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مباحث پیشرفته یادگیری عمیق؛ شبکه های نویه گرافی

(Graph Attention Networks)
The Causal Model of Couple Burnout Based on Irrational Relationship Beliefs, Non-adaptive Strategies of Cognitive Emotion Regulation, and Psychological Capital

Nazanin Fatehi (MSc), Mohsen Kachooei (PhD), Motahareh Gholami-Hosnaroudi (MSc)

1. Department of Clinical Psychology, Faculty of Humanities, University of Science and Culture, Tehran, Iran

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Abstract

Introduction: The present research was aimed to explain the causal model of couple burnout based on irrational relationship beliefs, non-adaptive strategies of cognitive emotion regulation, and psychological capital.

Method: The method was descriptive-correlational. The sample included 300 married women living in Tehran that were selected through the convenient sampling method. To collect data, Couple Burnout Measure (CBM; 1996), Relationship Beliefs Inventory (RBI; 1982), Cognitive Emotion Regulation Questionnaire (CERQ; 2006), and Psychological Capital Questionnaire (PCQ; 2011) were used. Data analysis was done by the path analysis method.

Results: Firstly, the fitness indices indicated that the model did not have sufficient fitness. However, the modification indices indicated that there was a correlation between the residuals of non-adaptive strategies and psychological capital. The modified model had very high fitness (GFI=0.988, AGFI=0.951, CFI= 0.976, RMSEA=0.045, RMR=0.048). Totally, this model could explain the 22.8% variance of couple burnout (p<0.05).

Conclusion: The present research provided some evidence in the support of the impact of irrational relationship beliefs, non-adaptive strategies of cognitive emotion regulation, and psychological capital on the couple burnout. Therefore, the results of the present research can be used in the couple therapy interventions to enrich couples’ relationships and also promoting the quality of the family system.

Keywords: Couple Burnout, Irrational Relationship Beliefs, Non-adaptive Strategies of Cognitive Emotion Regulation, Psychological Capital, Married Women

Introduction

Marriage is the most important event in the life cycle and the most effective relationship in human life, during which couples are in a two-way interaction with their spouses. Therefore, the quality of the marital relationship can have a significant impact on the mental and physical health of individuals [1]. Thus, the results of some studies suggest that failure to meet each of the needs of couples (sexual, emotional and psychological) can cause the loss of the meaning of marriage and the occurrence of couple burnout and consequently instability of marriage [2].

Couple burnout refers to the negative evolution of commitment and love in marriage. A process in which the emotional attachment to the spouse gradually diminishes, accompanied by feelings of alienation, apathy, and indifference between the couple, and the replacement of negative emotions with positive ones, eventually leading to a loss of initial enthusiasm and commitment [3]. In this regard, Tsapelas et al. [4] showed that couple burnout leads to the loss of intimacy and emotional separation of couples and this issue...
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causes couples not to find a suitable answer to resolve their conflicts and disputes.
On the other hand, one of the effective factors in the occurrence of marital disturbances, including couple burnout, is the existence of relationship beliefs. According to Eidelson and Epstein [5], relationship beliefs refer to the beliefs or mentality that a couple has about their marital relationship and to accept it as a reality, and dysfunctional relationship beliefs are those irrational beliefs and thoughts that are specific to the marital relationship and cause problems due to overuse. Therefore, such beliefs, in addition to creating a gap in emotional relationships, cause isolation of couples and subsequent couple burnout [6].
The results of the research also indicate that the satisfaction and quality of couples’ relationships are highly correlated with their relationship beliefs so that the results of a study by Ebrahimi and Mohamadlou [7] and Kemer et al. [8] indicate the importance of relationship beliefs with quality of marital life and satisfaction with the relationship.
Another factor that can affect couple burnout is non-adaptive cognitive emotion regulation strategies, which include the use of dysfunctional cognitive emotion regulation strategies (self-blame, blaming others, rumination, catastrophic) which people use when faced with stressful situations and tragic events [9].
On the other hand, it seems that the ability to regulate emotion is one of the components of emotional intelligence [10]. According to Satkin et al. [11], people with higher emotional intelligence have more marital satisfaction.

Therefore, according to research findings, couple satisfaction and compatibility are closely related to couples’ emotion management. The results of previous research [12-14] indicated a negative and significant relationship between difficulty in regulating emotion and marital satisfaction. Also, the results of other studies [15-17] showed a relationship between cognitive emotion regulation strategies and couple burnout. Thus, uncompromising strategies of cognitive emotion regulation are more associated with couple burnout. Therefore, since people’s dysfunctional beliefs lead to a certain pattern of responding to inner experiences and cause the continuation of negative emotions and consequently psychological disturbances [18], it seems that such beliefs can cause negative emotions and interactions between the couples and it interferes with the expression of emotions and eventually leads to couple burnout.
Another influential factor in the quality of individual life, as well as marital life, is the amount of psychological capital. Psychological capital is a hybrid and interconnected construct and includes four perceptual-cognitive components: hope, optimism, self-efficacy and resilience. In an interactive and evaluative process, these components give meaning to couples’ lives and guarantee the creation of a compatible and satisfying relationship between couples. Also, it perpetuates their efforts to change stressful situations and can enable them to be less stressed and more resilient when facing stressful life situations [19-21].
In this regard, the results of Golparvar et al.’s study [22] showed that the components of psychological capital are directly related to marital satisfaction and the results of Panahi and Fatehizadeh’s study [23] also showed a negative correlation between the components of psychological capital and quality of marital life. On the other hand, beliefs also play an effective role in the psychological capital of couples, so that the results of Atae and Bagheri’s study [24] showed that there is a positive and significant relationship between beliefs and psychological capital of married women. It seems that dysfunctional belief is likely to diminish a couple’s psychological capital by mismatching between ideals and realities.
Therefore, considering that the marital relationship is the foundation of the family system and any disruption in it is considered as a threat to the survival of the family, so the maintenance and continuity of the family institution become more and more necessary. Accordingly, it is important to examine the factors that can perpetuate satisfaction or the factors that expose many couples to disorder and breakdown.

In reviewing the research literature, although few previous studies have pointed to the correlation of these variables, similar studies have not been found to explain the model of couple burnout. Thus, as the consequences of couple burnout affect mental, physical, individual and family health, conducting a variety of research in this area can be effective. Therefore, the present study aimed to explain the causal model of couple burnout based on the variables of irrational relationship beliefs, non-adaptive cognitive regulation strategies and psychological capital.

Figure 1. Proposed research model
Method

The present study was fundamental in terms of purpose and in terms of methodology it was a descriptive-correlational research. The research statistical population included all married women in 22 districts of Tehran in 2019 who were sampled using a convenience sampling method. Also, the sample size of the present study was 300 according to Dr Hooman (between 5 and 15 observations per measured variable) [25] and considering the probability of fall. Having an age range of 20 to 48 years, at least two years of marital life, and at least high school diploma were among the inclusion criteria for participation in the present study, and living apart, suffering from serious physical and mental illnesses requiring the use of psychiatric drugs (according to the self-report in demographic information questionnaire) and substance abuse (according to the self-report in the demographic information questionnaire) were among the exclusion criteria in this study. The present study was performed on 300 married women who were in the age range of 20 to 48 years (mean = 33.72; standard deviation = 7.52). In this study, 36 (%12) of the participants had a high school diploma, 49 (%16.3) had an associate degree, 96 (%32) had a bachelor’s degree, 77 (%25.7) had a master degree, and 42 (%14) had a doctorate and, on average, 7.78 years had passed since their marriage. The tools used in this study are as follows:

Couple Burnout Measure (CBM): This scale is a self-assessment tool with 21 items and three main subscales including physical exhaustion (fatigue, weakness, and sleep disorders), emotional exhaustion (depression, disappointment, falling into the trap), and mental exhaustion (worthlessness, frustration, anger toward the spouse), which was developed by Pines [26]. This questionnaire is scored based on a seven-point Likert scale ranging from 1, representing lack of inexperience (never) to 7, representing high experiences (always), with a high score of 147 and a low score of 21, higher scores indicating more burnout. Evaluation of the reliability coefficient of the CBM scale showed that this scale has an internal consistency between the variables in the range of 0.84 and /90. Also, the validity of the questionnaire was confirmed by examining negative correlations with positive communication characteristics, including quality of conversations, emotional attraction to the spouse, sense of security, self-fulfillment, sense of purposiveness. Translated versions have been successfully used in intercultural studies in different cultures [27]. In Iran, after performing the questionnaire, Adib Rad [28] reported a reliability coefficient using the Cronbach's alpha coefficient of 0.76. In the present study, the internal consistency of this questionnaire with the Cronbach's alpha method was 0.90.

Relationship Beliefs Inventory (RBI): This scale is a 40-item self-assessment tool with five subscales developed by Eidelson and Epstein (5). The purpose of this questionnaire is to assess the level of irrational relationship beliefs in marital interaction and each question is scored on a Likert scale with six options from 0 (strongly disagree) to 5 (strongly agree). The five subscales of this list include: 1) 'Disagreement is destructive', 2) 'Partners cannot change', 3) 'Mindreading is expected', 4) 'Sexual perfectionism', 5) 'Sexes are different'. Eidelson and Epstein reported Cronbach’s alpha coefficient of subscales in the range of 0.72 to 0.81. In a study by Heydari et al. [29], Cronbach's alpha coefficient was reported to be 0.84 and the validity of this questionnaire was 0.76 using the criterion validity. In the present study, the internal consistency of this questionnaire was calculated as 0.78 with the Cronbach’s alpha method.

Cognitive Emotion Regulation Scale - Short Form (CERQ_Short): This scale is an 18-item self-assessment tool with nine subscales (self-blame, other-blame, rumination, catastrophizing, putting into perspective, positive refocusing, positive reappraisal, acceptance, and planning). In this questionnaire, cognitive emotion regulation strategies are divided into two general categories: adaptive strategies (adapted) and non-adaptive (non-adapted) strategies that measure people’s strategies in response to threatening events and life-threatening stresses based on a five-point Likert scale, ranging from 1 (Never) to 5 (Always). The minimum and maximum scores in each subscale are 2 and 10, respectively, and a higher score indicates more use of that cognitive strategy. According to the results of Besharat and Bazazian [30], the 18-item form of the CERQ has sufficient reliability and validity to measure cognitive coping strategies in Iranian samples. Garnefski and Kraaj (9) reported Cronbach’s alpha coefficient for this scale as 0.92. Also, in Hassani’s research, the Cronbach’s alpha coefficient was obtained as 0.76. In the present study, the internal consistency of this scale with the Cronbach’s alpha method in the subscale of non-adaptive strategies and adaptive strategies was 0.72.

Psychological Capital Questionnaire (PCQ): The scale is a 26-item self-assessment tool with four subscales (hope, efficacy, resiliency, and optimism) developed by Mac Gee [31] to measure psychological capital. A six-point scale is used for this questionnaire (strongly agree = 1 to strongly agree = 6). The validity and reliability of this questionnaire along with the 25-item form and the 12-item form of the psychological capital questionnaire were examined by Mac Gee and the validity and reliability of this questionnaire were confirmed. As evidence of concurrent validity of this questionnaire with another version of the psychological capital questionnaire, there is a positive and significant correlation between psychological capital and self-efficacy between 0.48 and 0.54, a positive and significant correlation between 0.40 and 0.61 with the hope, a positive and significant correlation between 0.48 and 0.55 with the resilience, and a positive and significant correlation between 0.47 and 0.50 with optimism. On the other hand, the face validity of this questionnaire has been reviewed and confirmed by Golparvar. Also, in Golparvar et al.’s [32] research, exploratory factor analysis with Varimax rotation was conducted on 26 questions of this questionnaire, and the same four factors introduced in the main questionnaire...
were obtained and Cronbach’s alpha for efficacy, hope, and resilience, and optimism were reported to be 0.91, 0.89, 0.83, and 0.70, respectively. In the present study, the internal consistency of this questionnaire was obtained as 0.84 with Cronbach’s alpha method.

**Results**

Descriptive statistics related to research instruments are presented in Table 1. Assumptions of path analysis were examined before performing it to ensure the accuracy of its statistical results. These assumptions include the normal multivariate distribution of data and the absence of multivariate outliers [33]. Examination of the multivariate outliers via the Mahalanobis distance showed that there were no multivariate outliers because the calculated \( \chi^2 \) value for every 300 subjects was less than the critical \( \chi^2 \) value of the table with four degrees of freedom, i.e., less than 9.49. Moreover, the Mardia test statistic was equal to 1.996 indicating that the data had a normal multivariate distribution (\( p > 0.05 \)). Therefore, according to the establishment of the assumptions, the hypothesis test was performed. First, Pearson correlation coefficients between research variables were calculated. These coefficients are presented in Table 2.

As Table 2 shows, all correlation coefficients were significant (\( p < 0.001 \)). The correlation results showed that women who used more irrational relationship beliefs had more couple burnout (\( r = 0.457; p < 0.001 \)) and used more non-adaptive strategies (\( r = 0.387; p < 0.001 \)) and had less psychological capital (\( r = 0.311, p < 0.001, \) and \( r = 0.386 \) and \( p < 0.001 \), respectively). Finally, more use of non-adaptive strategies in women was associated with less psychological capital (\( r = -0.253, p < 0.001 \)).

The path analysis method was used to test the proposed research model to explain couple burnout (Figure 1). The model fit indices are presented in Table 3. Although \( \chi^2 \) statistics show that the model does not fit with the data (\( \chi^2 = 5.975, p = 0.015 \)), \( \chi^2 \) is very sensitive to sample size, and in high volume samples, even rejects fitted models incorrectly. Therefore, this statistic is not a suitable indicator for judgment and other fit indexes, such as GFI, AGFI, CFI, RMSEA and RMR should be used. In the case of GFI, AGFI and CFI, values higher than 0.95 and in the case of RMSEA and RMR, values lower than 0.05 are considered as model fit indexes [33]. Accordingly, the model does not have a perfect fit and therefore needs to be adjusted to achieve a perfect fit.

Adjustment indexes show that there is a correlation between “error 1” (variable error of non-adaptive strategies) and “error 2” (variable error of psychological capital). This is also theoretically acceptable because it can be expected that part of the relationship between non-adaptive strategies and psychological capital is related to something other than relationship beliefs. After making this adjustment, the model was fitted. The fit indexes of the modified model are reported in Table 3 (GFI = 0.988, AGFI = 0.951, CFI = 0.976, RMSEA = 0.045 and RMR = 0.048).

After ensuring the model fit, the standard path coefficients were calculated. These coefficients are presented in Table 4 and Figure 2.

### Table 1. Descriptive Statistics of Research Instruments

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of subjects</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Couple burnout</td>
<td>300</td>
<td>72.56</td>
<td>18.85</td>
</tr>
<tr>
<td>Irrational relationship beliefs</td>
<td>300</td>
<td>99.77</td>
<td>15.72</td>
</tr>
<tr>
<td>Non-adaptive cognitive emotion regulation strategies</td>
<td>300</td>
<td>23.80</td>
<td>4.30</td>
</tr>
<tr>
<td>Psychological capital</td>
<td>300</td>
<td>106.91</td>
<td>14.56</td>
</tr>
</tbody>
</table>

### Table 2. Pearson Correlation Coefficients between Research Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Couple burnout</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Irrational relationship beliefs</td>
<td>*0.45</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Non-adaptive cognitive emotion regulation strategies</td>
<td>*0.31</td>
<td>*0.38</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Psychological capital</td>
<td>*-0.38</td>
<td>*-0.33</td>
<td>*-0.25</td>
<td>1</td>
</tr>
</tbody>
</table>

* Significance Level at 0.001

### Table 3. Model Fit Indexes

<table>
<thead>
<tr>
<th>Index</th>
<th>( \chi^2 )</th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>RMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial model</td>
<td>5.97</td>
<td>0.99</td>
<td>0.90</td>
<td>0.97</td>
<td>0.12</td>
<td>0.30</td>
</tr>
<tr>
<td>Adjusted model</td>
<td>3.00</td>
<td>0.98</td>
<td>0.95</td>
<td>0.97</td>
<td>0.04</td>
<td>0.04</td>
</tr>
</tbody>
</table>

### Table 4. Standard Path Coefficients Related to the Studied Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression weights</th>
<th>SD</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrational relationship beliefs → Non-adaptive cognitive emotion regulation strategies</td>
<td>0.38</td>
<td>0.01</td>
<td>0.0001</td>
</tr>
<tr>
<td>Irrational relationship beliefs → Psychological capital</td>
<td>-0.33</td>
<td>0.05</td>
<td>0.0001</td>
</tr>
<tr>
<td>Irrational relationship beliefs → Couple burnout</td>
<td>0.32</td>
<td>0.06</td>
<td>0.0001</td>
</tr>
<tr>
<td>Non-adaptive cognitive emotion regulation strategies → Couple burnout</td>
<td>0.12</td>
<td>0.23</td>
<td>0.023</td>
</tr>
<tr>
<td>Psychological capital → Couple burnout</td>
<td>-0.24</td>
<td>0.06</td>
<td>0.0001</td>
</tr>
<tr>
<td>Correlation between Error 1 and Error 2</td>
<td>*-0.14</td>
<td>3.16</td>
<td>0.016</td>
</tr>
</tbody>
</table>

*Pearson correlation
According to Table 4, irrational relationship beliefs have a significant effect on non-adaptive cognitive regulation strategies ($\beta = 0.387$, $p <0.01$), psychological capital ($\beta = -0.338$, $p <0.01$), and couple burnout ($\beta = 0.327$, $p <0.01$). Non-adaptive strategies and psychological capital also had a significant effect on couple burnout ($\beta = 0.122$, $p <0.05$, $\beta = -0.245$, $p <0.01$, respectively). Besides, ‘Error 1’ and ‘Error 2’ had a significant correlation with each other ($r = -0.141$, $p <0.05$). Finally, this model was able to describe 22.8% of the variance of couple burnout, which is significant at the level of 0.05. As a result, the proposed model was approved for explaining a couple of burnout.

**Discussion**

The present study aimed at explaining couple burnout based on the variables of irrational relationship beliefs, non-adaptive cognitive emotion regulation strategies, and psychological capital. The results of this study showed that irrational relationship beliefs have a significant effect on non-adaptive cognitive emotion regulation strategies and psychological capital. Irrational relationship beliefs, psychological capital and non-adaptive cognitive emotion regulation strategies also had a significant effect on couple burnout. According to the findings of this study, couples with irrational relationship beliefs have less psychological capital and irrational relationship beliefs can have a significant negative effect on the components of psychological capital (hope, optimism, efficacy, and resilience).

In this regard, the results of Ataee and Bagheri’s study [24] also showed the significance of the effect of belief on psychological capital. Explaining this finding, it can be pointed out that irrational relationship beliefs create ideals of the relationship in the couple’s mind that are not in line with the reality of the couple’s relationship, and as a result of a mismatch between the ideals and reality, the efficacy of couples is reduced, and such a situation is created that couples realize that despite their best efforts, no progress is felt in their marital relationship. Therefore, hope and optimism, the other components of psychological capital, are reduced in couples, and consequently, the couple’s resilience to potential failures and problems is decreased. As a result, by reducing these components, the amount of psychological capital of couples is reduced. On the other hand, the findings of this study showed that psychological capital has a significant effect on couple burnout.

In this regard, the results of previous studies [22, 23, 34] indicated that the psychological capital components are related to marital satisfaction, quality of marital life and marital intimacy. Also, Hashemi et al. [35] found that people with more desirable psychological capital also have higher psychological well-being. Also, the findings of Aliyev and Karakus’s study [36] showed that a relationship exists between increasing psychological capital and reducing negative emotions (such as anxiety and stress), which are also well associated with the components of couple burnout. Therefore, according to these results, it can be said that couples who have higher psychological capital have higher self-efficacy and are confident in their efforts to achieve their goals. On the other hand, a high level of hope and optimism in these couples cause them to have more resilience when facing failures and are less prone to couple burnout.

Another finding of this study showed that irrational relationship beliefs have a significant effect on couple burnout. Previous studies [7, 8] have shown that there is a significant relationship between relationship beliefs with quality of marital life and relationship satisfaction. On the other hand, according to Kiani et al.’s study [37], communication documents and emotional expression are also able to significantly predict couple burnout. The relationship between irrational thinking and couple burnout can be explained based on rational emotive behaviour theory proposed by Ellis [38]. Ellis, believes that irrational beliefs can create expectations in couples that are not compatible with the marital relationship and may reduce the tolerance threshold in the marital relationship and ultimately lead to couple burnout. Irrational relationship beliefs about marital situations lead to negative emotions, conflicts, and interactions, and can result in couple burnout by disturbing the expression of love as well as creating a gap between the ideals and realities of the marital relationship.

This study also showed that couple burnout is significantly influenced by non-adaptive cognitive emotion regulation
strategies, and this result is consistent with the findings of other studies [15-17]. According to previous studies, marital adjustment and satisfaction are closely related to emotion management, so that couples with marital satisfaction have better management in expressing their negative and positive emotions [6, 39]. Watkins et al. [40] also found that positive emotional regulation and subsequent interactions increase intimacy between couples. Also, Schreiber et al. [41] demonstrated that negative cognitive emotion regulation strategies may play a role in the development and perpetuation of psychological pathology by confronting self-regulatory goals during periods of emotional distress.

In fact, it can be said that non-adaptive cognitive emotion regulation strategies are associated with prominent forms of psychological trauma that these psychological traumas such as anxiety and depression are somehow related to the components of couple burnout. Therefore, to explain these findings, it can be stated that since non-adaptive cognitive emotion regulation strategies reduce the individual’s sense of control over the inner and outer world, then couples who frequently use these strategies when facing problems, instead of focusing on problem-solving, engage in situation-related emotions and blame themselves or others [42]. Therefore, they seem to pay less attention to the positive and controllable aspects of the situation and visualize it as a catastrophe with small events. Ultimately, these couples are likely to provide a bedrock for mental and emotional fatigue and couple burnout in general.

This study, like other existing studies, faced some limitations. First, the present study only examined the female population, which limits the generalization of results to the male population. Therefore, it is suggested that in future studies, the role of factors related to burnout in men’s population should be also considered. On the other hand, the results and evaluation of the study, due to the spread of COVID-19 depended on self-report tools such as online questionnaires. In order to obtain more accurate information, it is suggested to use other methods and tools in future research such as clinical interviews.

Conclusion
The results of the present study at the theoretical level, by examining the factors affecting couple burnout, contribute to the richness of the research background in this field and provide a basis for future research in order to better understand the theoretical concepts of the marital field. In addition, the results of this research at the practical level, can be effective at different levels of prevention and treatment (from enriching marital quality to repairing couple burnout and preventing divorce).

On the other hand, according to the proposed model of this study, the obtained results based on the relationship between non-adaptive cognitive emotion regulation strategies and psychological capital can be a platform for further research on the correlation between these two constructs and components that can mediate between these two components.

Therefore, irrational relationship beliefs, non-adaptive cognitive emotion regulation strategies and psychological capital of couples can be evaluated in the process of couple therapy, family therapy or in the stages of premariatal counselling to take more effective preventive measures in predicting the quality of life of couples, and if necessary, interventions in this field.

Conflict of Interest
The authors declared no conflict of interest.

Ethical Approval
The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information. Moreover, if desired, the results of the research could be available to them.

Acknowledgement
The authors would like to thank all those who participated in this study.

References
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