

# Attachment styles and Positive Feelings in Infertile Couples: The Mediating Role of Emotional Information Processing

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## Abstract

**Objective:** The present study aimed to investigate the mediating role of emotional information processing in the relationship between attachment styles and positive feelings towards the spouse in infertile couples.

**Method:** The method of the present research was a correlational description based on the practical purpose . The statistical population included infertile couples in Tehran, among whom 200 were selected by convenience sampling. The data were collected by the Experiences in Close Relationships (ECR) Scale (Brennan et al., 1998), Positive Feelings toward Spouse Questionnaire (The State University of New York., 1975), and Emotional Processing Scale (Baker et al., 2010) and analyzed by Pearson correlation and structural equation modeling using SPSS25 and AMOS24.

**Results:** The results of structural equation modeling demonstrated that avoidant and anxious attachments had a significant indirect effect, with effect sizes of -0.10 and -0.20, respectively, on positive feelings toward the spouse mediated by emotional information processing ( $p < 0.01$ ).

**Conclusion:** The obtained results showed that avoidant attachment has a positive and significant relationship with the components of avoidance and emotional control, and anxious attachment has a positive and significant relationship with the components of suppression, unpleasant emotional experience and unprocessed emotional symptoms. The result highlighted the importance of designing and evaluating interventions based on attachment and improving emotional processing to foster and repair the relationships of infertile couples.

**Keywords:** Attachment, Infertile couples, Positive feelings.

## Extended Abstract

### Background and Objectives

Infertility is recognized globally as a significant psychological and social crisis, affecting nearly 10% of couples worldwide (Vander Borgh & Wyns, 2018).

Beyond its biological ramifications, infertility deeply influences emotional well-being, often resulting in marital discord, diminished intimacy, and reduced psychological health (Cavdar & Coskun, 2018). As emotional bonds and communication are central to a couple's relational satisfaction, understanding the factors that influence these dynamics is critical.

According to attachment theory (Bowlby, 1979), early relationships shape emotional regulation and interpersonal functioning. Secure attachments are associated with emotional resilience, whereas insecure attachments—specifically anxious and avoidant styles—can undermine emotional communication and intensify distress in intimate relationships (Mikulincer & Shaver, 2005). Additionally, how

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individuals process emotional information (emotional information processing, EIP) influences how they interpret and react to relational events (Leyh et al., 2016).

The present study aimed to explore the mediating role of emotional information processing in the relationship between attachment styles and positive feelings toward the spouse among infertile couples. It was hypothesized that emotional information processing would be a key psychological mechanism linking attachment insecurities to diminished positive relational feelings.

### Materials and Methods

This was an applied, descriptive-correlational study employing structural equation modeling (SEM) to analyze the data. The statistical population consisted of infertile couples residing in Tehran. A total of 200 participants were recruited through convenience sampling, with eligibility criteria including female infertility, residence in Tehran, and informed consent to participate. Exclusion criteria involved chronic health conditions, psychiatric disorders, and incomplete questionnaire data.

Data were collected using the following instruments: Experiences in Close Relationships Scale (ECR; Brennan et al., 1998): Measured avoidant and anxious attachment with demonstrated reliability in the current study ( $\alpha = .78$  and  $.70$ ).

Positive Feelings Toward Spouse Questionnaire (1975): Assessed affective attitudes toward one's partner with good internal consistency ( $\alpha = .69$ ).

Emotional Processing Scale (Baker et al., 2007): Measured suppression, unregulated emotion, impoverished emotional experience, signs of unprocessed emotions, and avoidance (total  $\alpha = .81$ ).

Data analysis was conducted using SPSS 25 and AMOS 24 for SEM, alongside Pearson correlation for hypothesis testing.

### Results

Descriptive statistics revealed that 81.5% of participants were women, with an average age of 34.95 years and an average marriage duration of 8.52 years. Most participants held a bachelor's degree.

#### Correlational Findings:

Attachment and Emotional Processing: Avoidant attachment correlated positively with avoidance ( $r = .33$ ,  $p < .01$ ) and unregulated emotion ( $r = .49$ ,  $p < .01$ ). Anxious attachment correlated significantly

with suppression ( $r = .32$ ), impoverished emotional experience ( $r = .34$ ), and signs of unprocessed emotions ( $r = .17$ ).

Emotional Processing and Positive Feelings Toward Spouse: All five EIP subscales negatively correlated with positive feelings toward the spouse: suppression ( $r = -.36$ ), impoverished emotional experience ( $r = -.34$ ), signs of unprocessed emotions ( $r = -.31$ ), avoidance ( $r = -.26$ ), and unregulated emotion ( $r = -.26$ ), all  $p < .01$ .

#### Structural Equation Modeling:

SEM confirmed that both avoidant and anxious attachment had significant indirect effects on positive feelings toward the spouse via emotional processing. Avoidant attachment had a direct effect size of  $-.26$  and an indirect effect size of  $-.10$ . Anxious attachment showed a direct effect of  $-.21$  and an indirect effect of  $-.20$ .

Model fit indices were acceptable:  $\chi^2/df = 2.41$ , RMSEA =  $.08$ , CFI =  $.96$ , GFI =  $.97$ , AGFI =  $.90$ .

### Discussion

The findings underscore the pivotal role of emotional processing in the relationship between attachment styles and marital satisfaction in infertile couples. The data support the notion that insecure attachment styles disrupt emotional regulation, leading to maladaptive processing patterns that inhibit positive relational emotions (Mikulincer & Shaver, 2019).

Avoidant individuals may suppress or detach from emotional experiences, leading to emotional withdrawal and conflict avoidance. Anxiously attached individuals tend to ruminate and exhibit heightened emotional responses, potentially fostering relational instability (Allen & Miga, 2010). These dysregulated processing styles impair open communication and mutual appreciation, crucial components of marital satisfaction.

The mediation of emotional processing suggests that therapeutic interventions enhancing emotional awareness and expression could mitigate the adverse effects of attachment insecurities. Such interventions might include emotion-focused couple therapy or attachment-based psychoeducation (Greenberg & Goldman, 2008; Johnson & Whiffen, 2005).

Neuroscientific evidence also corroborates these findings, showing distinct neural pathways for avoidant (inhibition-related) and anxious (hyperactivation-related) attachment during

emotional processing (Ran & Zhang, 2018).

The study contributes to the literature by integrating attachment theory with emotional processing to explain relationship dynamics in infertile couples, a population uniquely vulnerable to relational distress due to the chronic stress of infertility.

### Conclusion

This study illustrates the complex interplay between attachment styles, emotional information processing, and positive marital feelings in infertile couples. The findings suggest that interventions targeting emotional processing may help infertile couples enhance emotional intimacy and relationship satisfaction.

Given the cultural context and the sampling limitations (only Tehran), the generalizability of findings is constrained. Future studies should replicate the findings in other regions and explore interventions tailored to address attachment-related emotional processing deficits.

In conclusion, by identifying emotional information processing as a mediator, the study offers valuable implications for psychotherapeutic practices aiming to support couples navigating infertility-related challenges.

### Introduction

Infertile couples are those who have failed to conceive after a year of sexual intercourse without using contraceptives (Dierickx et al., 2021). Infertility affects approximately 10% of couples worldwide. Therefore, infertility and its treatment is a major life crisis lasting many years (Vander Borgh & Wyns, 2018). On the other hand, infertility, due to its pathological and stressful nature, can cause disruption in the quality of marital relations, divorce, decrease in self-confidence, feelings of rejection and helplessness, and as a result, lead to depression (Cavdar & Coskun, 2018). Because infertility happens in the context of the family and has a great impact on family relationships, especially couples' relationships, the quality of the family's relationship, especially the spouse's, with the infertile person, as well as the support received from them in this

crisis-causing situation, has a significant impact on the mental health of the infertile person; In such a way that the lack of family support in this stressful situation, which puts a lot of psychological pressure on the infertile person, can have psychological consequences such as stress and negative feelings towards the spouse (Kong et al., 2023). According to positive psychology, feelings toward the spouse influence the relationships of couples with stressful problems (Chan, 2018).

Expressing positive feelings towards spouse refers to how often couples express love to each other; Expressing positive emotions is one of the outstanding characteristics of a balanced life of couples and in no life can you feel the need for emotions, while many couples ignore the importance of their emotions in their life together (Ustunel et al., 2022). Studies that examined emotional expression distinguished the expression of positive emotions such as happiness and love from the expression of negative emotions such as anger and hatred (Meneses & Greenberg, 2017). This distinction results from the differential impacts of these two groups of emotions on marital relationships. Researchers proved that a high level of positive emotional expression toward the spouse was associated with greater marital satisfaction (Autio & Rissanen, 2018). Many couples who refer for infertility treatment often have a lot of emotional disturbances and admit that their feelings are not understood by their spouses and they interact with defensive patterns that prevent trust, closeness, and pleasant reactions (Brudek & Kaleta, 2023). Troubled marital relationships are likely faced with a lack of emotions and expressing positive feelings towards the spouse and a lack of interest and respect; Therefore, expressing emotions and feelings can reduce problems and conflicts to a great extent and establish emotional, intellectual, and behavioral harmony between couples (Nihayah et al., 2023). Therefore, emotional maturity evokes positive

emotions such as friendship, mutual communication, understanding, honesty, trust, happiness, and sexual pleasure (Meneses & Greenberg, 2017).

One of the important indicators for determining the needs and health conditions of infertile women is their attachment style (Schaumburg et al., 2021). Research revealed that the unavailability of each partner and not responding to emotions are the key issues in troubled relationships (Reiser et al., 2021). Bowlby believed that attachment is a human characteristic, and the initial attachment of individuals affects their subsequent growth. The spouse is the main form of attachment for most adults; therefore, it is the primary source of security and comfort (Fraley & Roisman, 2019). Secure, anxious, and avoidant are the three attachment styles. Infants and adults with secure attachment style can easily trust others, express feelings, and commit to a long-term, intimate relationship. Those with an anxious attachment style are hesitant about being loved and worthy of love and are conservative. Individuals with avoidant style realize that they should rely heavily on themselves and not ask for support from their spouse to feel relatively secure, even when such support is crucial for survival and optimal development (Japutra et al., 2018). Bowlby (1979) states that emotions are strongly related to attachment. Many intense emotions arise during the formation, maintenance, termination, and renewal of attachment relationships. To form a bond is to love, to maintain a bond is to be loved, and to lose a partner is to cherish someone (Bowlby, 1979).

Emotion regulation is strongly related to secure attachment style. In fact, several theoretical and experimental studies indicated emotional regulation capacity as a natural extension of the attachment system (Allen & Miga, 2010; Mikulincer & Shaver, 2019). Individuals with secure attachment style tend to seek the support and intimacy of others comfortingly, resulting in better emotion

regulation. In contrast, the insecure attachment style prompts hyperactive strategies causing individuals to experience overwhelming emotions and seek energetic strategies to maintain intimacy with others (Mikulincer & Shaver, 2019; Marszał & Janiczak, 2018). The researchers also investigated the relationship between attachment and later success in life and found that a history of secure attachment significantly influences creating and maintaining close relationships, developing desirable personality traits, and most likely expressing desirable emotions and self-regulation (Kim & Miller, 2020). Recent research revealed that emotional regulation skills and attachment styles, which are the core of close relationships, play an outstanding role in mental development (Siegel, 2020). Most emotional information received in real life is transmitted through sensory channels. After simultaneously receiving numerous inputs from a complex visual environment, the brain evaluates them and allocates more cognitive resources to major events (X et al., 2019). Therefore, the successful identification and processing of emotional information are among the significant links of social interaction. Emotional biases in information processing and the lack of inhibitory filters might cause disordered thinking, cognitive distortions, and memory bias and stimulate emotions (Dinh Trieu Ngo et al., 2023).

The emotional disturbance is reduced through emotional processing so that the individual can consider other experiences and behaviors without the interference of disturbances (Leyh et al., 2016). Individuals with secure attachment style can freely evaluate their feelings. On the other hand, those with insecure attachment style tend to increase emotional pressure in suppression efforts, so they sometimes identify fewer target stimuli (Fonagy & Bateman, 2016). In fact, mothers' ability to understand and sympathize with their infants' feelings helps them create a genuine emotional



relationship. In the absence of mothers, infants have difficulty recognizing and regulating their emotions (Jones et al., 2018). In explicating these findings, it can be stated that childhood traumas and the way attachment develops can lead to the development of different strategies such as closeness and avoidance in dealing with and interacting with the environment and others (Smagur, 2017). Research revealed that information processing deficits significantly mediate the relationship between couples' attachment and distress (Vieira et al., 2023, Baker et al., 2007).

Results of the studies mentioned earlier indicated that besides its inherent nature, infertility contains side effects such as increased marital conflicts and decreased intimacy and constructive communication (Cavdar & Coskun, 2018). Positive feelings toward the spouse play a decisive role in the durability of the couple's relationship, and emotional processing is a major part of the couple's response to the stimuli presented in the marital relationship. Furthermore, attachment theory considers emotion the principal manifestation of attachment representations. Therefore, the present study aims to answer the question of whether emotional information processing significantly mediates the relationship between attachment styles and positive feelings toward the spouse in infertile couples. The conceptual model of this study is presented in Figure 1.

## Method

This research was practical in terms of purpose. Descriptive-correlation method was chosen to achieve the research objectives, and structural equation modeling was employed to examine the direct and indirect effects of research variables.

The statistical [WU1] [WU2] population included infertile couples in Tehran. Due to the large distribution of the statistical population and the lack of access to their list, the sample was selected by convenience sampling. Because Miser, Gamest, and Garino (2006) suggest that a sample of at least 300 students is good in research with the approach of modeling and path analysis, 300 students were selected by using a random sampling method to complete the questionnaires and finally 200 people remained.

The inclusion criteria were woman infertility, consent to participate in the research, referred to Royan Infertility Center, and living in Tehran. The exclusion criteria were physical disabilities and suffering from chronic diseases, taking medication due to physical and mental conditions, and not completing the questionnaires. The data were analyzed by descriptive statistics (frequency, frequency percentage, lowest score, highest score, skewness, kurtosis, mean, and standard deviation), Pearson correlation test, and structural equation

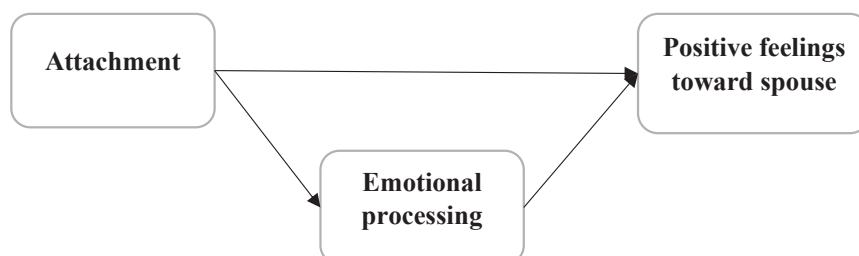


Figure 1. conceptual model of the study

modeling using SPSS25 and AMOS24.

### Procedure

After obtaining permission from the Vice-Chancellor of the Faculty of Psychology and Educational Sciences of the University of Tehran, the research questionnaires were prepared. Data analysis was conducted when the required and specified number of acceptable and completed questionnaires were collected.

### Ethical Statement

All the participants have submitted written informed consent upon knowing that participation is completely voluntary and attrition from the study has no negative consequences. The women were also assured more than once that their participation was anonymous and that any data to be published would be unidentified.

### Measurement

*Experiences in Close Relationships (ECR) Scale (Brennan et al., 1998)*: This 36-item scale measures adults' attachment style and includes the two sub-scales of avoidant and anxious attachments, each comprising 18 items. The responses are rated on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Odd items assess avoidant attachment and even items assess anxious attachment. Peyvastegar (2006) used the factor analysis method to calculate the validity of the test and accreditation in Iran. The factor analysis of the test questions showed that the questions are significantly correlated with the test factors (secure, anxious, and avoidant attachment style). The total score of each sub-scale is obtained by summing up its items. The validity of this questionnaire has been reported in Iran with a similar questionnaire. Cronbach's alpha in Peyvastegar (2006) was for secure attachment style/.86 and /.87 for anxious attachment and avoidant attachment /.84. Research

confirmed the content validity of this scale, and its Cronbach's alpha coefficient was .95 (Brennan et al., 1998). Regarding the present study, Cronbach's alpha coefficients of anxious and avoidant sub-scales were .78 and .7, respectively.

*Positive Feelings toward Spouse Questionnaire (1975)*: It is a 17-item questionnaire developed at the couple therapy clinic of the State University of New York in 1975. The responses are rated on a seven-point Likert scale, and the total score is obtained by summing up all the items. Scores between 17 and 43 reveal low positive feelings; those between 43 and 68 denote average positive feelings, and those above 68 indicate high positive feelings. The test-retest reliability of this questionnaire was .94, and its internal consistency for an Iranian sample was .89 (Autio & Rissanen, 2018). In the country, Mahmoudi et al. (2014) validated this questionnaire and reported its Cronbach's alpha /.86 and convergent validity/.89. The Cronbach's alpha coefficient of this questionnaire was .69 in the present study.

*Emotional Processing Scale (Baker et al., 2010)*: This scale comprises the five sub-scales of suppression, unregulated emotion, impoverished emotional experience, signs of unprocessed emotions, and avoidance. The responses are rated on a 10-point scale ranging from 0 (completely disagree) to 9 (completely agree). Cronbach's alpha and test-retest reliability coefficients of this scale were .92 and .79, respectively (Baker et al., 2007). In this questionnaire, the minimum score is 25, which indicates low processing, and the maximum score is 125, which indicates high processing. Narimani (2011) translated this questionnaire and Cronbach's alpha /.95 reported it. The validity of this questionnaire has been reported in Iran with a similar questionnaire. Regarding the present study, Cronbach's alpha coefficient of the total scale was .81, and the coefficients of its sub-scales ranged between .68 and .79.

## Results

The mean age of the participants was 34.95, and the mean of their marriage duration was 8.52. 163 participants were female, and 37 were male. Furthermore, the bachelor's degree (N=82) was the most frequent level of education, and the least frequent one was PhD (N=18). Descriptive statistics of the research variables, including attachment, emotional processing, and positive feelings toward the spouse, are presented in Table 1.

hypotheses concerning the relationship between variables, whose results are presented below. There is a significant relationship between attachment styles and emotional information processing in infertile couples. Pearson's correlation was used to test this hypothesis [Table 2].

As can be seen from Table 2, avoidant attachment has a positive and significant relationship with avoidance ( $p<0.01$ ,  $r=.33$ ), and unregulated emotion ( $p<0.01$ ,  $r=.49$ ). Furthermore, anxious attachment

**Table 1.** Descriptive statistics of the research variables (attachment, emotional processing, and positive feelings toward spouse)

| Variable                            |                                   | Min. | Max. | M     | SD    | Skewness | Kurtosis |
|-------------------------------------|-----------------------------------|------|------|-------|-------|----------|----------|
| Attachment                          | Avoidant                          | 29   | 97   | 56.93 | 13.06 | .4       | .23      |
|                                     | Anxious                           | 60   | 117  | 93.97 | 14.43 | -.37     | -.81     |
|                                     | Suppression                       | 5    | 24   | 16.52 | 4.22  | -.51     | .22      |
| Emotional processing                | Impoverished emotional experience | 5    | 23   | 15.39 | 3.61  | -.33     | .06      |
|                                     | Signs of unprocessed emotions     | 9    | 24   | 16.12 | 3.83  | .02      | -.83     |
|                                     | Avoidance                         | 6    | 22   | 13.77 | 3.43  | .22      | -.1      |
|                                     | Unregulated emotion               | 9    | 25   | 16.07 | 4.03  | .06      | -.97     |
| Positive feelings toward the spouse |                                   | 29   | 86   | 55.92 | 13.21 | .04      | -.51     |

**Table 2.** Relationship between attachment styles and emotional information processing in infertile couples

| Variable             |                                      | 1      | 2     | 3     | 4     | 5     | 6     | 7 |
|----------------------|--------------------------------------|--------|-------|-------|-------|-------|-------|---|
| Attachment           | 1. Avoidant                          | 1      |       |       |       |       |       |   |
|                      | 2. Anxious                           | -.53** | 1     |       |       |       |       |   |
|                      | 3. Suppression                       | .01    | .32** | 1     |       |       |       |   |
| Emotional processing | 4. Impoverished emotional experience | -.05   | .34** | .48** | 1     |       |       |   |
|                      | 5. Signs of unprocessed emotions     | -.12   | .17*  | .36** | .23** | 1     |       |   |
|                      | 6. Avoidance                         | .33**  | -.03  | .25** | .35** | .23** | 1     |   |
|                      | 7. Unregulated emotion               | .49**  | -.13  | .13   | .18** | .13   | .37** | 1 |

Descriptive statistics, including the mean and standard deviation of each of the research variables and skewness and kurtosis indexes, are presented in Table 1. Given that the values for skewness and kurtosis indexes are between +1 and -1, it can be concluded that the distribution of the research variables is almost normal. The inferential statistics of the research are presented below.

Pearson's correlation was used to test research

has a positive and significant relationship with suppression ( $p<0.01$ ,  $r=.32$ ), impoverished emotional experience ( $p<0.01$ ,  $r=.34$ ), and signs of unprocessed emotions ( $p<0.05$ ,  $r=.17$ ).

There is a significant relationship between emotional information processing and positive feelings toward the spouse in infertile couples. Pearson's correlation was run to test this hypothesis [Table 3].

Table 3 shows that positive feelings toward the

**Table 3.** Relationship between positive feelings toward spouse and emotional information processing in infertile couples

|                      | Variable                               | 1      | 2      | 3      | 4      | 5      | 6 |
|----------------------|----------------------------------------|--------|--------|--------|--------|--------|---|
| Emotional processing | 1. Suppression                         | 1      |        |        |        |        |   |
|                      | 2. Impoverished emotional experience   | .48**  | 1      |        |        |        |   |
|                      | 3. Signs of unprocessed emotions       | .36**  | .23**  | 1      |        |        |   |
|                      | 4. Avoidance                           | .25**  | .35**  | .23**  | 1      |        |   |
|                      | 5. Unregulated emotion                 | .13    | .18**  | .13    | .37**  | 1      |   |
|                      | 6. Positive feelings toward the spouse | -.36** | -.34** | -.31** | -.26** | -.26** | 1 |

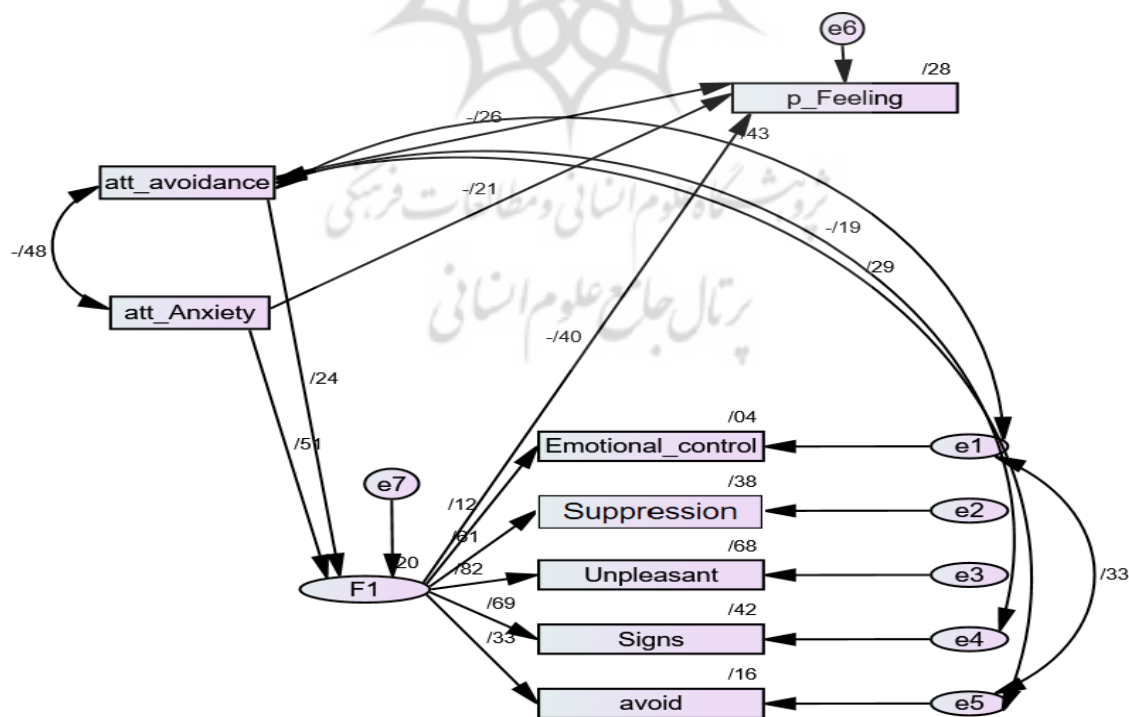
spouse have a negative and significant relationship with all five sub-scales of emotional information processing, i.e., suppression ( $p < 0.01$ ,  $r = -.36$ ), impoverished emotional experience ( $p < 0.01$ ,  $r = -.34$ ), signs of unprocessed emotions ( $p < 0.01$ ,  $r = -.31$ ), avoidance ( $p < 0.01$ ,  $r = -.26$ ), and unregulated emotion ( $p < 0.01$ ,  $r = -.26$ ).

Emotional information processing significantly mediates the relationship between attachment styles and positive feelings toward spouses in infertile couples. This hypothesis was tested by structural equation modeling using path analysis [Figure 2].

As can be seen from figure 2, the numbers on the paths show their weights. The error value in correlated variables is presented with two-way arrows. The fit indexes of the proposed research model are given in Table 4.

The above table illustrates that the corrected research model fits sufficiently well. The model path coefficients are presented in Table 5.

The above table presents the significant direct effect of avoidant and anxious attachments on positive feelings toward the spouse, with effect sizes of  $-.26$  and  $-.21$ , respectively ( $p < 0.05$ ). Furthermore,

**Figure 2.** Corrected research model



**Table 4.** Fit indexes of the proposed research model

| Index         | $\chi^2/df$ | RMSEA      | NFI        | IFI        | CFI        | GFI        | AGFI       |
|---------------|-------------|------------|------------|------------|------------|------------|------------|
| Fit criterion | $3 \geq *$  | $1 \geq *$ | $9 \leq *$ | $9 \leq *$ | $9 \leq *$ | $9 \leq *$ | $9 \leq *$ |
| Statistics    | 2.41        | .08        | .93        | .96        | .96        | .97        | .9         |

**Table 5.** Direct and indirect effects of anxious and avoidant attachment on positive feelings toward the spouse

| Variable            | Path     | Standardized effect size | Lower bound | Upper bound | Sig. |
|---------------------|----------|--------------------------|-------------|-------------|------|
| Avoidant attachment | Direct   | -.26                     | -.39        | -.11        | .01  |
|                     | Indirect | -.1                      | -.22        | -.03        | .00  |
| Anxious attachment  | Direct   | -.21                     | -.32        | -.06        | .04  |
|                     | Indirect | -.2                      | -.36        | -.06        | .00  |

avoidant and anxious attachments have a significant indirect effect on positive feelings toward the spouse, with the effect sizes of -0.10 and -0.20, respectively, through the mediation of emotional information processing ( $p < 0.01$ ). The findings are discussed in the following.

## Discussion

The present study aimed to determine the mediating role of emotional information processing in the relationship between attachment styles and positive feelings toward the spouse in infertile couples. The first hypothesis has been confirmed and is Significant. The results obtained from the Pepperson correlation test showed that there is a significant relationship between attachment styles and emotional information processing in infertile couples. Regarding the significance of the hypothesis that there is a relationship between attachment styles and emotional information processing in infertile couples, it is in line with the research results of Nihayah et al. (2023), Schaumburg et al. (2021), Japutra et al. (2018). It can be said about the explanation of this result, the results of neurological studies can somewhat explain the relationships found in the present study, i.e., anxious attachment is associated with increased awareness of emotional stimuli in the amygdala, avoidant attachment is related to inhibitory brain activity (Ran & Zhang, 2018).

Therefore, given that avoidant attachment is related to inhibitory processes of the nervous system, it can be linked with avoidance and control over emotional stimuli. Furthermore, since avoidant attachment is associated with increased emotional awareness, it can increase awareness of the signs of emotional processing, experiencing impoverished emotions, and emotional suppression tendencies.

Also, The second hypothesis has been verified, stating that there is a significant relationship between emotional information processing and positive feelings towards the spouse in infertile couples. Pearson's correlation revealed that positive feelings toward the spouse had a negative and significant relationship with all five sub-scales of emotional information processing, i.e., suppression, impoverished emotional experience, signs of unprocessed emotions, avoidance, and unregulated emotion. This finding is in line with the results obtained in the research of Momeni et al. (2018), Maidani and Saberi (2016), and Holmes et al. (2007) which showed that emotional processing plays an important role in the quality of marital relationships. Also, the results presented by Ran and Zhang (2018) show that emotional processing and expression of emotions play a significant role in married people's lives and understanding of pleasant feelings, which is in line with the findings of the present study. In explicating this finding, it can be stated that emotional

processing is required for emotional expression. In other words, spouses who express their emotions, influence each other's behavior and gain pleasant experiences (Mikulincer & Shaver, 2019). When couples positively process emotional information in their marital relationship, they can express gratitude and appreciation for their spouse's efforts and show behaviors that strengthen the relationship. In contrast, when couples come to an unpleasant understanding or respond to their processing using avoidance and suppression because they do not have a positive perception and image of the marital relationship, the possibility of experiencing a positive feeling toward the spouse is lost.

The findings of structural equation modeling using path analysis indicated that avoidant and anxious attachments significantly affected positive feelings toward the spouse mediated by emotional information processing. It seems that individual differences in attachment tendencies are reflected in cognitive, behavioral, and neural patterns of emotional regulation and processing. In other words, the attachment style (insecure or secure) of married individuals influences their emotional processing; therefore, any positive or negative event in the marital relationship can cause inefficient emotional processing in individuals with avoidant and anxious attachment styles. That is, inefficient emotional processing in individuals with avoidant attachment style can be manifested as indifference, unexpressed hostility, apprehension, and jealousy. For anxious attachment, it can be expressed as doubt and emotional ambivalence such as success or failure, satisfaction or dissatisfaction (Mikulincer & Shaver, 2005). Therefore, such emotions are accompanied by the unwillingness to express emotions, and the experienced negative emotions hinder experiencing positive feelings toward the spouse.

### Conclusion

The relatively high prevalence of infertility in Iran is one of the major issues and concerns of the country's health

system. Therefore, researchers have been interested in understanding and identifying the variables related to the quality of the marital relationship of infertile couples. The findings of the present study acknowledge the need to take attachment-based practical measures and provide emotional processing interventions to foster and repair the relationship of infertile couples in conflict who do not have positive feelings toward each other.

The findings were limited to infertile women in Tehran; therefore, care should be exercised in generalizing the findings to infertile women in other cities. The difficulty in obtaining the consent of some of the participants to answer the questionnaires was another limitation of this study. Future researchers are recommended to replicate the same study in other cities to have more evidence of the relationships among the variables included in this study. Finally, the model of the present study can be tested on males and different age groups.

Based on the results of the model confirmed in the research, it is suggested that an intervention centered on emotional information processing training to improve positive feelings towards the spouse of infertile couples who have attachment damage, be designed and its effectiveness investigated.

It is suggested that a similar study be conducted on the population of fertile married people in order to examine the generalizability of the results to other couples as well.

It is suggested that family counselors and couple therapists, in infertile couples who have attachment damage and experience unpleasant feelings towards their spouses, study training and interventions related to improving and facilitating emotional processing. give

It is also suggested that the organizations that provide services to infertile couples at the community level, based on the results obtained in the current research, provide the necessary interventions for infertile couples in order to prevent future harm.

### Informed Consent Statement

Informed consent was obtained from all subjects involved in the study before participation.

### Acknowledgments

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### Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

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