The relationship between romantic and prenatal maternal attachment: The moderating role of social support

Abstract

The aim of this study was to examine the relationships between three types of maternal attachment bonds: anxious romantic, avoidant romantic, and prenatal. The moderating role of perceived social support is also analyzed. Ninety-one pregnant women in or near their thirtieth week of gestation (M = 29.59; SD = 4.57) were recruited, all of whom completed a series of questionnaires to assess the quality of their romantic and prenatal attachment bonds and their levels of perceived social support. The results reveal that both anxious and avoidant romantic attachments were significantly associated with low levels of maternal prenatal attachment. Moreover, the level of social support perceived during pregnancy moderated the relationship between anxious and prenatal attachments but had no effect on avoidant romantic and prenatal attachments. Our discussion of these findings consider the emotional and behavioral characteristics of various forms of insecure romantic attachments. Overall, the data highlight the relevance of the quality of intimate close relationships on maternity experiences and women's caregiving abilities.

Keywords: romantic attachment; anxious attachment; avoidant attachment; prenatal attachment; social support

Introduction

The quality of attachments that children develop with specific persons who provide care for them immediately after birth significantly influences their subsequent psychological development. These early relationships allow children to develop internal working models (IWMs) and a set of expectations and beliefs about self and others. Consequently, this affects their relationships between self and others (Bartholomew, 1990) that serve over time as a model for subsequent intimate relationships that the children will establish with others during all phases of development and through adulthood.

Despite the great significance of this first attachment and its influence on the entire life of a child, the affective bond between a pregnant mother and her baby begins to develop before birth (Brandon, Pitts, Denton, Stringer, & Evans, 2009) as she formulates an imaginary connection with her future child. This bond can be described as a unique emotional tie that develops during pregnancy between either the mother or father and the unborn child (Condon & Corkindale, 1997) and is generally called prenatal attachment. The central core of this bond is an emotional state characterized by the maternal tendency to know the unborn, to be together, to circumvent any potential separation or loss, and to protect and respond adequately to the needs of the future child (Condon, 1993). However, an analysis of recent literature has shown that the use of the term “prenatal attachment” can be misinterpreted because the affective bond a mother develops to her unborn child is significantly different than the maternal-child attachment bond after birth. While an attachment bond refers to the child's need to receive protection and safety from caregivers (Redshaw & Martin, 2013; Walsh, 2010) and also relates to the attachment system that seeks care from someone who can provide it (Bowlby, 1969), the construct of prenatal

attachment is attributable to the caregiving system and reciprocal to the attachment system (Redshaw & Martin, 2013; Walsh, 2010). The caregiving system refers to the tendency to provide protection, comfort, and care for another individual (George & Solomon, 2008; Solomon & George, 1996). Despite the accuracy of this clarification, the term "prenatal attachment" is commonly used in literature to refer to the emotional bond of a parent toward the unborn child.

In this regard, it has been frequently demonstrated that a strong prenatal attachment has several advantages for both the mother and her child and plays an important role in their pre- and post-natal well-being. In particular, the quality of this bond benefits the transition to motherhood (Eswi & Khalil, 2012) and maternal sensitivity in future interactions with the baby (Maas, de Cock, Vreeswijk, Vingerhoets, & van Bakel, 2016). It also improves the woman's ability to assume a responsive maternal role after childbirth and affects her subsequent behavioral attachment pattern (Tani, Castagna, & Ponti, 2018; Walsh, Hepper, & Marshall, 2014). In fact, it is closely and positively associated with maternal attachment to the child after birth (Maas et al., 2016; Rossen et al., 2017).

Given the aforementioned considerations, it is not surprising that most recent literature has focused on the identification of predictive factors that may promote maternal prenatal attachment (for a review, see Cataudella, Lampis, Busonera, Marino & Zavattini, 2016). Within the theoretical framework of attachment theory, caregiving behaviors with maximum development during pregnancy (George & Solomon, 2008) are strictly linked to the quality of maternal attachment toward the partner (Kunce & Shaver, 1994; Selcuk, Zayas, & Hazan, 2010). As Solomon and George (1996) stated, "the caregiving behavioral system is a mature transformation of the attachment system" (p. 213). Therefore, maternal

prenatal attachment—reflecting the quality of the caregiving system—is affected by the quality of romantic attachment developed by the mother, and there are significant differences between secure and insecure attachments (Mikulincer & Florian, 1999). In fact, given that women who are securely attached to their partners activate their attachment and caregiving systems, it is presumable that this caregiving behavioral system affects the imaginary connection with the unborn child. Therefore, women who are securely attached to their partners during pregnancy tend to be more prone to developing a good prenatal attachment with the fetus, and this is expressed by the tendency to protect and respond adequately to all needs. Similarly, Mikulincer and Florian (1999) found that women with secure romantic attachments develop stronger bonds with their children during the first trimester of pregnancy compared to anxious-ambivalent and avoidant women.

It is broadly acknowledged that pregnancy is not necessarily a joyful period; in fact, it is more apt to be stressful for expectant mothers. The quality of a couple's relationship may undergo temporary changes and the marital relationship may be restructured, thereby augmenting their fears and anxieties. Moreover, physical and emotional changes may affect maternal psychological well-being, thus compounding perceptions of vulnerability during pregnancy. This perception of frailty may activate the expectant mother's attachment system and interfere with the development of the caregiving system. Women who are focused on their own vulnerability may have insufficient mental resources to provide care to others or to respond sensitively to someone's needs (Bowlby, 1969). Conversely, women with avoidant attachment toward partners—as revealed by their discomfort with closeness and their demands for independence—may tend to retract during pregnancy (with reduced prenatal attachment and caregiving systems) rather than engage with someone whose needs

have been strongly expressed. On the other hand, women with anxious romantic attachments may be focused on their worries and unfulfilled needs for attachment. This this may constitute an obstacle to proper responses and attention to the needs of others, thereby thwarting the development of an imaginary connection with the fetus and a reduced prenatal attachment (Mikulincer & Shaver, 2012). Despite this, studies on the relationship between insecure romantic attachments and prenatal attachments have yielded inconsistent results. While some authors have found that women with avoidant romantic attachments show less affection to their fetuses in the third trimester (Mikulincer & Florian, 1999), others found that those with anxious romantic attachments have reduced emotional bonds with their unborn child (Mazzeschi, Pazzagli, Radi, Raspa, & Buratta, 2015). Finally, Walsh and colleagues (2014) found no significant direct association between attachment to a person's partner and prenatal attachment.

Considering these heterogeneous data, one may surmise that there are additional variables that can influence the relationship between romantic attachment to the partner and prenatal attachment to the unborn child. For example, Walsh and colleagues (2014) reported that the relationship between avoidant romantic attachment and prenatal attachment is mediated by the level of caregiving responsiveness to the partner, such as the ability to supply the partner with physical intimacy and sensitivity to needs. Despite the relevance of these results, in our opinion, there may be other variables that can further explain the association between romantic and prenatal attachment. The literature has consistently shown the significant role played by the level of social support as a predictor of the quality of emotional maternal bonds with unborn children. In particular, many studies have emphasized the impact of supportive social relationships during pregnancy

that are strongly linked to the level of prenatal attachment and the ability of women to perform care after childbirth, thereby favoring the development of maternal sensitivity (Tani, Catagna, & Ponti, 2017). Moreover, Hopkins and colleagues (2018) found that the level of social support is not only linked directly with the level of prenatal attachment but also acts as a moderator. In particular, the authors found that high levels of social support as perceived by women tend to moderate the relationship between maternal anxiety and prenatal attachment. Starting with these considerations, we were interested in analyzing whether the level of maternal social support perceived during pregnancy could also be a moderating variable in the relationship between insecure romantic attachments to partners and prenatal attachments to unborn children.

The present study

The present study aimed to contribute to the literature by analyzing the relationship between the two main dimensions of adult romantic attachment (anxiety and avoidance) and maternal prenatal attachment by exploring the moderating role of the mother's perceived social support during gestation. In particular, the main focus of this study was to verify whether anxious romantic attachments and avoidance romantic attachments are significantly linked to the level of maternal prenatal attachment. The second aim was to explore the role played by the level of maternal perceived social support in the relationship between the two dimensions of romantic attachment and the quality of prenatal attachment.

We hypothesized that both forms of insecure attachment could be negatively linked to the level of prenatal attachment based on the reduced emotional availability that characterizes these attachment bonds. However, in line with other studies that have shown

the relevance of the social support level as a variable that affects the quality of maternal prenatal attachment both directly and indirectly, we posited that a high level of perceived social support could moderate the relationship between insecure romantic and prenatal attachments.

Materials and methods

Procedure

This study was conducted in two second-level units of two maternity wards in Tuscany, Italy. The ethical committee of the local health authorities approved the study (no. 12749/2018). The survey was conducted in accordance with the guidelines for ethical treatment of human participants of the Italian Psychological Association. All women were recruited while attending a delivery preparation course organized for pregnant women. Only women who met the following inclusion criteria were invited to participate: native Italian women, over 18 years of age, currently pregnant at over 26 weeks of gestation, and they must have been in a stable romantic relationship for at least the past 18 months. Specifically, two trained psychologists visited the first meeting of the delivery preparation course where they explained the purpose of the study. It was also made clear that the women could withdraw from participation at any time, participation was voluntary, and no monetary considerations were offered for participation. Before data collection began, all women signed a written informed-consent form. Ninety-six percent of the women agreed to participate. Data collection was conducted in small groups (3–5 women) in a room made available in the hospital.

Participants

A total of 91 pregnant women aged 20–40 years (M = 29.59; SD = 4.57) were recruited for the present study. Overall, the participants as a group had a high educational level with more than 47% holding a high school diploma and 44% holding a university degree or higher. For employment, 61.5% of the women currently had a job, 8.8% were students, 13.2% were housewives, and 16.5% were unemployed. This was the first pregnancy for 61.5% of the women. The average length of their romantic relationships was slightly over 7 years (Months = 87.34; SD = 49.97), and 100% of the women were either cohabitant with their partner or married.

Measures

A sociodemographic questionnaire was administered to obtain information regarding age, educational level, work status, number of children, length of relationship, and relationship status.

The revised version of the Experiences in Close Relationships scale (ECR-R; Busonera, Martini, Zavattini, & Santona, 2014) adapted to Italian was used to measure the quality of the attachment relationship to a romantic partner. The ECR-R is a self-report scale consisting of 36 items rated on 7-point Likert scales from 1 (strongly disagree) to 7 (strongly agree) to assess two main dimensions of romantic attachment: *Anxiety* (item example: "I worry about being abandoned") and *Avoidance* (item example: "I prefer not to show my partner how I really feel"). For the current study, the Cronbach' s alpha coefficients were .89 for anxiety and .90 for avoidance, respectively.

The Italian version of the Prenatal Attachment Inventory (PAI; Della Vedova, Dabrassi, & Imbasciati, 2008) was used to evaluate women's prenatal attachment to unborn children. The PAI is a self-report measure comprising 21 items rated on 4-point Likert scales from 1 (almost never) to 4 (almost always). Item Example: "I wonder what the baby looks like now." For the present sample, Cronbach's alpha was .80.

Finally, the validated Italian version of the Maternal Social Support Scale (MSSS; Dabrassi, Imbasciati, & Della Vedova, 2009) was used to estimate social support as perceived by the women. The MSSS is a self-report questionnaire comprising 6 items to assess the amount of care and love a woman perceives from her family, partner, and friends. Items are rated on a 5-point frequency scale from 1 (never) to 5 (often). For the current sample, Cronbach's alpha was .74.

Data analysis

Descriptive statistics and pairwise correlation coefficients were calculated for all variables. The normality of each variable was examined before performing subsequent analyses using accepted ranges of ± 2 for skewness and ± 7 for kurtosis (Curran, West, & Finch, 1996). In order to test if primiparous and multiparous women differed in their levels of romantic attachment, prenatal attachment, and perceived social support, three t-tests were conducted. Finally, to examine the moderating role of perceived social support on the relationship between anxious or avoidant romantic attachment and maternal prenatal attachment, two hierarchical regression analyses were conducted separately for the two forms of attachment based on a procedure suggested by Aiken and West (1991). In particular, the two dimensions of romantic attachment and the level of perceived social

support were centered at the sample mean for both main effect and interaction terms. The independent variables were included in the regression analysis in three consecutive steps. For the first hierarchical regression, anxious romantic attachments were entered in Step 1. In Step 2, the moderating variable relative to perceived social support was entered. In Step 3, the two-way interaction between anxious romantic attachment × perceived social support was entered. In the second hierarchical regression, the avoidant attachment was entered in Step 1. In Step 2, the moderating variable relative to perceived social support was entered. In Step 3, the two-way interaction between avoidant romantic attachment × perceived social support was entered. For both hierarchical regressions, as a dependent variable, the level of maternal prenatal attachment was included. Significant interaction between the predictor (anxious romantic attachment and/or avoidant romantic attachment) and the moderating variable was graphically represented by the moderating variable, and the main effect of attachment bonds (i.e., perceived maternal social support and anxious and avoidant attachment) was represented as low, medium, or high. In particular, the three levels of low, medium, and high were computed using the mean and standard deviation as follows: 1 standard deviation above the mean as the high mean; 1 standard deviation below the mean as the low mean; and values ranging between 1 standard deviation below the mean and 1 standard deviation above the mean as medium mean (Aiken & West, 1991). Moreover, to analyze the significance of each slope, simple slope analyses were conducted using post-hoc regressions. For these analyses, the moderator variable was standardized and three groups were created: values of moderator standardized variable < -1 were considered low; values of moderator standardized variable > 1 were considered high; and values of moderator standardized variable ranging from -1 to 1 were considered medium.

Results

No significant differences emerged between primiparous and multiparous women with respect to anxious romantic attachment ($t(89) = -.422$; $p = .674$), avoidant romantic attachment ($t(89) = -1.585$; $p = .116$), prenatal attachment ($t(89) = -.891$; $p = .375$), and perceived social support ($t(89) = .607$; $p = .545$).

Table 1 reports all descriptive statistics and pairwise correlation coefficients of anxious and avoidant romantic attachments, prenatal attachment, and perceived social support.

INSERT TABLE 1 ABOUT HERE

Both anxious and avoidant romantic attachments were significantly and negatively correlated with the level of prenatal attachment and social support. Higher levels of insecure attachment to partners were linked to lower levels of prenatal attachment and social support. Moreover, a higher level of prenatal attachment was significantly and positively related to a higher level of social support.

Shown in Table 2 are the results of the first hierarchical regression analysis regarding the moderating role of the level of perceived social support on the relationship between anxious romantic attachment and prenatal attachment.

INSERT TABLE 2 ABOUT HERE

In Step 1, anxious romantic attachments accounted for 16% of the variance in prenatal attachment to the unborn child, $F(1, 89) = 18.53$, $p = .000$. In Step 2, the moderating variable of the level of perceived social support explained 28% of additional variance, $F(1, 88) = 44.09$, $p = .000$. In Step 3, the interaction terms explained .05% of additional variance, $F(1, 87) = 8.51$, $p = .004$. Higher levels of anxious romantic attachment were more strongly associated with lower levels of prenatal attachment at lower levels of perceived social support. This interaction is shown in Figure 1.

INSERT FIGURE 1 ABOUT HERE

Post-hoc analyses showed that the relationship between anxious romantic attachment and prenatal attachment was significant when perceived social support was low ($\beta = -.48$, $p = .025$). On the contrary, the relationships were non-significant when perceived social support was medium ($\beta = -.82$, $p = .573$) and high ($\beta = -.23$, $p = .343$).

The results of the second hierarchical regression analysis regarding the moderating role of the level of perceived social support on the relationship between avoidant romantic attachment and prenatal attachment are shown in Table 3.

INSERT TABLE 3 ABOUT HERE

In Step 1, avoidant romantic attachments accounted for 25% of the variance in prenatal attachment to the unborn child, $F(1, 89) = 30.585$, $p = .000$. In Step 2, the moderating variable of the level of perceived social support explained 21% of additional

variance, $F(1, 88) = 35.464$, $p = .000$. In Step 3, the interaction terms explained a non-significant .02% of additional variance, $F(1, 87) = 3.831$, $p = .054$. In other words, the interaction between avoidant romantic attachment and perceived social support was non-significant.

Discussion

The main purpose of this study was to analyze the relationship between the two main dimensions of adult romantic attachment (anxiety and avoidance) and maternal emotional bonds toward the fetus, commonly referred to as "prenatal attachment" in the literature. We also explored the moderating role of the mother's perceived social support during gestation on these relationships. We posited that a maternal insecure attachment to one's partner could represent a significant risk to the development of a good maternal prenatal attachment. However, we also hypothesized that the degree of social support perceived during pregnancy could play a significant role as a moderating variable in the relationship between the quality of romantic and prenatal attachment.

Our results partially confirmed our hypotheses. In particular, both forms of insecure romantic attachment were strictly associated with a lower level of maternal prenatal attachment. Women who reported insecure anxious and avoidant attachment bonds with their partners also reported a lower proportion of positive and warm feelings toward their unborn children. Therefore, in line with previous literature, insecure romantic attachment was found to be strictly linked to the quality of a woman's affectionate emotional bond to her unborn child during pregnancy (Mazzeschi et al., 2015; Mikulincer & Florian, 1999). Anxious romantic attachment reflects the tendency to hyperactivate the attachment system

(Fraley & Shaver, 2000; Mikulincer & Shaver, 2003), and highly anxious women feel a general distrust toward their significant others (Wallace & Vaux, 1993). These feelings could exacerbate their insecurity in the face of the arrival of a new child in the family that could be perceived as an interfering factor in their romantic relationship. In contrast, avoidant romantic attachment reflects the tendency to deactivate the attachment system (Fraley & Shaver, 2000; Mikulincer & Shaver, 2003). Highly avoidant women have emotional difficulties and struggle to provide support to others. Although the underlying operating modes differ, both of these attachment bonds interfere negatively with the ability to provide adequate protection and care. Therefore, parenting is more difficult for women with insecure attachments. Given that most recent studies have considered prenatal attachment as being indicative of the caregiving system (Walsh et al., 2014), a less than optimal maternal caregiving system—such as those of insecure individuals—can be negatively associated with the quality of maternal prenatal attachment.

Moreover, our findings reveal that the relationship between romantic and prenatal attachment could be moderated by the level of social support women perceive during pregnancy. However, contrary to our hypotheses, the moderating role of social support was significant only for anxious romantic attachment but not for avoidant romantic attachment. These results can be explained by considering different emotional and cognitive coping strategies; in particular, different uses of social support and the expectations about support that can be received, if necessary (Wallace & Vaux, 1993), of avoidant and anxious attached people. In fact, avoidant women have difficulties in forming intimate and close relationships. They fear intimacy and consequently maintain behavioral and emotional distance from their significant others. On the contrary, anxious women have doubts about

their efficacy. They strive to reduce the distance from their partners and require constant support (Mikulincer & Florian, 1999). Therefore, despite the fact that insecure attached individuals have more difficulties than secure ones in the use of social support from significant others, it may be argued that anxious women (but not avoidant ones) could use that support more effectively. In fact, avoidant women tend to become more self-reliant during pregnancy, whereas anxious women often rely on others and seek their support during this critical period (Mikulincer & Florian, 1999). However, when very anxious women perceive that they are receiving an adequate level of social support during a critical life period like gestation, the activation threshold of the attachment system increases, thereby affecting the nature of their perceptions and behaviors.

Our data show that anxious romantic attachments are strictly linked to lower levels of prenatal attachment at lower levels of perceived social support. However, medium and high levels of perceived social support can mitigate the relationship between anxious romantic and prenatal attachments. In other words, having affectionate and supportive relationships with significant others—including parents, siblings, and friends—can help anxious women reduce their insecurity and foster emotional bonds with their unborn children. In other words, it is possible that a high level of social support may satisfy strong desires for acceptance and approval that typify anxious women, thus helping them be less intrusive or overly involved in compulsive caregiving (Kunce & Shaver, 1994).

On the contrary, avoidant women increase the distance between themselves and others in stress situations. They either do not perceive high levels of social support or they may have more difficulty managing the emotions that the perceived support might cause.

They react by distancing themselves from these emotions. By doing so, the protective power of social support in highly avoidant women may lose its effectiveness.

Despite the relevance of these results, this study has several limitations. First, our examination of the role of social support was limited to close intimate relationships, such as those with parents, partners, or friends. In our opinion, it would be very interesting to explore the role of social support available from other types of social relationships for reducing maternal emotional difficulties and improving the ability to assume an adequate maternal role, for example, relationships developed by women during the perinatal period with professionals (e.g., obstetricians, midwives, and medical staff). Finally, a new frontier of research could explore the role of fathers and evaluate the moderating role of paternal romantic attachments on the relationship between maternal romantic and prenatal attachments.

Despite these limitations, this information can be useful for clinical and nursing practices to better understand and identify when intervention may be needed to bolster maternal social support and, in turn, improve a mother's caregiving skills. This study expands knowledge about the significant role that the quality of intimate close relationships has on the entire maternity experience. In fact, this should be considered a complex human process during which strictly interconnected social, emotional, and physical aspects affect the way in which women assume the maternal role and influence the outcomes of maternal and fetal health and well-being.

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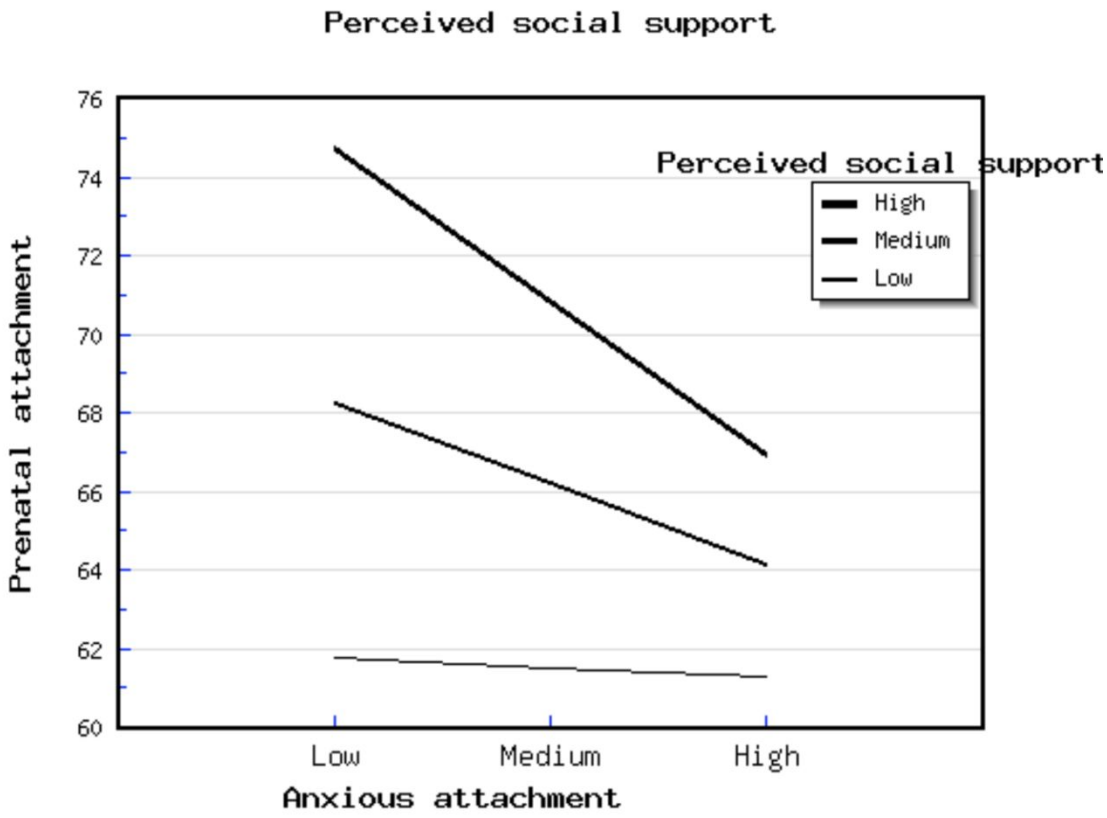

Figure 1. Interaction between maternal anxious romantic and perceived social support in the prediction of the quality of prenatal attachment.

Table 1. Descriptive statistics and bivariate correlations for all variables

	Range	M	SD	Skewness	Kurtosis	1	2	3	4
1. ECR_anxiety		53.42	20.03	.577	.193	-	.38**	-.41**	-.34**
2. ECR_Avoidance		34.05	16.46	1.84	4.12		-	-.51**	-.43**
3. PAI		66.78	7.41	-.277	.267			-	.63**
4. MSSS		21.73	2.74	-.056	1.33				-

Note. ** $p < .01$; ECR_anxiety: *Anxious romantic attachment*; ECR_Avoidance: *Avoidant romantic attachment*; PAI: *Prenatal Attachment Inventory;* MSSS: *Maternal Social Support*

Table 2. Hierarchical regression analysis results for anxious romantic attachment and social support as predictors of prenatal attachment

	ß	t	p	95% CI	
Step 1					
ECR_Anxiety	-.415	-4.304	.000	-.224	-.083
Step 2					
ECR_Anxiety	-.225	-2.675	.009	-.145	-.021
MSSS	.559	6.640	.000	1.056	1.958
Step 3					
ECR_anxiety	-.278	-3.355	.001	-.164	-.042
MSSS	.629	7.463	.000	1.245	2.149
ECR_anxiety X MSSS	-.244	-2.918	.004	-.055	-.010

Note. ECR_anxiety: *Anxious romantic attachment*; MSSS: *Maternal Social Support*

Table 3. Hierarchical regression analysis results for avoidant romantic attachment and social support as predictors of prenatal attachment

	ß	t	p	95% CI	
Step 1					
ECR_Avoidance	-.506	-5.530	.000	-.310	-.146
Step 2					
ECR_Avoidance	-.284	-3.304	.001	-.205	-.051
MSSS	.513	5.955	.000	.921	1.844
Step 3					
ECR_Avoidance	-.308	-3.599	.001	-.215	-.062
MSSS	.515	6.081	.000	.936	1.844
ECR_avoidance X MSSS	-.152	-1.957	.054	-.049	.000

Note. ECR_avoidance: *Avoidant romantic attachment*; MSSS: *Maternal Social Support*