information, emotional intelligence can be described as skills which enable the pregnant women to cope effectively with environmental impacts and stressors in such a dynamic and changing process as pregnancy and provide the pregnant women with the opportunity to develop relations in agreement with the environment inhabited by them. As per the relevant literature, it was identified that, based on the gender variable, the level of emotional intelligence differed and women obtained higher scores especially in understanding their own personal emotions, understanding others’ emotions and the manipulation of emotions sub-scales of an emotional intelligence scale [1, 6, 7]. The high-level of women’s emotional intelligence skills is a crucial feature which is likely to affect both the maternal and fetal health favorably [1]. The emotional connection established by the pregnant woman with the fetus, that is, the prenatal attachment does not only influence the health of fetus at that time but is essential also to the development of healthy spiritual development of the baby in postpartum period [8, 9]. Emotional intelligence is important to the enjoyment of healthy and safe feelings of attachment by individuals. It is known that having poor feelings of attachment is associated with postpartum anxiety and depression [1, 10]. In addition, pregnant women with

high emotional intelligence are more successful in discovering the emotions they feel, resolving all the fear and anxiety in them, and approaching the birth of their baby with confidence and safety [11].

This research was planned for evaluating the relationship between emotional intelligence and prenatal attachment levels of women with healthy and high-risk pregnancies. In addition, in the literature reviews, no study with the same content and purpose as this study has yet been encountered. Therefore, this study can shedding light on future studies.

Research Questions

- Is there any statistically difference in prenatal attachment levels of women with healthy and high-risk pregnancies?
- Do the socio-demographic and obstetric characteristics of women with healthy and high-risk pregnancies have statistically significant associations with their prenatal attachment levels?
- Do the socio-demographic and obstetric characteristics of women with healthy and high-risk pregnancies have statistically significant associations with their emotional intelligence levels?
- Is there any statistically significant association between pregnant women’s prenatal attachment and emotional intelligence levels?

METHODS

This research is based on descriptive research design and regression analysis. It was performed at the perinatology polyclinic of two university hospitals from February to July in 2018. Research population was composed of 630 pregnant women who were admitted to two medical schools on the above dates. By virtue of the fact that the exact size of the research population was known, the size of the sample to be addressed by the research was calculated as minimum 242 pregnant women for $\alpha = 0.05$, $H = \pm 0.05$, $p = 0.5$, $q = 0.5$ [12]. Assuming that certain participants were likely to be left out of the research during the data collection process, data were collected from 281 pregnant women. No sample selection technique was employed, rather, all pregnant women who volunteered to take part in the research and complied with research criteria were included into the sample. The criteria specified for being included in the research were to be aged

above 18 years, to be in a period later than the twentieth week of the pregnancy and to have the ability to speak and understand Turkish. Research data were collected by researchers through face-to-face interviews in approximately 15-20 minutes. Research findings were evaluated by using 95% confidence interval, and statistical significance was identified if the P value was lower than 0.05 ($p < 0.05$), and also the effect size was found as 0.21.

Data Collection Tools

Data were collected through the Pregnant Women Information Form, Emotional Intelligence Self-Evaluation Scale and Prenatal Attachment Inventory.

Pregnant Women Information Form

It is a form composed of 25 questions which were created by researchers upon the literature review for identifying pregnant women's socio-demographic (age, income level, education level and so on.) and obstetric characteristics (maternal risk, fetal risk, week of pregnancy period, fetus gender and so on.) in conjunction with the research topic [1, 8].

Emotional Intelligence Self-Evaluation Scale (EISES)

The scale which was comprised of 30 items and five sub-scales was developed by Nicholas Hall (1999). Its sub-scales are Emotional Awareness, Managing One's Emotions, Self-Motivation, Empathy and Coaching Others' Emotions. The minimum and maximum scores to be obtained from this 6-point Likert-type scale are successively 30 and 180 points. A high score to be obtained from the scale demonstrates that the person has high-level emotional intelligence. The scale has certain breakpoints, that is, low (129 points and below), normal (130-154 points) and high (155 points and above). The validity and reliability test for the scale was performed in Turkish by Ergin (2000), and Cronbach's Alpha Coefficient was calculated as 0.84 [13]. Cronbach's Alpha Coefficient was calculated as 0.96 for this research.

Prenatal Attachment Inventory (PAI)

Composed of 21 items, the scale was developed by Muller (1996). The minimum and maximum scores to be obtained from this 4-point Likert-type scale are consecutively 21 and 84 points. A high score to be ob-

tained from the scale indicates that the person has high-level prenatal attachment. The validity and reliability test for the scale was performed in Turkish by Yılmaz and Beji (2013), and Cronbach's Alpha Coefficient was computed as 0.84 [8]. Cronbach's Alpha Coefficient was computed as 0.912 for this research.

The Visual Analog Scale (VAS)

In this study, the scale used for the assessment of variations in intensity of stress and coping with stress. The scale has a total score range of minimum 0 to maximum 10 [14].

Ethical Approval

The research protocol was approved by the Social Sciences and Humanities Ethics Committee of İstanbul University (No: 3245), and informed consent was received from all participants in written format. All study procedures were performed in compliance with the Declaration of Helsinki.

Statistical Analysis

Data which were collected through the research were analyzed via IBM Statistical Package for the Social Science (SPSS) 21.0 software. Whether variables were normally distributed was evaluated on the basis of Kolmogorov-Smirnov Test and the analysis of histograms. Means, standard deviations, frequencies and percentages were used within the scope of descriptive statistical methods whereas the Student T-Test and ANOVA as parametric tests and Chi-Squared Test as a nonparametric test were utilized for the comparison of variables. Bonferroni Test and Tukey Test were employed as multiple comparison (post-hoc) tests for intergroup comparisons, and the correlation analysis was used for the assessment of the association between scales. Statistical significance was identified if the P value was lower than 0.05 ($p < 0.05$).

RESULTS

Upon the examination of the distribution of participant women with healthy and high-risk pregnancies, it was discerned that the normal distribution was the case for data across groups ($p > 0.05$). The review of socio-demographic and obstetric data of women with healthy and high-risk pregnancies indicated that there was a

statistically significant difference only on the basis of the mean age and gravida between groups ($p > 0.05$). It was ascertained that 25.3% of pregnant women ($n = 71$) previously had miscarriage and 3.2% of pregnant women ($n = 9$) thought of having abortion and there was no statistically significant difference between groups ($p > 0.05$). Of pregnant women who were informed about the sex of their babies, 47.6% ($n = 134$) reported that their babies would be female, 51.6% ($n = 147$) said that their babies would be female and 77.2% ($n = 217$) stated that their babies had the sex which they wished that their babies would have.

In Table 1, data on socio-demographic and obstetric characteristics of participant women with healthy and high-risk pregnancies and their distribution across groups are exhibited.

On the basis of means of scores obtained from Emotional Intelligence Self-Evaluation Scale and its sub-scales and the Prenatal Attachment Inventory by women with healthy and high-risk pregnancies, it was found that they had high levels of emotional intelligence and medium levels of prenatal attachment. Upon the evaluation of stress experienced by pregnant women and the level of their success in coping with

Table 1. Socio-demographic and obstetric characteristics of participant womens’ with healthy and high-risk pregnancies

Characteristics	Group 1 (n = 156)		Group 2 (n = 125)		Statistics		
	Mean	SD	Mean	SD	t	p value	
Age (years)	28.07	4.56	32.09	6.00	6.373	< 0.001	
Gestational week	28.96	6.89	30.28	6.14	1.682	0.094	
Gravida	2.10	1.18	2.44	1.37	2.224	0.027	
Abortous	0.38	0.76	0.17	0.50	2.404	0.170	
Groups	n	%	n	%	X ²	p value	
Age groups (year)	17-30	101	64.7	47	37.6	20.510	< 0.001
	31-45	55	35.3	78	62.4		
Family type	Nuclear	130	83.3	103	82.4	0.969	0.616
	Extended	26	16.7	22	17.6		
Educational status (year)	1-8	51	32.7	42	33.6	0.969	0.616
	9-17	93	59.6	77	61.6		
	18-27	12	7.7	6	4.8		
Working status	Working	57	36.5	52	41.6	0.749	0.387
	Not Working	99	63.5	73	58.4		
Income rate	Less	38	24.4	41	32.8	4.574	0.102
	Equal	96	61.5	61	48.8		
	Over	22	14.1	23	18.4		
Living children	Yes	95	60.9	73	58.4	0.742	0.362
	No	61	39.1	52	41.6		
Pregnancy intention	Planned	132	84.6	104	83.2	0.103	0.747
	Unplanned	24	15.4	21	16.8		
Is your baby the gender you expect	Yes	124	79.5	93	74.4	1.021	0.320
	No	32	20.5	32	25.6		

SD = Standard deviation, Group 1 = Womens’ with healthy pregnancies, Group 2 = Womens’ with high-risk pregnancies

stress as per VAS, it was identified that women with high-risk pregnancies had higher levels of stress than women with healthy pregnancies and this difference was statistically significant ($p < 0.001$). However, between women with healthy and high-risk pregnancies, there was no statistically significant difference in the level of success in coping with stress ($p = 0.451$). Table 2 displays means of scores obtained from the Scale and the Inventory by women with healthy and high-risk pregnancies and comparisons of means of scores.

As there was no statistically significant difference between emotional intelligence and prenatal attachment levels across groups, associations of pregnant women’s socio-demographic data with their emotional intelligence and prenatal attachment levels were eval-

uated irrespective of whether the women had healthy or high-risk pregnancy. It was ascertained that, on the basis of the age variable, there were statistically significant differences in means of scores obtained by participant pregnant women from the overall Emotional Intelligence Self-Evaluation Scale ($p = 0.05$) and its ‘self-motivation’ sub-scale ($p = 0.026$). It was found that, on the basis of whether the pregnant women voluntarily got pregnant, there were statistically significant differences in emotional intelligence and prenatal attachment levels except for the ‘emotional awareness’ sub-scale of the EISES ($p < 0.05$). Upon the examination of the difference between two groups, it was identified that women who voluntarily got pregnant had higher emotional intelligence and prenatal attachment levels than women who involun-

Table 2. Means of scores obtained from the Emotional Intelligence Self-Evaluation Scale and the Prenatal Attachment Inventory by women with healthy and high-risk pregnancies and comparisons of means of scores.

Emotional Intelligence Self-Evaluation Scale and Sub-dimensions	Group 1 (n = 125)	Group 2 (n = 156)	t	p value
	Mean ± SD Min-max	Mean ± SD Min-max		
Being aware of own emotions	27.51 ± 7.30 6 - 36	26.04 ± 8.30 6 - 36	1.566	0.118
Managing emotions	24.86 ± 6.70 7 - 36	24.31 ± 7.60 6 - 36	0.640	0.523
Self motivation	27.28 ± 7.30 6 - 36	25.51 ± 7.50 6 - 36	1.987	1.987
Emphaty	27.64 ± 7.60 7 - 36	26.16 ± 8.10 6 - 36	1.557	1.557
Managing relationships	26.10 ± 7.00 9 - 36	24.77 ± 7.50 6 - 36	1.518	1.518
Total Emotional Intelligence	133.34 ± 32.30 36 -180	126.81 ± 35.80 33 -180	1.599	1.599
Prenatal Attachment Inventory	56.66 ± 15.30 21 -84	56.10 ± 13.00 27 - 84	0.322	0.748
Stress Level, VAS	6.50 ± 3.10 1 -10	4.94 ± 3.1 1- 10	4.104	< 0.001
Coping with Stress, VAS	6.82 ± 3.00 0 -10	6.54 ± 3.2 1 -10	0.756	0.451

SD = Standard deviation, VAS: Visual Analog Scale, Group 1 = Womens’ with healthy pregnancies, Group 2 = Womens’ with high-risk pregnancies

tarily got pregnant. It was discerned that, on the basis of the education level of the pregnant women (in years), there were statistically significant differences in means of scores obtained from the EISES and its sub-scales ($p < 0.05$) whereas there was no statistically significant difference in means of scores obtained from the Prenatal Attachment Inventory ($p > 0.05$). The direction of the difference is linear, and, as pregnant women’s education levels (in years) go up, they have better skills in being aware of their own emotions and enhancing self-motivation. The mean of scores obtained from ‘managing one’s emotions’ sub-scale was higher for pregnant women educated for 9-17 years (high school) than it was for those educated for

1-8 years (primary school), nevertheless, there was no statistically significant difference for other groups with different education levels ($p > 0.05$). Likewise, means of scores obtained from the overall EISES and its ‘empathy’ and ‘coaching others’ emotions’ sub-scales were higher for pregnant women educated for 9-17 years (high school) and for 18-27 years (undergraduate and above) than it was for those educated for 1-8 years (primary school), and this difference was statistically significant ($p < 0.05$). However, between pregnant women who were graduates of high school and who were holders of undergraduate degree or a higher degree, there was no statistically significant difference in means of scores obtained from the overall EISES

Table 3. The relationship between sociodemographic variables and emotional intelligence and prenatal attachment level (n = 286)

Variables	Emotional awareness	Managing one’s emotions	Self-motivation	Empathy	Coaching others’ emotions	Total emotional intelligence	Prenatal attachment
Age							
17-30	24.96 ± 8.2	23.09 ± 6.9	24.35 ± 7.6	25.50 ± 8.4	23.94 ± 7.8	121.85 ± 35.6	56.19 ± 15.1
31-45	27.82 ± 7.2	25.53 ± 6.4	27.14 ± 6.8	27.51 ± 6.0	26.58 ± 6.3	134.60 ± 28.7	52.02 ± 14.6
Test value	F = 2.669	F = 2.285	F=3.683	F = 1.470	F = 2.271	F = 2.874	F = 2.520
p value	0.071	0.104	0.026	.0232	0.111	0.050	0.082
Pregnancy Intention							
Planned	27.07 ± 7.6	25.00 ± 7.0	26.68 ± 7.2	27.01 ± 7.5	25.83 ± 6.9	131.57 ± 30.9	57.58 ± 14.2
Not planned	24.73 ± 9.2	22.24 ± 7.8	24.26 ± 8.5	25.80 ± 9.7	22.88 ± 8.8	119.93 ± 40.6	49.88 ± 11.6
Test value	X ² = 40.54	X ² = 55.28	X ² = 44.42	X ² = 51.36	X ² = 72.88	X ² = 140.30	X ² = 102.81
p value	0.095	0.003	0.044	0.006	< 0.0001	0.001	< 0.001
Is your baby the gender you expect							
Yes	26.95 ± 7.5	25.03 ± 7.0	26.91 ± 7.1	27.30 ± 7.5	25.77 ± 6.9	131.94 ± 32.7	57.20 ± 14.2
No	25.82 ± 9.0	22.93 ± 7.6	24.21 ± 8.3	25.18 ± 9.1	23.98 ± 8.5	122.15 ± 39.1	53.48 ± 13.2
Test value	t = .998	t = 2.048	t = 2.560	t = 1.879	t = 1.715	t = 2.007	t = 1.939
p value	0.319	0.041	0.011	0.061	0.087	0.046	0.055
Education (year)							
1-8	23.82 ± 8.3	22.45 ± 7.8	23.83 ± 8.4	24.06 ± 9.3	23.08 ± 7.7	117.26 ± 38.0	55.76 ± 12.2
9-17	27.80 ± 7.5	25.51 ± 6.8	27.32 ± 6.8	28.02 ± 7.0	26.52 ± 7.0	135.17 ± 32.0	56.97 ± 15.1
18-27	31.05 ± 4.0	26.38 ± 5.0	29.33 ± 2.5	29.66 ± 2.8	26.22 ± 5.4	142.66 ± 14.2	53.61 ± 12.6
Test value	F = 11.241	F = 6.218	F = 8.569	F = 9.202	F = 6.985	F = 10.071	F = .583
p value	< 0.001	0.002	< 0.001	< 0.001	0.001	< 0.001	.559

and its ‘empathy’ and ‘coaching others’ emotions’ sub-scales ($p > 0.05$). Table 3 indicates the relationship between means of scores obtained by pregnant women from the EISES and PAI and pregnant women’s socio-demographic variables.

It was found that there was no statistically significant correlation between means of scores obtained by pregnant women from the EISES and PAI ($p < 0.05$). It was only discerned that there was a weak statistically significant negative association between pregnant women’s skills in managing their own emotions and their stress levels ($r = -0.127, p = 0.033$) (Table 4).

DISCUSSION

This research analyzed the relationship between emotional intelligence and prenatal attachment levels of pregnant women with healthy and high-risk pregnancies.

The maternal age below 18 years or above 35 years is accepted as a risk factor for the pregnancy [2]. Upon the review of participant pregnant women in terms of maternal age, it is an anticipated outcome that women with high-risk pregnancy would be older than women with healthy pregnancy. In a similar vein, it is likely that women with high-risk pregnancy who have higher mean age have higher gravida than women with healthy pregnancy and this difference is statistically significant. In view of the difference in mean ages of women with healthy and high-risk pregnancies (4.01 ± 0.63 years), pregnant women’s socio-demographic characteristics were compared on the basis of data ob-

tained from Turkiye Demographic and Health Survey (Turkiye DHS) 2013 and Turkiye DHS 2018. The number of pregnant women with high school education and education above high school went up in Turkiye DHS 2018 as compared to DHS 2013 whilst there was no increase in the number of pregnant women with primary and secondary school education. Even if the education level of pregnant women went up, the level of participation in labor force and income level were almost analogous both in Turkiye DHS 2013 and Turkiye DHS 2018 [15, 16]. The findings obtained alongside this current research are in parallel to Turkiye DHS report.

Upon the comparison of means of scores obtained under this current research from the overall EISES and its sub-scales to those obtained under the research by Buko and Özkan [1], it was found that means of scores obtained under this current research were higher except for ‘self-motivation’ sub-scale. However, it was ascertained that means of scores obtained under this current research from the overall EISES and its sub-scales were lower than those obtained under the research by Çapık *et al.* [17]. It was determined that the results of this research were similar to the emotional intelligence scores of Ozer's study [11]. It is known that there are studies suggesting that women have higher levels of emotional intelligence [18]. Also in this current research, it was identified that pregnant women had higher levels of emotional intelligence, and emotional intelligence levels of women with healthy and high-risk pregnancies were close to each other.

Even if, in previous research, there is no clear evidence suggesting that women with high-risk preg-

Table 4. Correlation of emotional intelligence scale with prenatal attachment inventory and stress level

	Emotional awareness	Managing one’s emotions	Self-motivation	Empathy	Coaching others’ emotions	Total emotional intelligence
Prenatal attachment	-0.085 $p = 0.157$	-0.063 $p = 0.289$	-0.068 $p = 0.258$	-0.055 $p = 0.357$	0.003 $p = 0.966$	-0.060 $p = 0.318$
Stress level. VAS	-0.072 $p = 0.227$	-0.127 $p = 0.033$	-0.039 $p = 0.519$	-0.081 $p = 0.173$	-0.090 $p = 0.134$	- 0.090 $p = 0.133$

VAS: Visual Analog Scale

nancy had lower prenatal attachment levels than those with healthy pregnancy, there are studies alleging that women with high-risk pregnancy had lower prenatal attachment levels [19,20]. In this current research, the prenatal attachment of women with healthy and high-risk pregnancies was found to be similar and at medium levels. Likewise, in the relevant literature, pregnant women were in general reported to have 'medium-level' prenatal attachment [10, 19-21]. As per Lazarus and Folkman's understanding [22], a prospective mother who is faced with a new situation or change suffers stress. Additionally, pregnancy complications can pave the way for increases in the perceived stress and negative emotional symptoms [22, 23]. Alongside the current research, it was identified that women with high-risk pregnancy had higher levels of perceived stress and this difference was statistically significant whereas there was no statistically significant difference in healthy pregnant women's levels of success in coping with stress. Emotional intelligence enables individuals to get to know and notice their own emotions, cope with stress more successfully and adapt to changing conditions [4, 23]. As per findings obtained within the context of this research, it is thought that women with healthy and high-risk pregnancies get psychosocially well-adapted to such a major transformation as pregnancy by virtue of having high-level emotional intelligence.

Emotional intelligence and prenatal attachment are affected by several variables such as age, socio-economic level, cultural difference, and education level, academic achievement and job performance [10, 18, 19, 23, 24]. Research results were reinforced by the fact that independent variables were homogeneously distributed across groups in the current research. Emotional intelligence is a type of intelligence which can be unearthed and developed by the person [4]. According to this current research, there was a statistically significant difference in the mean of scores obtained by pregnant women only from 'self-motivation' sub-scale, and in this respect, pregnant women aged 31-45 years had higher mean of scores than other age groups. This result explains the similarity in prenatal attachment levels of women with age-related high-risk pregnancy and women with healthy pregnancy. That is because of the fact that a woman who motivates herself to have a healthful baby and healthy pregnancy period does not get dissociated from her

own psychological well-being without giving up and losing courage even when pregnancy period does not progress well. Being emotionally intelligent is that the pregnant woman places her attention around an emotion by boosting her self-motivation so that she can make better decisions on her own health issues and cope with problems more successfully [1, 4]. In the relevant literature, there are researches asserting that emotional intelligence is enhanced along with the increase in age and the level of formal education [23, 24, 27]. The result of this current research is in support of the relevant literature. In this current research, it was ascertained that there was no statistically significant association between education level and prenatal attachment level of pregnant women. In the relevant literature, there are studies demonstrating that there was an inverse or no relationship between education level and prenatal attachment level [19, 20, 24, 28-31]. Watson and Clark [30] characterize emotions as organism's needs, aims and its adaptive responses which are addressed to incidents and essential to its survival and adaptation to the environment. Outer expression of emotions is closely related to the psychological well-being [30]. In the conceptual framework of this current research, it can be asserted that the prenatal attachment is the emotional response with which the pregnancy gets aligned. Whether the woman voluntarily got pregnant and whether the baby had the sex which the pregnant woman wished were found to be positively associated with whether pregnant woman had stronger ties with her baby, whether she adopted more motivating emotions and whether she established positive relations. In the relevant literature, there was no previous research to be compared to these findings of the current research. However, these results are in support of the conceptual framework of the emotional intelligence and prenatal attachment.

Along side the research, it was found that there was no statistically significant correlation between means of scores obtained by pregnant women from the EISES and its sub-scales and the PAI. However, the research by Buko and Özcan [1] which was akin to this current research in terms of its design showed that there was a statistically significant positive relationship between prenatal attachment and emotional intelligence. It is thought that this difference is likely to be related to differences in participant pregnant women's socio-demographic characteristics and cultural con-

structs and properties of cities inhabited by pregnant women. The conduct of this research in Istanbul which is the largest metropolis of Türkiye endowed the pregnant women with several advantages such as access to education and health services vis-à-vis pregnant women living in Anatolia. Another important factor is that pregnant women who participated in this current research had higher levels of emotional intelligence than those participating in the research performed by Buko and Özcan [1].

Limitations

As this research was performed in a particular hospital in a Turkish city, its results cannot be generalized to the entire population. Therefore, for the purpose of explaining the relationship between emotional intelligence and prenatal attachment, it is necessary to undertake research to be carried out on larger samples.

CONCLUSION

At the end of the research, it was ascertained that there was no statistically significant difference in prenatal attachment levels of women with healthy and high-risk pregnancies and prenatal attachment level had no statistically significant relationship with emotional intelligence level. Moreover, it was identified that pregnant women had high levels of emotional intelligence and having high-level emotional intelligence was a crucial factor for coping with stress. Furthermore, it was found that emotional intelligence level could be affected by socio-demographic variables such as age and education level in years. In this conjunction, it is recommended that studies in which concepts found to be associated as per this current study would be further examined and the extent of effective factors would be broadened should be performed on larger samples.

Authors' Contribution

Study Conception: MMK, NKY, ÜO; Study Design: MMK, NKY, ÜO; Supervision: MMK, NKY, ÜO; Funding: MMK, NKY, ÜO; Materials: NKY, MMK, ZE; Data Collection and/or Processing: MMK, ZE; Statistical Analysis and/or Data Interpretation: NKY; Literature Review: NKY, MMK; Manuscript Preparation: NKY, MMK and Critical Review: ÜO.

Conflict of interest

The authors disclosed no conflict of interest during the preparation or publication of this manuscript.

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