




***Pregnancy Adaptation and its Association with Attachment
Styles in Wanted and Unwanted Pregnancies***

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Abstract

Background: Physical and psychological problems and stressors sometimes impair the human adaptation and lead to maladaptive behaviors that may interfere with pregnancy acceptance and fetal communication. On the other hand, a parent's attachment style plays a role in the creation of child insecure attachment style and an irreplaceable context for emotional and social development. It continues until the adulthood and affects the individual ability in various contexts as a defective cycle.

Objectives: Therefore, the present study was designed and conducted to determine the rate of pregnancy adaptation and its association with maternal attachment styles in both wanted and unwanted pregnancies.

Methods: The study was a descriptive and comparative research on 178 pregnant women who visited health centers of Zanjan, Iran in 2017. The data collection tool included the demographic data checklist, Adult Attachment Scale (AAS) by Hazen & Shaver, and the prenatal self-evaluation questionnaire (PESQ) by Lederman for measuring the pregnancy adaptation, and it was completed by the self-report. Data were analyzed using chi-square, Mann-Whitney, independent t, Spearman, and linear regression tests via SPSS 16.

Results: The median (interquartile range (IQR)) of the total score of pregnancy adaptation in the wanted pregnancy group 118 (13.5) was lower than the unwanted pregnancy group 244 (33.5), indicating better adaptation in the wanted pregnancy group. Secure attachment style was significantly higher in the wanted pregnancy groups than the unwanted pregnancy group ($p < 0.001$). In the unwanted pregnancy group, there was an inverse relationship between secure attachment style and pregnancy self-assessment score ($r = -0.335$ and $p = 0.001$) (A more secure attachment style and lower self-evaluation score indicate higher pregnancy adaptation); and a positive relationship between avoidant attachment style and prenatal self-evaluation score ($r = 0.248$ and $p = 0.019$).

Conclusion: Since the increase in secure attachment style was associated with a decrease in prenatal self-evaluation score, or in other words, was associated with an increase in adaptation with pregnancy, education and counseling for improving secure attachment styles is suggested to reduce adverse consequences of unwanted pregnancy and improve the children's psychological health.

Keywords: *adaptation; attachment style; wanted pregnancy; unwanted pregnancy*

Introduction

According to global statistics, 44% of pregnancies are unwanted. More than half (55%) of unwanted pregnancies occur in developing countries. It is also estimated that 62 out of every 1,000

pregnancies in women aged 15-44 years are unwanted, and half of these unwanted pregnancies (56%) leads to abortion [1]. According to the Iran Integrate Monitoring Evaluation Survey (IMES), the unwanted pregnancies include pregnancies in

which the husband or wife or both are not satisfied with it, or they have no intention of another pregnancy, or have scheduled it for future, so that the current pregnancy is considered to be untimely [2]. Unwanted pregnancy is associated with physical problems, psychological reactions, and familial and social problems [3,4].

Adapting to different conditions is a characteristic of human mental health, so, humans are always trying to adapt themselves to their physical and psychological environment [5]. Adaptation refers to a set of behaviors through which a person accepts changes and develops skills to respond appropriately to existing stimuli and adapt to abnormal events and situations [5,6]. The adaptation and acceptance of pregnancy and communication with the fetus may be difficult in mothers with unwanted pregnancies [3,7]. Lack of adaptation and acceptance of pregnancy as well as the unexpected nature of unwanted pregnancies cause maternal anxiety and distress [4], inability to perform daily activities, reduced maternal role acceptance [7,8], and decreased maternal attachment to the fetus [9].

The attachment theory is an important case for explaining the adaptation to abnormal conditions [10]. According to John Bowlby's Attachment Theory, attachment is not only a children development theory, but also a theory of evolution at all stages of life, resulting in adult's attachment styles [11]. Parent's response to children's needs or in other words, the parent-child relationship is based on the parent attachment style and leads to the attachment style in children. Children's attachment style is an irreplaceable opportunity for emotional and social growth of children; so that, negative early experiences lead to psychological problems and aggression in children and adults [11-14]. Attachment style continues on the basis of emotions, expectations, active inner patterns, and beliefs in individuals until adulthood, affecting normal and abnormal personal and interpersonal relationships in adulthood [11]. Attachment style is an important factor in maternal exposure and adaptation to difficult and abnormal situations [15,16]. Moreover, it is the basis of how individuals deal with life issues and the ways of their attitude, actions, and reactions to issues and problems [17]. The mother's attachment style affects her behavior with her child, child's development and growth,

personality development, and subsequent attachment relationships [14,18]. Adult attachment research has confirmed that the attachment system is activated under stressful conditions; and individuals with different attachment styles seek to regulate emotions, feelings, and cope with abnormal situations by the ways that reflect their beliefs about themselves and others [19]. Attachment style is a variable that can modulate stress and adverse effects, and is a determinant of type of psychological adaptation or maladaptation [20] and is of great importance in predicting mental health [21].

Hazen and Shaver introduced secure, insecure ambivalent and insecure avoidant attachment styles [22]. Secure attachment is often a result of intimate and positive interactions [23]. Individuals with secure attachment styles adopt effective coping strategies in facing with life's stressful events and problems [22, 24]. They are very successful in interpersonal communication, social problem solving, coping with stress, and physical and mental health [23,24]. Individuals with insecure avoidant attachment styles have a negative attitude towards themselves and distrust towards others [24]. Difficulties in intimate and close relationships, lack of interest in social and romantic relationships, inability or unwillingness to share thoughts and feelings with others, and lack of empathy are other characteristics in these individuals [23]. In an insecure ambivalent attachment style, individuals are usually reluctant, uncertain, and jealous in their close relationships with others [22,23]. Attention seeking, negative self-evaluation, distress, and discomfort while ending a relationship and ongoing mental occupation of relationships with others are characteristics of ambivalent individuals [22, 23]. Maternal attachment style during pregnancy appears as secure, insecure avoidant or insecure ambivalent attachment style, formed on the basis of her attachment experiences from childhood and has a significant impact on her prenatal attachment and maternal behavior and feelings towards the fetus [14,25]. Studies have reported varying rates of abortion, violence, emotional problems [26], physical problems during pregnancy, and low birth weight [20] and psychological disorders during and after pregnancy in different attachment styles [27,28]. Despite scientific progress in improving the

physical problems of pregnancy, psychological problems have remained an important and unknown issue in the health of pregnant mothers [29]. Given the importance of pregnancy and its impact on the health of women and infants, and the fact that attention to psychological issues can affect the successful passing of this critical stage as well as the importance of this issue, which mothers always strive to adapt to changes in pregnancy [18], and as there is no research to identify psychological factors associated with adaptation to unwanted pregnancy, the present study aimed to determine the extent of pregnancy adaptation and its association with mothers' attachment styles in wanted and unwanted pregnancies in women who visited health centers of Zanjan in 2017.

Methods

The descriptive comparative study was conducted on 178 mothers with wanted or unwanted pregnancy who visited Zanjan Health Centers in 2017 for receiving the prenatal care. After registering the study at the Student Research Center of Zanjan University of Medical Sciences (Code of Ethics: ZUMS.REC.1396.241), the researcher visited the health centers for sampling by receiving a letter of recommendation from research deputy of university. Sampling was conducted using multi-stage sampling method. At first 18 health centers of Zanjan city were divided into three classes in terms of socioeconomic levels (according to provincial health network list), and then three centers were randomly selected from each class using the random number table; and convenience sampling was performed inside each cluster. Sampling in each cluster was proportional to their covered population. Based on the criterion of the US Center for Disease Control and prevention (CDC), all pregnant women who visited in the first trimester of pregnancy, were asked to think about just before their recent pregnancy and choose one of the following options for their decision to become pregnant: a) I was planning to get pregnant sooner, b) I was going to become pregnant later, c) I was planning to become pregnant at the same time, d) I was not planning to be pregnant at that time or at any time in the future. Individuals who chose option "c", were considered as unwanted pregnancy; and options "b" or "d" were considered as unwanted

pregnancy (as defined by the Iran Integrate Monitoring Evaluation Survey (IMES)). From mothers, who met the inclusion criteria, 89 individuals in each group were selected by the convenience sampling method. Inclusion criteria comprised gestational age less than 14 weeks (first trimester of pregnancy), consent to participate in the study, literacy, and residence in Zanjan. Exclusion criteria comprised a known mental illness in the spouse, substance abuse in mothers or their spouses, a history of midwifery, mental illness, and drug use (according to the electronic health record) in mothers, and non-completion of the questionnaire in a way that more than 20% of questions are left unanswered. Sample size was considered 89 per group, and a total of 178 patients were included in the study based on the results of a study by Teymourpour et al. indicating a correlation of 0.12 between secure attachment style and infertility adaptation [16] with 5% error level and 90% power.

Research tool included demographic information checklist, Adult Attachment Scale (AAS) by Hazen & Shaver, and Prenatal self-evaluation questionnaire (PESQ) to measure pregnancy adaptation. The AAS was developed using test materials by Hazen & Shaver (1987) and was normalized on student samples and the general population of Iran. The questionnaire consisted of 15 questions; and 5 questions were assigned to each of three attachment styles, secure, avoidant, and ambivalent. Scoring was on a five-point Likert scale, including never (score 1), rarely, sometimes, often, and almost always (score 5). The test subscales included secure, avoidant, and ambivalent attachment styles. The participants' minimum and maximum scores on each subscale were considered to be 5 and 25, respectively. A higher score in a subscale than other sub-scales indicated the individual's attachment style. Hazen & Shaver obtained the total test-retest reliability of the questionnaire equal to 0.81, Cronbach's alpha reliability of 0.78, and desired face and content validity; and reported very desirable construct validity. Cronbach's alpha coefficients of secure, avoidant, and ambivalent subscales in an Iranian student population varied from 0.5, 0.84, and 0.85, respectively, indicating good internal consistency of adult attachment scale [9]. The PESQ was used to assess maternal adaptation to pregnancy. The questionnaire consisted of 79

questions, each of which consisted of four options, always, sometimes, rarely, and never. Responses ranged from one to four points. The answer always received point 4; and never got point 1. All questionnaire items, except for questions 5, 9, 13, 16, 17, 27, 29, 30, 34, 36, 39, 41, 42, 43, 44, 45, 46, 51, 52, 54, 57, 58, 62, 63, 64, 65, 66, 67, 68, 69, 76, and 77, were scored reversely. In general, the scores ranged from 79 to 316. Lower scores indicated better maternal adaptation to pregnancy. The questionnaire included seven subscales namely pregnant woman's relationship with her husband (10 questions), pregnant woman's relationship with her mother (10 questions), fear of losing control and self-confidence (10 questions), predicting labor (10 questions), readiness for acceptance and identification of maternal role (15 questions), acceptance of pregnancy (14 questions), and concerns about self and child health during childbirth (10 questions). Reliability of the questionnaire was confirmed by internal consistency using Cronbach's alpha coefficient of $\alpha=0.87$. The content validity of the questionnaire was also confirmed in Iran (CVI=0.83, and CVR=0.67) [6,30].

Data analysis was performed using the whole data in SPSS 16. Sub-scales of each questionnaire and socio-economic level of participants were then determined. Finally, the research results were analyzed according to predetermined goals and appropriate statistical tests. In order to select the appropriate test, it was first necessary to determine whether the quantitative variables had a normal distribution. According to the parametric or non-parametric data, the research results were compared between the two groups of wanted and unwanted pregnancy. The Independent T-test and Mann-Whitney U test were used for variables with normal and abnormal distribution, respectively. Furthermore, the mean \pm standard deviation was reported for normal quantitative variables; and the median \pm interquartile range (IQR) for non-normal variables. Chi-square or Fisher's exact tests were used to compare the qualitative variables. Pearson correlation coefficient was used to determine the relationship

between normal quantitative variables; and Spearman's correlation coefficient was used for non-normal quantitative variables. Linear regression test was used to predict the effects of significant demographic variables between the two groups on attachment style and pregnancy adaptation. The significance of these tests was considered to be $P<0.05$.

Results

The mean age of women and their spouses was higher in the unwanted pregnancy group than the wanted pregnancy group. The frequency of employed and student women was higher in the unwanted pregnancy group than the wanted pregnancy group. Most of husbands of women in both wanted and unwanted pregnancy groups were self-employed.

Most husbands of women in the wanted pregnancy group had a high school diploma; and those in the unwanted pregnancy group had secondary and high school diplomas. The frequency of illiterate/ elementary school husbands was higher in the unwanted pregnancy group than the wanted pregnancy group. Frequency of participants with high socioeconomic status (first level) was 16.9% in the wanted pregnancy group, and 12.4% in the unwanted pregnancy group. There were more individuals with low socioeconomic status (levels 4 and 5) in the unwanted pregnancy group than the wanted pregnancy group. There was no significant difference between two groups in terms of socio-economic levels.

68.5% of mothers in the wanted pregnancy group and 57.3% unwanted pregnancy group had no history of delivery. There was a statistical significant difference between two groups in terms of pregnancy frequency ($P=0.004$) and delivery frequency ($P<0.001$). Furthermore, there was a statistically significant difference between two groups in terms of number of children ($p<0.001$). 21.3% of individuals in the wanted pregnancy group and 68.5% in the unwanted pregnancy group used a contraceptive method (Table 1).

Table 1: Demographic and midwifery information of participants in both groups

Group Variable	Wanted pregnancy		Unwanted pregnancy		P value	
	Mean±SD		Mean±SD			
Age (year) ***	26.66±5.7		29.19±6.5		0.007	
Spouse's age (year) **	30(8)		31(10)		0.041	
Job *	Housewife	73	82.0	66	74.2	0.132
	Employed	15	16.9	17	19.1	
	Student	1	1.1	6	6.7	
Spouse's job *	Employee	27	30.3	31	34.8	0.217
	Worker	15	16.9	22	24.7	
	Self-employed	47	52.8	36	40.4	
Pregnant woman's education *	Secondary/high school	39	43.8	42	47.2	0.557
	Diploma	27	30.3	30	33.7	
	Academic	23	25.8	17	19.1	
Spouse's education *	Illiterate/elementary school	11	12.4	21	23.6	0.034
	Secondary/high school	15	16.9	24	27.0	
	Diploma	32	36.0	21	23.6	
	Academic	31	34.8	23	25.8	
Socio-economic status *	Level 1	15	16.9	11	12.4	0.356
	Level 2	32	36.0	29	32.6	
	Level 3	33	37.1	32	36.0	
	Level 4/ 5	9	10.1	17	19.1	
Frequency of pregnancy *	1	38	42.7	21	23.6	0.004
	2	34	38.2	28	31.5	
	3	9	10.1	20	22.5	
	≥4	8	9.0	20	22.4	
History of abortion (Yes) *	18	20.2	10	11.2	0.07	
Contraception (yes) *	19	21.3	61	68.5	<0.001	
Type of contraception *	No method	70	78.7	28	31.5	<0.001
	Condom	7	7.9	19	21.3	
	Discontinuous	5	5.6	29	32.6	
	LD pill	4	4.5	7	7.9	
	Other methods	3	3.4	6	6.7	

Percentage is reported for qualitative variables that are marked by* (Chi-square test)

Median (IQR) is reported for non-normal quantitative variables that are marked by** (Mann-Whitney U test)

Mean±SD is reported for normal quantitative variables that are marked by*** (Independent T test)

Given that there was a significant difference between two groups in terms of age, spouse's age, spouse's education, pregnancy frequency, pregnancy contraception, and type of contraception, the regression test was used to

predict the effects of these variables on pregnancy adaptation and attachment style. The results indicated that only spouse's education had an effect on the pregnancy adaptation ($P=0.037$ and $\beta=-2.23$) (Table 2).

Table 2: Predicting the pregnancy adaptation and attachment style in terms of some demographic variables using linear regression

Constant Variables	Pregnancy adaptation			Attachment style		
	Statistic value (B)	Standard Error	P value	Statistic value (B)	Standard Error	P value
Age	-0.357	1.512	0.814	0.017	0.018	0.333
Spouse's age	-0.066	1.290	0.959	-0.012	0.015	0.432
Spouse's education	-2.234	1.064	0.037	-0.011	0.013	0.376
Pregnancy frequency	8.155	5.444	0.136	-0.078	0.064	0.227
Contraception method	-33.055	18.685	0.079	-0.272	0.221	0.221
Contraception type	5.791	3.688	0.118	-0.041	0.044	0.351

A majority of mothers in wanted pregnancy group had secure attachment style (78.7%) and in unwanted pregnancy group had avoidant attachment style (38.2%). Based on the chi-square test, there were significant differences between the two groups in terms of attachment style ($P < 0.001$).

Based on the Mann-Whitney U test, the score of pregnancy adaptation (and all of its subscales) was 118 (13.5) in the wanted pregnancy group and lower than the unwanted pregnancy group 244 (33.5), indicating a high level of adaptation in the wanted pregnancy group ($p < 0.001$) (Table 3).

Table 3: Comparison of pregnancy adaptation and attachment style between wanted and unwanted pregnancy groups

Variable	Group	Wanted pregnancy		Unwanted pregnancy		P value
		Median	Interquartile range	Median	Interquartile range	
Relationship with spouse		13	2.5	30	12.5	< 0.001
Relationship with mother		13	3	30	11.5	< 0.001
Fear of losing control and self-confidence		13	2	30	10	< 0.001
Labor prediction		17	4	31	5	< 0.001
Maternal role identification		25	5	46	6	< 0.001
Pregnancy acceptance		18	3	43	5	< 0.001
Worry about the self and children health		17	4	31	3	< 0.001
Total score of pregnancy adaptation		118	13.5	244	33.5	< 0.001
Attachment style *	Secure	70	78.7	27	30.3	< 0.001
	Avoidant	8	9.0	34	38.2	< 0.001
	Ambivalent	11	12.4	28	31.5	< 0.001

Percentage is reported for qualitative variables that are marked by *.

Based on the Spearman test there was no statistically significant relationship between secure attachment style and pregnancy adaptation in the wanted pregnancy group, but there was a statistically significant inverse relationship in the unwanted pregnancy group ($r = -0.335$ and $P = 0.001$).

There was no statistically significant relationship between the avoidant attachment style and pregnancy adaptation in the wanted pregnancy group, but there was a significant positive relationship in the unwanted pregnancy group ($r = 0.248$ and $P = 0.019$).

There was no statistical significant relationship between the ambivalent attachment style and pregnancy adaptation in the wanted pregnancy

group ($r=0.109$ and $P=0.310$) and unwanted pregnancy group ($r=0.190$ and $P=0.075$) (Table 4).

Table 4: Relationship of attachment style and pregnancy adaptation in both wanted and unwanted pregnancy groups

Variable	Pregnancy adaptation in wanted pregnancy		Pregnancy adaptation in unwanted pregnancy	
	Correlation coefficient	P value*	Correlation coefficient	P value*
Secure attachment style	-0.007	0.945	-0.335	0.001
Avoidant attachment style	0.022	0.841	0.248	0.019
Ambivalent attachment style	0.109	0.310	0.190	0.075

*Spearman

Discussion

According to the research results, the total score of pregnancy adaptation was significantly lower in the wanted pregnancy group than the unwanted pregnancy group. Since a lower score indicated the greater pregnancy adaptation, and the unexpected nature of unwanted pregnancy challenged the adaptation process [31], Baghdari et al. found that the mean pregnancy adaptation score was 126.30 ± 3.39 in mothers with a history of fetal or neonatal death, which was lower than mothers with unwanted pregnancy experience, thereby experiencing more physical and psychological adaptation to pregnancy [6].

The majority of mothers had secure attachment styles in the wanted pregnancy group, and avoidant attachment styles in the unwanted pregnancy group. The finding was consistent with most studies on attachment styles in different societies, indicating that the majority of attachment style had a secure type in normal groups with no physical or psychological problems [17,20,32]. The results were consistent with findings of studies by Sadeghi et al. on comparing attachment styles in mothers without history of abortion and mothers with a history of abortion, so that mothers without a history of abortion generally had a secure attachment style [25]. Amani et al. also reported that the majority of students participating in their study had a secure attachment style [5]. Given that the insecure attachment style was significantly higher in the unwanted pregnancy group than the wanted

pregnancy group, those with insecure attachment styles had no biological readiness and could not deal with situations during the unexpected situations such as unwanted pregnancy, leading to the consideration of pregnancy as an unwanted and unplanned process [33].

According to the available findings, there was an inverse relationship between secure attachment style and pregnancy adaptation score in the unwanted pregnancy group. Given that lower adaptation score indicates a better pregnancy adaptation status, it can be concluded that if the secure attachment increases in mothers with unwanted pregnancy, their levels of pregnancy adaptation improves. This relationship was also seen in the wanted pregnancy group, but it was not statistically significant. Secure attachment style plays a significant role in the individual psychological adaptation to different situations. Consistent with the results, Ekman et al. found that mothers with a secure attachment style also experienced greater psychological adaptation [34]. Besharat and Teymourpour also found that individuals with secure attachment styles were more adaptable to infertility and were better at mental health and psychological well-being [10,16]. Amani et al. also reported higher levels of social adjustment and the ability to cope with stressful and abnormal situations in students with secure attachment styles [5]. Kobak & Sceery also indicated that individuals with secure attachment styles had fewer adaptation problems [35], the pattern was also seen in individuals with various

diseases [36]. According to theoretical bases of the Bowlby's Attachment Theory, a secure attachment style provides a basis for safety and security by which the individuals can discover their surroundings, give more physical and psychological adaptation responses to their surroundings, and can better accept changes in their surroundings. Bowlby also argues that a secure attachment style provides a basis for psychological adaptation actions [12]. Since the self-esteem and trust in others are from traits of individuals with secure attachment styles, it enables them to interact confidently and receive positive feedback, thereby facilitating the individual adaptation to new contexts and unexpected situations such as the unwanted pregnancy [37]. In line with the study, pregnant mothers with secure attachment styles had a positive affect that helped them to use effective and adaptive coping strategies with stressful and critical situations such as unwanted pregnancy and accept the present situations with enthusiasm and optimism [38]. Attachment style is an important factor in maternal adaptation to pregnancy [39].

The findings indicated that the avoidance attachment style in unwanted pregnancies led to a lower maternal adaptation to physical and psychological conditions of pregnancy. In line with the results, Sabuncuoglu et al. reported a significant relationship between attachment style and physical and psychological problems during pregnancy [20]. In a study, which aimed to determine the relationship between attachment style and health problems during pregnancy, the results indicated that physical and psychological problems during and after the pregnancy were also associated with the insecure attachment [20]. Besharat et al. found that the avoidant attachment style led to weaker adaptation in women with a history of infertility [40]. In line with the results, Amani et al. found that the non-adaptation was higher in students with higher avoidant attachment styles, and thus increasing the avoidant attachment style decreased their adaptation [5]. Avoidant and ambivalent attachment styles were associated with negative affect and negative mood changes and made it difficult to accept and adapt to physiological and psychological changes during pregnancy [38]. Decreasing problem-solving skills, lack of a

solution, lack of self-esteem and trust in others in participants with insecure avoidant attachment styles undermined the individual exposure to unpredictable and unwanted situations and eliminated opportunities for empathy with others [15,35]. The interaction of avoidant attachment characteristics justifies a greater non-pregnancy adaptation. On the other hand, insecure attachment is a risk factor for decreasing resilience in times of problems and stresses, leading to negative emotion experiences, psychological vulnerability and ultimately maladaptation [41,42].

According to the present findings, we are faced with a theory of intergenerational transmission of attachment styles. According to this theory, children transmit their behavioral patterns to their children through copying their parents' behavior experienced during their childhood, and then their children, in turn, transmit the same patterns to the next generation, thereby transmitting healthy and unhealthy interactive patterns through family subcultures from a generation to another, so that there is a correlation between mothers' attachment styles and children's attachment styles. Securely attached women have internal control and feel capable of maintaining their own and fetus's health, but insecurely attached women experience many problems during pregnancy, including unwanted pregnancy and emphasize the role of external control and find their own ability lower to adapt to the current situation and preserve their own and fetus's health. The unwanted and unplanned pregnancy can mean that a woman is less comfortable with controlling her living conditions or handling such situations [43]. It seems reasonable to expect that maternal compatibility with pregnancy may increase as the secure attachment style increases in experiencing an unwanted pregnancy [44].

A limitation of the study was that the education of spouses of pregnant mothers had an impact on the pregnancy adaptation and the variable was not controlled in the study. Given that psychological variables usually had complex and multifactorial etiologies, it is useful to evaluate other factors affecting the adaptation and compare them between two groups in future studies. Since the present study considered the relationship between adaptation and attachment style in wanted and unwanted pregnancies, the future studies are

suggested evaluating the roles of demographic factors more carefully.

Secure attachment style and pregnancy adaptation were more common in mothers with wanted pregnancy than those with unwanted pregnancy. There was also a significant inverse relationship between secure attachment style and pregnancy adaptation in unwanted pregnancies. The higher the secure attachment, the lower the overall score of adaptation, which indicated greater and more favorable adaptation to pregnancy. The findings indicated the need to pay more attention to maternal attachment styles to improve the adaptation status, especially in unwanted pregnancies. In general, the inclusion of attachment styles in the assessment of perinatal physical and psychological disorders can improve screening and design of interventions.

From the perspective that securely attached provide more adaptive responses to their surroundings, mental health in the field of adaptation, in the preventive dimension, requires providing a necessary context for creating a secure attachment within the framework of mother-child relationships that can play a significant supportive role in preventing psychological problems during pregnancy and help improve maternal and child health.

Given the importance of attachment style in pregnancy adaptation and midwives' roles in education and health promotion, findings of the present study can be used at clinical, educational, management, and counseling levels

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Conflict of interest

There was no conflict of interest in the present study.

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