Comparison of Emotional Processing, Emotional Failure, and Cognitive Adjustment of Emotions in Students with Divorced and Non-Divorced Parents

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ABSTRACT

Background: divorce causes emotional and psychological damages to children. On this basis, emotional processing, emotional failure, and emotional adjustment of students with divorced and non-divorced parents were compared in Isfahan city, Iran.

Methods: In this descriptive-analytic causative-comparison study, all students with divorced and non-divorced parents were investigated in Isfahan. In this research, non-probability sampling method was used. In order to conduct the study, 200 middle-school students with divorced and non-divorced parents were selected (100 students had divorced and 100 had non-divorced parents). The questionnaires used in this study included emotional processing questionnaire, emotional failure, and emotional adjustment questionnaire. The data were analyzed using analysis of variance.

Results: The results showed that emotional processing, emotional failure, and emotional adjustment were significantly different between the two groups of students with divorced parents and non-divorced parents (P-value < 0.001). Although students with divorced parents had lower scores in components of emotional processing and emotional adjustment, they had higher scores in emotional failure.

Conclusion: Based on the findings, emotional processing, emotional failure, and emotional adjustment of students with divorced parents should be considered. In this regard, a suitable method of intervention is required, such as treatment based on acceptance and commitment therapy and mind-consciousness to reach acceptable normal level of transformational process.

Keywords: Emotional Processing, Emotional Failure, Emotional Adjustment, Divorce
Introduction

One of the oldest and most original units of society is family. In fact it is the constituting cell of community. Family can be an entity to flourish the best and deepest desires. However, this original social unit is vulnerable to special damages, which hinder flourishing transcendental desires. Family damages cause a great deal of stress for the families and affect the functions of members. As a result of all these tensions, the family weakens and collapses.\(^1\) \(^2\) One of the most stressful events is divorce that imperils the cognitive structure and makes the practices for coping with stress inefficient.\(^3\) Although it is not a firmly confirmed assumption that parents’ divorce leads to emotional and behavioral problems in children, the negative consequences of divorce is certainly greater than its positive aspects.\(^4\) Review of the literature indicated that children of divorced families experienced more educational, emotional, and behavioral problems and had lower levels of mental health compared with the children of ordinary families. Furthermore, more psychological incompatibility, lower self-esteem, and more social problems were observed among them. Different studies suggest that children of divorced families achieved lower scores in social, emotional, and academic areas compared to other children of the same age.\(^5\)

According to the aforementioned remarks, the incidence of divorce not only causes mental damages to the couple, but also endangers the mental health of children. Emotion and emotional adjustment are one of the vulnerable psychological components in children of divorced families.\(^6\) \(^8\) According to different research results, the children of divorced families are not able to adjust their emotions compared with normal children.\(^9\) \(^10\) Emotions can be defined as special inner state of feeling, which begins by the interpretation of the situation in a specific manner, follows a series of physiological changes, and sets the balance between the organism and the environment.\(^11\) It should be noted that several approaches exist for conscious cognitive adjustment of emotions, which are divided into two groups. The first group includes approaches that are theoretically more adaptive and positively focused. They consist of positive refocusing on planning and acceptance, positive reevaluating, and expanding the perspective. The second group includes approaches, which are theoretically non-adaptive. They consist of disaster making, self-criticism, blaming others, and mental rumination.\(^12\)

Emotional processing is another vulnerable component among children of divorced families.\(^13\) According to the study by Baker et al., the emotional processing was categorized into three levels of emotional experience (Lack of Attunement, Discordant, andExternalized),\(^14\) mechanisms controlling the experience and expression of emotions (Suppression, Dissociation, Avoidance, and Uncontrolled), and signs of inadequate processing (Intrusion). The literature showed that the incidence of different mental and emotional damages in people was caused by a dysfunctional emotional processing.\(^15\) \(^16\) The emotional failure is the other component that can be affected by the divorce. According to the researches, unpleasant childhood experiences such as parents’ separation causes problems in the parent-child relationship.\(^17\) This issue disrupts diagnosing and describing emotions and weakens the emotional processes.\(^18\) Previous studies showed that unhappy childhood had significant relationship with psychological disorders and emotional failure in the adulthood.\(^19\) \(^21\) According to the definition, emotional failure is defined as the difficulty in emotional self-organizing and the inability in cognitive processing of emotional information and organizing them. People with these shortcomings, have problems distinguishing between the inner feelings and physical feelings and have difficulty in the detecting, showing, processing, and organizing emotions.\(^22\)

The results of previous research indicated that children and adolescents with divorced parents suffered from a variety of psychological damages.\(^20\) \(^21\) \(^23\) However, the research gap is that...
emotional processes of children with divorced parents such as emotional processing, emotional failure, and emotional adjustment have not be examined.

So, considering the fact that no study has ever compared the emotional processing, emotional failure, and emotional adjustment in children with divorced and non-divorced parents, this study was conducted. The aim was to compare and examine these components between the two groups of children with divorced and non-divorced parents.

Methods

This research was a descriptive-analytic, causative-comparative study. The statistical population included all middle school students with divorced and non-divorced parents in Isfahan from 2017 to 2018. In this study, non-probability sampling method was conducted and the sixth educational district of Isfahan city was selected from all educational districts. Later, the researcher referred to five female schools and six female middle schools. As a result, 131 students of the 7th, 8th, and 9th grades with divorced parents were selected (63 girls and 69 boys). In the next step, 100 students were selected from this population to participate in the research. The same process was applied again and 100 students with non-divorced parents were selected. Consequently, a total number of 200 students participated in this study (100 students with divorced parents and 100 students with non-divorced parents). This sample size was selected after reviewing the written scientific resources, in which the sample size of 100 people was calculated for each group in the causative-descriptive research to reach the generalization purpose. Then, the research questionnaire was distributed among the participants. In the case that participants had any questions about the items, the researcher provided them with some explanations. The inclusion criteria for research included having divorced parents (for students with divorced parents), having consent to collaborate in the research, being in the middle school, and having no acute mental and physical problems. Moreover, the criteria for exclusion form the study were lack of desire to continue participation in research, incomplete questionnaires, and lack of cooperation in order to participate in the study.

In this study, the following questionnaires were applied:

**Emotional adjustment questionnaire**

Emotional adjustment questionnaire was designed by Gross and John in 2003 and has 10 questions about two sub-scales of emotional suppression (questions 2, 4, 6, and 9) and cognitive reevaluation (questions 1, 3, 5, 7, 8, and 10). The participants were required to answer the questions based on a seven-point scale from completely disagree to completely agree. The scores range from 10 to 70. The internal consistency coefficient in the cognitive reevaluation sub-scale was 0.72 for men and 0.79 for women. Moreover, the internal consistency coefficient in the subscale of emotional suppression was 0.67 for men and 0.69 for women. Soleimani and Habibi in their research reported that the coefficient of cronbach's alpha for this questionnaire was 0.81. In addition, the Cronbach's alpha coefficient reported by Mohammadi and Mousavi was 0.79. These researchers also reported that the content validity of the questionnaire was desirable. The validity of the questionnaire using cronbach's alpha coefficient was calculated as 82.0 in the present study.

**Emotional processing information questionnaire**

Emotional processing information test was designed by Barker, Tomas, and Lessi in 2011. This test has six components: self-weakening with 7 questions, extreme emotional control with 4 questions, escaping from personal emotions with 5 questions, feeling comfortable with physical emotions with 3 questions, avoiding personal emotions with 3 questions, and orientation and physical attributes with 3 questions. This questionnaire should also be answered on a four-point Likert scale; from never (score = 0) to most
of the time (score = 3). According to the components of this questionnaire, the higher scores indicate weaker emotional processing. The validity of self-weakening, extreme control on emotions, escaping from emotions, feeling comfortable with physical emotions, avoiding personal emotions and orientation, as well as physical attributes subscales were 0.77, 0.84, 0.81, 0.82, 0.79, 0.77, and 0.72, respectively. Furthermore, the reliability of this questionnaire using cronbach’s alpha coefficient were 0.80, 0.84, 0.79, 0.83, 0.81, and 0.72 for self-weakening, extreme control on emotions, escaping from emotions, feeling comfortable with physical emotions, avoiding personal emotions and orientation, as well as physical attributes subscales, respectively. In the present study, the questionnaire reliability was also calculated using cronbach’s alpha coefficient for subscales of self-weakening, extreme control on emotions, escaping from emotions, feeling comfortable with physical emotions, avoiding personal emotions and orientation, as well as physical attributes as 0.81, 0.80, 0.76, 0.85, 0.84, and 0.74, respectively.

The scale of the emotional failure

The 20-item scale was made by Bagby, Parker, and Taylor. It evaluates emotional failure through three subscales of difficulty in identifying feelings (article 7), difficulty in describing feelings (5 article), and thinking oriented outside (8 article). The questions should be answered on a five-point Likert scale ranging from 1: completely disagree to 5: completely agree. In the Persian version, the cronbach's alpha coefficient was calculated for the three subscales of difficulty in identifying feelings, difficulty in describing feelings, and thinking oriented outside as 0.82, 0.75, and 0.72, respectively. This indicates good internal consistency of this scale. In the present study, the reliability of this scale was calculated using cronbach’s alpha coefficient for the difficulty in identifying feelings (0.72), difficulty in describing feeling (0.65), and for thinking oriented outside (0.54).

To analyze the data, two levels of inferential and descriptive statistics were used. At the level of descriptive statistics, the mean and standard deviation were calculated, at the level of inferential statistics, one-way ANOVA and multi-variable ANOVA were used. The multi variable ANOVA was applied to compare the values of variables between the two groups. The results were analyzed using SPSS- 24. In order to observe the ethical considerations, participants were required to sign the consent forms to participate in the intervention and they were informed about the whole study procedure. Furthermore, they were assured about confidentiality of information; they were not required to write their names. In addition, this study was approved by the Department of psychology in the Islamic Azad University of Najafabad.

Results

The findings derived from the participants' demographic data showed that their age range was from 13 to 16 years, of which the age of 15 years had the highest frequency (N = 97 people, 47 %). All participants were studying at the middle school grades and the highest frequency was at the eighth grade (N = 118, 59%). Moreover, 46 participants were girls (23%) and 154 were boys (77%). In addition, the average age rates of students with divorced and non-divorced parents were 14.8 and 15.4 years, respectively.

The pre-assumptions of parametric tests were evaluated before providing the results of analysis of variance test. Accordingly, Schapiro Wilk test results indicated that the pre-assumption of data normal distribution was met in three variables of emotional processing, emotional adjustment, and emotional failure (P>0/05). Moreover, the pre-assumption of, homogeneous variance was evaluated by Levine's test and the results were not significant. In other words, the pre-assumption of homogeneity was observed in emotional processing, emotional failure, and emotional adjustment (P-value > 0.05).

According to the results of Table 2, a significant difference was observed between two groups of
students with and without divorced parents regarding variables of emotional processing, emotional failure, and emotional adjustment. Accordingly, the results of the descriptive findings revealed that students with divorced parents had lower scores in emotional processing and cognitive adjustment, whereas, higher scores in emotional failure compared with students with non-divorced parents. In addition, according to the results, 49, 39, and 46 percent of changes in the emotional adjustment, emotional processing, and emotional failure can be explained by grouping the variables (the divorced parents and non-divorced parents).

### Table 1. Descriptive analysis of emotional processing, emotional failure, and emotional adjustment components in students with divorced and non-divorced parents

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students with divorced</td>
<td>37.03</td>
<td>7.13</td>
</tr>
<tr>
<td>Students with non-divorced</td>
<td>45.48</td>
<td>7.15</td>
</tr>
<tr>
<td>Emotional processing</td>
<td></td>
<td></td>
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<tr>
<td>Students with divorced</td>
<td>41.80</td>
<td>5.72</td>
</tr>
<tr>
<td>Students with non-divorced</td>
<td>49.94</td>
<td>5.12</td>
</tr>
<tr>
<td>Emotional failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students with divorced</td>
<td>51.50</td>
<td>9.83</td>
</tr>
<tr>
<td>Students with non-divorced</td>
<td>36.60</td>
<td>6.98</td>
</tr>
</tbody>
</table>

### Table 2. The results of analysis of variance comparing emotional processing, emotional failure, and emotional adjustment in groups with divorced and non-divorced parents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Sum of squares</th>
<th>Degree of freedom</th>
<th>Mean of squares</th>
<th>F</th>
<th>p-value</th>
<th>Effect size</th>
<th>Test power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional adjustment</td>
<td>grouping</td>
<td>3570.12</td>
<td>1</td>
<td>3570.12</td>
<td>65.14</td>
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<td>0.49</td>
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<td></td>
<td>error</td>
<td>10851.87</td>
<td>198</td>
<td></td>
<td>54.80</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Total</td>
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<td>200</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Emotional processing</td>
<td>grouping</td>
<td>3312.98</td>
<td>1</td>
<td>3312.98</td>
<td>113.22</td>
<td>0.0001</td>
<td>0.39</td>
<td>1</td>
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<tr>
<td></td>
<td>error</td>
<td>5793.64</td>
<td>198</td>
<td></td>
<td>29.26</td>
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<td></td>
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<tr>
<td></td>
<td>Total</td>
<td>429918</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Emotional failure</td>
<td>grouping</td>
<td>11100.50</td>
<td>1</td>
<td>11100.50</td>
<td>154.20</td>
<td>0.0001</td>
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<td></td>
<td>error</td>
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<td></td>
<td>71.98</td>
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### Discussion

This study aimed at comparing the emotional processing, emotional failure, and emotional adjustment of students with divorced and non-divorced parents in Isfahan city. The results of data analysis showed that emotional processing, emotional failure, and emotional adjustment were significantly different between the two groups of students with divorced and non-divorced parents. Students with divorced parents had lower scores in emotional adjustment and emotional processing, while they had higher scores in emotional failure compared with students with non-divorced parents.

The first finding of this research indicated that emotional processing was significantly different between the two groups of students. These results are consistent with the other studies. As the literature shows, incidence of divorce can affect psychological components related to mental and emotional health in children. Consistent with these results, Karukivi et al. identified divorce as one of the harrowing experiences of childhood, which jeopardizes the child-parent relationship.
They also mentioned that lack of healthy relationship between child and parents led to emotional turmoil and distort in the child's emotional processes. Thorberg, Young, Sullivan and colleagues Lyvers Shimura and Khalid, Qadir, Chan, Schwannauer stated that difficult childhood and adolescence period due to divorce had a significant relationship with emotional failure and cognitive-psychological disorders.\textsuperscript{19,21} Parental divorce causes a wide range of changes and brings about new challenges in the family structures that affect children's adjustment over time. These changes include changing place of residence, family relationships, and living standards that not only jeopardize couples' compatibility, but also children and surrounding people's mental equilibrium. The main victims of this decision are children and teens. Divorce causes economic, social, and psychological problems in many cases. Such changes can make kids feel angry, guilty, afraid, and anxious. In the same regard, a study was conducted on factors affecting the relationship between parents and children after divorce.\textsuperscript{32} The results showed that parents could not establish a close and proper relationship with their child after separation. Such problems led parents to show patterns of lack of care and loving attention.\textsuperscript{33} In comparison with the ordinary families, families with divorce are more susceptible to emotional problems such as emotional processing.\textsuperscript{34}

The second finding of the present study revealed that emotional failure was significantly different between the two groups of studied students. Consistent with this finding, Sutherland, Altenhofen, and Biringen investigated the impact of divorce on children's emotional, cognitive, and social processes.\textsuperscript{35} They believed that parental separation was not a simple process for children, because divorce causes intense psychological stress on children and affects their emotional health including emotional management and expression of emotions and feelings.\textsuperscript{36} Divorce not only creates emotional problems for children, but also causes them to experience other difficulties in the context of social function and social adjustment in the long run. This is due to the fact that that establishing stable social relationships and social adjustment needs adaptive and normal emotional processes. The lack of adequate communication with people around causes children from divorced families to have emotional negligence, which leads to emotional failure.

The third finding of this study showed that the emotional adjustment was significantly different between the two groups of students with divorced and non-divorced parents. Consistent with this finding, Sfdary chraghtph and Sanaie compared distress endurance, emotional failure and processing between normal children and children of divorced families. They reported that children of divorced families had lower distress tolerance and emotional processing and higher emotional failure compared to normal children.\textsuperscript{13} This finding indicates that low distress tolerance can lead to over perception of challenges for children of divorced families. This process causes them to lose their emotional control, so they show a great deal of emotional distress and behavioral adjustment. In addition, it can be said that children with divorced parents have unstable conditions and less social support. Children, who do not receive the optimal social support from parents, cope with life stresses very poorly. As a result, they feel emotional and psychological frustration. Children from divorced families develop emotional confusion that leads to their low emotional adjustment.

**Conclusion**

As a summary, students with divorced parents, compared to students with non-divorced parents, had lower scores in emotional processing and emotional adjustment, while they had higher scores in emotional failure. On this basis, other researchers are recommended to conduct studies in mental care clinics and counseling centers to investigate the effects of psychological services of education departments on these participants. Emotional processes of children and teenagers with divorced parents should also be examined more
thoroughly using proper psychological intervention practices. Teenagers and children with divorced parents can also attend training programs to make up for their shortcomings and emotional failures. In this area, appropriate methods of treatment, such as treatment based on the child and teenager-oriented acceptance and commitment, and teenagers' mindful practices, as well as group and individual game therapy can reduce emotional and behavioral problems.

The present study, similar to any other research had some limitations: the results were limited to a specific geographic region and group; only students with divorced and non-divorced parents in Isfahan were investigated. Therefore, future researchers are recommended to carry out this study on other groups and in other geographical areas using random sampling and experimental research design to increase the generalization power of the findings.

Conflicts of Interest
In this study, was not reported any potential conflicts of interest with the authors.

Acknowledgements
Hereby, we thank all the students who participated in this study and school authorities who helped us to conduct the research. Further, in the current study all ethical issues were observed base on the Helsinki Declaration.

Authors' Contribution
Conceptualization, M.A.A. and Sh.Sh.; Methodology, M.A.A.; Formal Analysis, M.A.A.; Investigation, Sh.Sh.; Data Curation, Sh.Sh.; Writing – Original Draft, M.A.A. and Sh.Sh.; Writing – Review and Editing, Sh.Sh; Resources, Sh.Sh.; Supervision, M.A.A.

All authors read and approved the final manuscript and are responsible about any question related to article.

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