

## Research Paper



# Cognitive Emotion Regulation Strategies and Marital Communication Patterns in Married Women: Investigating the Mediating Role of Defense Mechanisms

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**ABSTRACT**

**Objective:** This descriptive-correlational study aims to investigate the mediating role of defense mechanisms (DMs) in the relationship between cognitive emotion regulation strategies (CER) and marital communication patterns (MCP) in married women in Tehran Province, Iran.

**Methods:** The statistical population of the study included all married women in Tehran Province in 2021. A total of 170 subjects were selected as the statistical sample of the study via convenience sampling methods. Data were collected using the cognitive emotion regulation questionnaire (CERQ), the couples' communication patterns questionnaire (CPQ), and the defense style questionnaire (DSQ). In data analysis, in addition to using descriptive statistics, the inferential statistics section was analyzed using SPSS software, version 26, and AMOS software, version 24.

**Results:** Based on the goodness of fit indices, DMs play a mediating role in the relationship between CER strategies and MCP. The indirect size effect of the CER strategies on the MCP is positively significant with a standardized coefficient of 0.38 ( $P < 0.05$ ).

**Conclusion:** Therefore, considering the importance of MCP in married life, CER strategies and DMs are necessary to inform and inform people about cognitive strategies of emotional regulation and emotional adjustment. Family therapists are recommended to consider CER strategies as well as DMs to treat marital issues.

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## Highlights

The mediating role of defense mechanisms (DMs) in the relationship between cognitive emotion regulation (CER) strategies and marital communication patterns (MCP).

The indirect effect of the CER strategies on the MCP.

The role of CER strategies and DMs in the treatment of marital issues.

## Plain Language Summary

The family is one of the vital and basic foundations of a society, which plays a crucial role in regulating people's social life with its role in various aspects. Marital commitment means how much couples value their marital relationship and how motivated they are to maintain and continue their marriage. The commitment to a relationship can often be considered a structure that is divided into three categories, personal, moral, and structural commitment. Relationships between couples are damaged when the feelings and emotions of the couple are expressed in the wrong situation and time, or they appear with great intensity or do not have the appropriate intensity according to the situation. The choice of DMs plays an effective role in the correct understanding of the response to psycho-environmental pressure. The statistical population of this descriptive-correlational study included all married women in Tehran Province in 2021. A total of 170 subjects were selected as the statistical sample of the study through available sampling methods. After performing the executive steps of the study and providing the necessary coordination with the student and research affairs of the university, the questionnaires were provided to the married women in the form of Google (Internet) due to the coronavirus situation and the lack of direct access, and the students read the instructions of the questionnaires and answered them. Based on the results, DMs play a mediating role in the relationship between CER strategies and MCP. The size of the indirect effect of the CER strategies on the MCP is positively significant. Therefore, considering the importance of MCP in married life, CER strategies and DMs are necessary to inform and inform people about cognitive strategies of emotional regulation and emotional adjustment. Family therapists are recommended to consider CER strategies as well as DMs to treat marital issues.

## Introduction

**T**he communication pattern of couples is vital in solving marital conflicts. These patterns include mutual constructive communication, mutual avoidant communication, and expectation/avoidance pattern. Factors affecting couples' communication patterns were divided into 4 categories, including spiritual health and spirituality, marital satisfaction and sexual satisfaction, marital compatibility, and lovemaking styles (Hassani-Moghadam, 2019).

The family is one of the vital and basic foundations of a society, which plays a crucial role in regulating people's social life with its role in various aspects. Olson has a systemic view of family structure, which introduces cohesion, communication in his combined circular pattern, and flexibility. Family cohesion, as one of the main factors of family strength, is the emotional bonding (continuity, connection, and emotional commitment) that

family members have towards one another (Olson et al., 2018).

Marital commitment means how much couples value their marital relationship and how motivated they are to maintain and continue their marriage (Amoto, 2004). It should also be considered that the commitment to a relationship can often be considered a structure that is divided into three categories, personal, moral, and structural commitment. Personal commitment means a person's interest and desire to continue a marital relationship. Moral commitment expresses a person's moral loyalty to marriage. Structural commitment also refers to the obstacles and limitations of leaving a marital relationship and the feeling of being forced to continue that relationship or the fear of the consequences of divorce (Adams, 1997).

One of the basic human needs is to create healthy interpersonal relationships. In the meantime, marriage can be considered one of the most fundamental factors among humans. The definition of a healthy and purpose-

ful marriage (the purpose-driven marriage), is a healthy marriage in which factors, such as commitment, respect, responsibility, and sexual satisfaction are taken into consideration (Johnson et al., 1999).

Emotion regulation has wide strategies, such as conscious and unconscious cognitive and behavioral regulation that cause a person to increase, maintain, or decrease an emotion. It causes emotions to be adjusted unconsciously or consciously (Bargh & Williams, 2007). Having this characteristic indicates the growth and development of couples through cognitive-emotion regulation (CER), which increases the quality of that relationship (Ochsner & Gross, 2025). CER is one of the factors that can improve the psychological functions of family members in the form of thinking, creation, and behavior and increase the ability to deal with emotional and psychological problems. One of the basic problems between couples is the lack of basic communication skills in CER. Relationships between couples are damaged when the feelings and emotions of the couple are expressed in the wrong situation and time, or they appear with great intensity or do not have the appropriate intensity according to the situation. Therefore, a healthy and productive relationship of couples depends on having a couple's CER and improves the quality of the relationship (Ahmadi et al., 2017). Another study shows that couples who have a greater ability to control negative feelings and emotions have higher satisfaction and quality of life. Also, the more couples use more and better emotions in their relationships, the better the quality of their relationships will be (Gross & John, 2003). On the other hand, ineffective emotional strategies, such as risky behaviors, suppressing negative emotions, and running away from unpleasant feelings lead to emotional dysregulation in relationships, a decline in sexual relations, and the breakdown of relationships between couples (Kramer, 2019). Therefore, if a cognitive error is observed, for reasons, such as a lack of sufficient information or incorrect evaluation of the cultural and religious position of the other person, the person cannot face risky and stressful situations. In this regard, Garnefski believes that people can be helped significantly in rebuilding their thought patterns. One of the critical factors in predicting the durability of a couple's relationship is the level of quality and marital satisfaction between each other. The lack of emotional and effective relationships between couples causes chaos in the family and causes conflicts and arguments between them. For this purpose, couples should be aware of each other and take care of each other's needs. In every couple, the levels of needs and types of needs are different, and these needs are met by effective communication with each other. Relationships between

couples as family relationships can be one of the most essential and main parts of the family, which also affects collective health (Young & Long, 1994).

When couples use the right marital communication patterns (MCP), they have a correct understanding of the content and purpose of each message towards themselves, and based on that, they meet each other's emotional and psychological needs. Accordingly, the right MCP gives people higher self-esteem, the power to make the right choice, and make the right decision and improve their learning style. Researchers, such as Madathil and Benschhoff believe that a successful marriage is when couples use healthy and efficient MCP in their relationship. Because incorrect MCP causes essential and crucial issues to remain unresolved and these themselves cause conflict and unhealthy communication between couples (Zhang, 2007). Correct and healthy MCP includes behaviors that maintain relationships in marital satisfaction (Sanford, 2017).

The choice of defense mechanisms (DMs) plays an effective role in the correct understanding of the response to psycho-environmental pressure. Therefore it is vital in the conceptualization and treatment of disorders from the perspective of psychoanalytic theory (Cramer, 2000). From 1940 to 1950, a fundamental change was made in the theory of analytical psychotherapy. Therefore, psychological effects in interpersonal relationships and cognitive patterns, and underlying emotions in mental disorders were considered (Andrews et al., 1993). DMs are carried out by the "ego" which Freud called to control instincts and impulses to protect oneself. Ego DMs are unconscious psychological processes that help an individual prevent anxiety when exposed to a stressful situation. They are one of the crucial concepts related to the unconscious that was introduced in the psychoanalytical system to explain the functioning of the defense system and the psychological system against anxiety and stress (Cramer, 2000). Nevertheless, knowing the non-adaptive DMs of people with mental disorders is effective in planning the individual's treatment (Valliant, 1994). Valliant believes that DMs are an automatic regulatory process that works to minimize cognitive dissonance and minimize sudden changes in internal and external realities by affecting how to understand and perceives threatening events (Andrews et al., 1993).

Psychological pressure resulting from unpleasant feelings and emotions is often considered a destructive factor in people's psychological health. People who are exposed to emotional threats and nervous pressures are more damaged. Psychiatrists are surprised by the great

impact of negative emotions in mental disorders, they see pathological symptoms and physiological and psychological disorders in it. Biologists believe that emotional reactions have a simple mechanical result, originating from the release of unknown forces in the nervous system. According to biologists, if people can keep their cool, they can better adapt to reality (Andrews et al., 1993). Thus, existing studies on DMs of married women have ignored the implications of these defenses on their CER and MCP. Given the increasing incidence of psychiatric problems among married women and the importance of the family for society, it is necessary to describe these implications in greater detail so that strategies can be employed to promote psychologically healthy and performance-enhancing DMs and discourage the opposite mechanisms. We struggle to bridge this gap in scientific knowledge by answering the question: What are the relationships between CER and couple MCP considering the mediating role of DMs?

## Materials and Methods

The research method is descriptive-correlational. In this study, CER and MCP were considered as independent variables (predictors), and DMs were considered as a dependent variable (criteria).

### Participants

The statistical population of the study included all married women in Tehran Province in 2021. A total of 170 subjects were selected as the statistical sample of the study through convenience sampling methods. After performing the executive steps of the study and providing the necessary coordination with the student and research affairs of the university, the questionnaires were provided to the married women in the form of Google (Internet) due to the coronavirus situation and the lack of direct access, and the students read the instructions of the questionnaires and answered them.

### Inclusion and exclusion criteria

The inclusion criteria included being married, having at least a diploma, a minimum and maximum of 20-50 years of age, and satisfaction with participating in the program.

The exclusion criteria included reluctance to continue the program, unpredictable problems that prevent the teen from continuing the program, and use of psychiatric drugs

### Measurement

The measurements were translated into Persian and translated to English by bilingual researchers to check language equivalency.

### Communication patterns questionnaire (CPQ)

CPQ (Christensen & Sullaway, 1984) is a self-report measure designed to assess the extent to which couples make use of various interaction strategies during conflict. It consists of 35 Likert-scale items that evaluate couples' behavior during three stages of marital conflict, when a problem arises in the couple's relationship, during the discussion about the communication problem, and after the discussion about the communication problem. Couples rate each behavior on a 9-point Likert scale ranging from 1 (not at all possible) to 9 (very likely). The minimum possible score is 35 and the maximum is 315. Some of these behaviors include mutual avoidance, mutual argument, argument/avoidance, mutual negotiation, verbal aggression, physical aggression, and mutual withdrawal. Three subscales were devised to assess particular constructs of interest, the demand-withdraw communication subscale, the demand-withdraw role subscale, and the mutual constructive communication subscale. Inter-partner agreement was 0.73, 0.74, and 0.80, respectively, for the three subscales (Christensen & Sullaway, 1984). (Christensen, 1996) reported intraclass correlation coefficients (ICCs) (Cronbach's  $\alpha$ ) between 0.73 and 0.78 for constructive communication and female-demand/male-withdraw but also reported an ICC of 0.58 for male-demand/female-withdraw among Americans, and ICCs ranging from 0.21 to 0.81 in samples from Taiwan, Brazil, and Italy. In Iran, Samadzadeh et al. (2013) showed that the CPQ has good validity (Cronbach's  $\alpha=0.76$ ). In addition, the convergent validity of the questionnaire with the mentioned scales was obtained (0.3-0.95).

### Cognitive emotion regulation questionnaire (CERQ)

Garnefski et al. (2003) developed CERQ. It is a multi-dimensional questionnaire and a self-report tool with 18 items. The CER scale measures 9 strategies (self-blame, acceptance, rumination, positive refocusing, refocusing on planning, positive reappraisal, acceptance perspective, catastrophizing, and health of others). The scoring of the questionnaire is analyzed and interpreted based on the Likert scale, never (1), rarely (3), sometimes (4), and often (5). On the other hand, based on the score of the questionnaire, each of the subscales has 4 options. The higher the score derived in each subscale, the more that

strategy has been used by the individual. [Garnefski et al. \(2003\)](#) reported favorable reliability and validity for this scale. They also reported an  $\alpha$  coefficient for the subscales of this questionnaire in the range of 0.71 to 0.81. [Samani and Sadeghi \(Samani & Sadeghi, 2010\)](#) validated the Persian form of this scale and the  $\alpha$  coefficient has a range between 0.75 to 0.88. To check the convergent and divergent validity of the questionnaire in Iran, the depression, anxiety, and stress scale (DASS-21) with 21 four-point graded questions (from “completely similar to me” to “different from me”) was used, which evaluates the three factors of stress, depression, and anxiety. The minimum possible score is 2 and the maximum is 10. In this scale, each factor evaluates emotional disturbance ([Samani & Sadeghi, 2010](#)).

### Defense style questionnaire (DSQ)

DSQ ([Andrews et al., 1993](#)) contains 40 questions and measures three defense styles, including mature with questions 2, 3, 5, 7, 21, 24, 29, and 35, neurotic with questions 1, 6, 11, 17, 28, 32, 34, and 40, immature with questions 4, 8, 9, 10, 12, 13, 14, 15, 16, 18, 19, 20, 22, 23, 25, 26, 27, 30, 31, 32, 36, 37, 38, and 39 ([Besharat et al., 2019](#)). The questionnaire is scored on a 9-point Likert scale as follows: “I completely agree” receives 9 points, “I strongly agree” 8 points, “I slightly agree” 7 points, “I agree” 6 points, “I have no idea” 5 points, “I disagree” 4 points, “I slightly disagree” 3 points, “I strongly disagree” 2 points, and “I completely disagree” 1 point. In Iran, Cronbach’s  $\alpha$  was used to check the validity of the questionnaire, and the coefficients of the components derived ranged between 0.69 to 0.81 ([Hasani et al., 2009](#)). The validity of the questionnaire was checked using Cronbach’s  $\alpha$  method and the coefficients derived ranged between 0.58 to 0.80 ([Andrews et al., 1993](#)). [Besharat et al.](#) found the Cronbach’s  $\alpha$  coefficient for each of the developed, underdeveloped, and irritable styles to be 0.75, 0.73, and 0.74, respectively ([Besharat et al., 2019](#)).

### Data analysis

This study used frequency, Mean $\pm$ SD, minimum and maximum score, and correlation coefficient to analyze the data. In data analysis, in addition to using descriptive statistics (frequency, Mean $\pm$ SD, minimum and maximum score), the inferential statistics section was analyzed using SPSS software, version 26, and AMOS software, version 24. In the inferential statistics section, the structural equation modeling (path analysis), correlation coefficient, and fit indices were used, which gave us accurate and pure information by removing the relation-

ship errors between the variables. Also, the Shapiro-Wilk test was used to examine the normality of data. Direct and indirect effects have also been reported in this study.

## Results

[Table 1](#) presents the results of the Kolmogorov-Smirnov test to examine the normality of data. As seen, the significance level of the Z test in all variables is greater than 0.05. Therefore, the data have a normal distribution. Therefore, parametric tests can be used.

### Sub-hypothesis 1

A relationship is observed between the CER and MCP in married women with the mediating role of DMs.

The Pearson correlation test and regression analysis ([Hayes, 2017](#)) were used to check sub-hypothesis 1.

According to [Table 2](#), a significant positive correlation coefficient ( $P < 0.01$ ) is observed between the constructive MCP with the mature DMs ( $r = 0.523$ ) and with the positive strategies of CER ( $r = 0.642$ ). In addition, a significant negative correlation coefficient ( $P < 0.01$ ) is observed between the constructive MCP with the immature DMs ( $r = -0.544$ ), with the neurotic DMs ( $r = -0.542$ ), and with negative strategies of CER ( $r = -0.625$ ). In other words, the use of the mature DMs and the positive strategies of CER increases the constructive MCP, while the use of the immature DMs, the neurotic DMs, and the negative strategies of CER decreases the constructive MCP.

[Table 3](#) presents the results from the Bootstrap test to determine the mediating role of DMs in the relationship between CER and constructive MCP. As seen, the indirect effect size of the positive CER on the constructive MCP of couples with the standardized (regression) coefficients of the mature DMs (0.13), immature DMs (0.15), and neurotic DMs (0.15) is positively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the positive CER and the constructive MCP in married couples. In addition, the indirect effect size of the negative CER on the couples’ constructive MCP with the standardized coefficients of the mature DMs (-0.14), immature DMs (-0.16), and neurotic DMs (-0.16) is negatively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the negative CER and the constructive MCP.

Therefore, sub-hypothesis 1, i.e. “a relationship is observed between the CER and the mutually constructive



**Table 1.** The results of the Kolmogorov-Smirnov test to check the normality of the distribution of variables

| Variables      | Subscales                          | Z     | P     |
|----------------|------------------------------------|-------|-------|
| DMs            | Mature DMs                         | 0.159 | 0.079 |
|                | Immature DMs                       | 0.124 | 0.196 |
|                | Neurotic DMs                       | 0.128 | 0.198 |
| Couples' MCP   | Constructive communication pattern | 0.148 | 0.142 |
|                | Avoidant communication pattern     | 0.161 | 0.098 |
|                | Expectation/withdrawal MCP         | 0.200 | 0.125 |
| CER strategies | Positive strategies of CER         | 0.124 | 0.156 |
|                | Negative strategies of CER         | 0.122 | 0.198 |

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Abbreviations: DMs: Defense mechanisms; MCP: Marital communication pattern; CER: Cognitive-emotion regulation.

MCP in the married women with the mediating role of DMs", is confirmed.

### Sub-hypothesis 2

A relationship is observed between the CER and the mutual avoidance MCP in married women with the mediating role of DMs.

The Pearson correlation test and regression analysis were used to check sub-hypothesis 2.

According to Table 2, a negative significant correlation coefficient ( $P < 0.01$ ) is observed between the avoidance MCP with the mature DMs ( $r = -0.558$ ) and with the positive strategies of CER ( $r = -0.444$ ). In addition, a positive significant correlation coefficient ( $P < 0.01$ ) is observed

between the avoidance MCP with the immature DMs ( $r = 0.538$ ), with the neurotic DMs ( $r = 0.494$ ), and with the negative strategies of CER ( $r = 0.508$ ). In other words, the use of mature DMs and the positive strategies of CER decreases the avoidance of MCP. While the use of immature DMs, neurotic DMs, and the negative strategies of CER increases the avoidance of MCP.

Table 4 presents the results from the Bootstrap test to determine the mediating role of DMs in the relationship between CER and avoidance MCP. As seen, the indirect effect size of the positive CER on the couples' avoidance MCP with the standardized coefficients of the mature DMs (-0.26), immature DMs (0.20), and neurotic DMs (-0.21) is negatively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the positive CER and the avoidance MCP.

**Table 2.** Correlation matrix between CER and DMs subscales with mutually constructive MCP, avoidance MCP, and expectation/withdrawal MCP

| Variables                  | Constructive MCP | Avoidance MCP | Expectation/Withdrawal MCP |
|----------------------------|------------------|---------------|----------------------------|
| Mature DMs                 | 0.523**          | -0.558**      | -0.552**                   |
| Immature DMs               | -0.544**         | 0.538**       | 0.565**                    |
| Neurotic DMs               | -0.542**         | 0.494**       | 0.571**                    |
| Positive strategies of CER | 0.642**          | -0.444**      | -0.496**                   |
| Negative strategies of CER | -0.625**         | 0.508**       | 0.647**                    |

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Abbreviations: DMs: Defense mechanisms; MCP: Marital communication pattern; CER: Cognitive-emotion regulation.

\*\* $P < 0.01$ ; \* $P < 0.05$ .

**Table 3.** The results from the Bootstrap test to determine the mediating role of DMs in the relationship between CER and constructive MCP

| Predictor Variables | Mediating Variables | Criterion Variables       | Resampling | Estimation Error | Bootstrap Limits |        | Effect Size | P     |
|---------------------|---------------------|---------------------------|------------|------------------|------------------|--------|-------------|-------|
|                     |                     |                           |            |                  | Lower            | Upper  |             |       |
| Positive CER        | Mature DMs          | Couple's constructive MCP | 2000       | 0.059            | 0.030            | 0.262  | 0.13        | 0.04* |
|                     | Immature DMs        | Couple's constructive MCP | 2000       | 0.055            | 0.050            | 0.266  | 0.15        | 0.04* |
|                     | Neurotic DMs        | Couple's constructive MCP | 2000       | 0.060            | 0.042            | 0.276  | 0.15        | 0.04* |
| Negative CER        | Mature DMs          | Couple's constructive MCP | 2000       | 0.051            | -0.250           | -0.05  | -0.14       | 0.03* |
|                     | Immature DMs        | Couple's constructive MCP | 2000       | 0.065            | -0.292           | 0.046  | -0.16       | 0.03* |
|                     | Neurotic DMs        | Couple's constructive MCP | 2000       | 0.056            | -0.260           | -0.039 | -0.16       | 0.03* |

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Abbreviations: DMs: Defense mechanisms; MCP: Marital communication pattern; CER: Cognitive-emotion regulation.

\*P<0.05.

Also, the indirect effect size of the negative CER on the couples' avoidance MCP with the standardized coefficients of the mature DMs (0.20), immature DMs (0.20), and neurotic DMs (0.17) is positively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the negative CER and the avoidance MCP.

Therefore, sub-hypothesis 2, i.e. "a relationship is observed between the CER and the mutual avoidance MCP with the mediating role of DMs", is confirmed.

### Sub-hypothesis 3

A relationship is observed between the CER and the expectation/withdrawal MCP in married women with the mediating role of DMs.

The Pearson correlation test and regression analysis were used to check sub-hypothesis 3.

According to Table 2, a negative significant correlation coefficient (P<0.01) is observed between the expectation/withdrawal MCP with the mature DMs (r=-0.552) and with the positive strategies of CER (r=-0.496). In addition, a positive significant correlation coefficient

**Table 4.** The result from the bootstrap to DMs in the CER and MCP

| Predictor Variables | Mediating Variables           | Criterion Variables       | Resampling | Estimation Error | Bootstrap Limits |        | Effect Size | P     |
|---------------------|-------------------------------|---------------------------|------------|------------------|------------------|--------|-------------|-------|
|                     |                               |                           |            |                  | Lower            | Upper  |             |       |
| Positive CER        | Mature DMs                    | Couple's avoidance of MCP | 2000       | 0.064            | -0.39            | -0.144 | -0.20       | 0.02* |
|                     | Immature DMs                  | Couple's avoidance of MCP | 2000       | 0.059            | -0.333           | -0.103 | -0.20       | 0.03* |
|                     | Neurotic defensive mechanisms | Couple's avoidance of MCP | 2000       | 0.069            | -0.346           | -0.079 | -0.21       | 0.03* |
| Negative CER        | Mature DMs                    | Couple's avoidance of MCP | 2000       | 0.063            | 0.090            | 0.341  | 0.20        | 0.03* |
|                     | Immature DMs                  | Couple's avoidance of MCP | 2000       | 0.063            | 0.098            | 0.341  | 0.20        | 0.03* |
|                     | Neurotic defensive mechanisms | Couple's avoidance of MCP | 2000       | 0.070            | 0.067            | 0.335  | 0.17        | 0.04* |

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Abbreviations: DMs: Defense mechanisms; MCP: Marital communication pattern; CER: Cognitive-emotion regulation.

\*P<0.05.

**Table 5.** The results from the bootstrap test to determine DMs in the CER and MCP

| Predictor Variables | Mediating Variables | Criterion Variables                  | Resampling | Estimation Error | Bootstrap Limits |        | Effect Size | P     |
|---------------------|---------------------|--------------------------------------|------------|------------------|------------------|--------|-------------|-------|
|                     |                     |                                      |            |                  | Lower            | Upper  |             |       |
| Positive CER        | Mature DMs          | Couple's expectation/ withdrawal MCP | 2000       | 0.074            | -0.338           | -0.103 | 0.23-       | 0.02* |
|                     | Immature DMs        | Couple's expectation/ withdrawal MCP | 2000       | 0.059            | -0.332           | 0.093- | -0.20       | 0.03* |
|                     | Neurotic DMs        | Couple's expectation/ withdrawal MCP | 2000       | 0.067            | -0.376           | -0.109 | -0.25       | 0.02* |
| Negative CER        | Mature DMs          | Couple's expectation/ withdrawal MCP | 2000       | 0.054            | 0.066            | 0.279  | 0.15        | 0.03* |
|                     | Immature DMs        | Couple's expectation/ withdrawal MCP | 2000       | 0.066            | 0.061            | 0.320  | 0.16        | 0.03* |
|                     | Neurotic DMs        | Couple's expectation/ withdrawal MCP | 2000       | 0.073            | 0.072            | 0.355  | 0.17        | 0.04* |

\*P<0.05.

Abbreviations: DMs: Defense mechanisms; MCP: Marital communication pattern; CER: Cognitive-emotion regulation.

( $P < 0.01$ ) is observed between the expectation/withdrawal MCP with the immature DMs ( $r = 0.565$ ), with the neurotic DMs ( $r = 0.571$ ), and with the negative strategies of CER ( $r = 0.647$ ). In other words, the use of mature DMs and the positive strategies of CER reduces the expectation/withdrawal of MCP. While the use of immature DMs, neurotic DMs, and negative strategies of CER increases the expectation/withdrawal MCP in married women.

Table 5 presents the results from the Bootstrap test to determine the mediating role of DMs in the relationship between CER and expectation/withdrawal MCP.

As seen, the indirect effect size of the positive CER on the couples' expectation/withdrawal MCP with the standardized coefficients of the mature DMs (-0.23), immature DMs (-0.20), and neurotic DMs (-0.25) is negatively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the positive CER and the expectation/withdrawal MCP in married couples.

Furthermore, the indirect effect size of negative CER on the couples' expectation/withdrawal MCP with the standardized coefficients of the mature DMs (0.15), immature DMs (0.16), and neurotic DMs (0.17) is positively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the negative CER and the expectation/withdrawal MCP in married couples.

Therefore, sub-hypothesis 3, i.e. "a relationship is observed between the CER and the expectation/withdrawal MCP with the mediating role of DMs", is confirmed.

### Discussion

This correlation study was conducted to investigate the mediating role of DMs in the relationship between CER and MCP in married women in Tehran Province. The statistical population of the study included all married women in Tehran Province in 2021. A total of 170 subjects were selected as the statistical sample of the study via convenience sampling methods. The results of this study showed a correlation between the CER and the mutually constructive MCP in married women with the mediating role of DMs. The indirect effect size of the positive CER on the constructive MCP of couples with the standardized (regression) coefficients of the mature DMs (0.13), immature DMs (0.15), and neurotic DMs (0.15) is positively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the positive CER and the constructive MCP. In addition, the indirect effect size of the negative CER on the couples' constructive MCP with the standardized coefficients of the mature DMs (-0.14), immature DMs (-0.16), and neurotic DMs (-0.16) is negatively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the negative CER and the constructive MCP in married couples. The results of this study are consistent with the research of [Bahramimashoof et al. \(2022\)](#) Their results also showed that CER strategies directly and indirectly influence marital satisfaction.

Explaining this result, DMs have adaptive power, as they reduce anxiety and its adverse effects, and allow one to better adapt to adverse environmental factors; also, intense and frequent use of DMs causes distance and separation from reality; these mechanisms are es-



pecially used in mental disorders (Ahmadvand, 1989). When two people do not have a healthy interaction and hold grudges or shout at each other, they have cross-conversation. Cross-conversation occurs when the response provided does not match the conversational stimulus and the speaker does not expect that response (Shafiabadi & Naseri, 2006). Emotion regulation through cognitions is inextricably linked to human life. Cognitions or cognitive processes can help us manage and regulate our emotions or feelings, so that we have control over or are not overwhelmed by our emotions, for example, during or after experiencing threats or stressful events. The CER strategies help people to regulate negative arousal and emotions. This method of regulation has a direct relationship with the growth, development, or occurrence of mental disorders. Therefore, as a result of the incorrect cognitive evaluation of the situation due to lack of information, wrong perception, or illogical and false beliefs, the person chooses his/her cognitive strategy to face the stressful situation (Garnefski & Karaaj, 2006).

Another result of this study showed a relationship between the CER and the mutual avoidance MCP with the mediating role of DMs. The indirect effect size of the positive CER on the couples' avoidance MCP with the standardized coefficients of the mature DMs (-0.26), immature DMs (0.20), and neurotic DMs (-0.21) is negatively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the positive CER and the avoidance MCP. Also, the indirect effect size of the negative CER on the couples' avoidance MCP with the standardized coefficients of the mature DMs (0.20), immature DMs (0.20), and neurotic DMs (0.17) is positively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the negative CER and the avoidance MCP. The results of this study are consistent with the research of Roshan and Mogadashin (Roshan, et al. 2015), Beheshti and Najafi, and Monte and Rosen. Roshan and Mogadashin (Roshan, et al. 2015) found a significant relationship between the quality of life and DMs so using more mature and immature DMs can significantly predict quality of life.

Explaining this finding, the pattern of conflict between couples is very intense, in such a way that conflict and fighting have become a permanent and destructive pattern and couples refuse to communicate with each other; their lives have been parallel to each other and their communication is minimal or non-existent. This pattern is manifested through behaviors, such as changing the subject, joking, trying to calm down, not creating a dispute, showing unwillingness to get involved in the dispute, and keeping silent in front of the spouse. During

that, the couple tries to avoid discussing the problem (Christensen, 1996). According to Lorentz, agreement and compromise between husband and wife cannot be established without talking about issues, opinions, and ideas. Therefore, if both husband and wife reach the point of withdrawal as the main solution to avoid conflict, they will not find healthy communication behaviors in their married life, and negative communication behaviors, such as avoiding intimacy, withdrawing with anger, involvement in conflict, and avoidance and defensiveness in communication, whether it is for an individual or a specific couple, will destroy the opportunity for mutual understanding and respect between couples and will bring anxiety, restlessness, and helplessness, ultimately leading to divorce. In addition, mutual avoidance is related to the husband's and wife's dissatisfaction in the first year of their marriage and family imbalance (Honarvaran et al., 2011). DMs allow people a period of rest to master changes in their self-concept. DMs can also dampen or negate sudden increases in biological drives and enable individuals to reduce unresolved conflicts with important others. Finally, the use of DMs can help to keep anxiety, shame, and guilt within tolerable limits during sudden conflicts with conscience and culture (Vaillant, 1994). Adaptive (mature) DMs can increase the feeling of satisfaction and allow feelings, thoughts, and their consequences to be experienced consciously. They not only reduce conflicts and cognitive dissonance but also balance conflicting motivations and create a kind of integration and harmony, thereby promoting psychological well-being. In contrast, in less adaptive DMs, conflicting sources of human behavior including conscience, reality, interpersonal relationships, and emotions are distorted or denied (Vaillant, 2000).

The results of this study also showed a relationship between the CER and the expectation/withdrawal MCP with the mediating role of DMs. The results showed a negative significant correlation coefficient ( $P < 0.01$ ) between the expectation/withdrawal MCP with the mature DMs ( $r = -0.552$ ) and with the positive strategies of CER ( $r = -0.496$ ). In addition, there is a positive significant correlation coefficient ( $P < 0.01$ ) between the expectation/withdrawal MCP with the immature DMs ( $r = 0.565$ ), with the neurotic DMs ( $r = 0.571$ ), and with the negative strategies of CER ( $r = 0.647$ ). In other words, the use of the mature DMs and the positive strategies of CER reduces the expectation/withdrawal MCP, while the use of the immature DMs, neurotic DMs, and negative strategies of CER increases the expectation/withdrawal MCP. The indirect effect size of the positive CER on the couples' expectation/withdrawal MCP with the standardized coefficients of the mature DMs (-0.23), immature DMs

(-0.20), and neurotic DMs (-0.25) is negatively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the positive CER and the expectation/withdrawal MCP in married couples. Furthermore, the indirect effect size of negative CER on the couples' expectation/withdrawal MCP with the standardized coefficients of the mature DMs (0.15), immature DMs (0.16), and neurotic DMs (0.17) is positively significant at the 0.05 level. Therefore, all three DMs have a mediating role between the negative CER and the expectation/withdrawal MCP in married couples. The results of this study are consistent with the researches.

Explaining this result, interpersonal relationships are regarded as an important and fundamental need among humans (Harjie & Dickson, 2004). CER strategies refer to the way people think after a negative experience or traumatic event occurs for them (Voges & Romney, 2003). At other times, emotion regulation is achieved through other components of information processing. In this way, instead of limiting the data related to emotionally arousing information, people adjust their emotions by changing the information interpretation or analysis. MCPs are communication channels through which husband and wife interact with each other. Communication channels that occur frequently in a family are called MCP, and the set of these patterns form the family communication network (Trenholm & Jensen, 1996).

Therefore, there is a relationship between cognitive-emotional regulation and communication patterns of couples with the mediating role of defense mechanisms, it is confirmed.

## Conclusion

Due to the increasing importance of MCP in married life, the present study investigates the relationship between CER and a couple's MCP in married women in Tehran Province with the mediating role of DMs.

All three DMs have a mediating role between CER of negative emotion and avoidant MCP of married couples.

Therefore, considering the importance of MCP in married life, CER strategies and DMs are necessary to inform people about cognitive strategies of CER and emotional adjustment. Family therapists are recommended to consider CER strategies as well as DMs to treat marital issues.

## Research limitations

This research had limitations, which are listed below

1. Because the sampling method was available, it is necessary to be cautious in generalizing the results.
2. The data of this research is based on examining the opinions of married women in Tehran Province, and the opinions of other people (married men) and different strata in other regions of the country are considered therefore the results of this research should be done with caution and sufficient knowledge to generalize to other societies.
3. The impossibility of controlling factors, such as the amount of cultural, economic, and psychological characteristics and possible family problems has made it impossible to interpret the research results completely independently.
4. Due to the environmental conditions and the COVID-19 disease in the country, data were collected online, and a lack of good cooperation from many respondents and a lack of sufficient supervision and control over the answers was another limitation of the research

## Offers

In this research, suggestions based on practical suggestions for future research are also presented, which include:

## Suggestions for future research

1. Since this research is limited to married women in terms of the statistical population and the generalization of the results to men is limited, therefore it is suggested that in the future, such research should be conducted in married men as well so that the results are more reliable and generalizable.
2. Since this research has examined only two variables of cognitive regulation of emotions and couples' MCP in DMs, it is suggested to examine other variables of married women, including marital satisfaction, sexual satisfaction, emotional divorce, attachment style, primary maladaptive schemas, marital despondency, relationships of extramarital affairs, personality traits, quality of life, psychological well-being, etc.
3. It is suggested that in future research, other expressions, such as interviews and field observations should be used as much as possible to collect information.

4. It is suggested to conduct this research in the way of educational interventions in the field of family therapy and couple therapy.

5. It is suggested that the implementation of this research in other societies with different cultures will be effective in identifying various issues and problems in the field of interpersonal and social, family, and cultural relationships that cause communication problems.

### Practical suggestions

1. At the macro level, educational and inclusive policies of society, especially in the field of the family, should pay serious attention to the issue of teaching the role of cognitive regulation of emotion and its effect on couples' MCP.

2. According to the results of the research, which showed that married women who use less emotional schemas have a constructive communication pattern and married women who use more emotional schemas have an avoidant communication pattern and an expectation/withdrawal pattern. The necessity of training to deal with schemas excitement is offered in the form of workshops and educational booklets for couples.

3. Before couples enter into a relationship, it is better to prepare a training package for healthy MCPs to be effective in the direction of a healthy life.

### Ethical Considerations

#### Compliance with ethical guidelines

In this study, ethical standards, including obtaining informed consent, and guaranteeing privacy and confidentiality were observed. Also, when completing the questionnaires, while emphasizing the completion of all questions, participants were free to leave the research at any time and provide personal information. They were assured that the information would remain confidential, and this was fully complied with. Informed consent was obtained from all participants included in this study. This study was registered in the Ethics Committee of [Islamic Azad University of Tehran Medical Branch](#) (Code: IR.IAU.TMU.REC.1400.178).

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#### Authors' contributions

All authors equally contributed to preparing this article.

#### Conflict of interest

The authors declared no conflict of interest.

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