The Relationship between Mother-Child Interaction and Mental Health of Adolescent Girls: The Mediating Role of Religious Identity

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Introduction: Mental health of adolescent girls as future mothers is of great importance. The purpose of this study was to investigate the mediating role of religious identity in the relationship between mother-child interaction and mental health of adolescent girls in Yazd, Iran.

Methods: This study was conducted on 319 female students, studying at the tenth to twelfth grades of high schools in Yazd. In this study, Parent-Child Relationship Survey (PCRS), the Goldberg General Health Questionnaire (GHQ-28), and Lotf-Abadi National-Religious Identity Questionnaire were used. The structural equation modeling was used to analyze data using AMOS software version 25.

Results: The findings of this study, using the method of structural equation modeling, showed that the quality of mother-child interaction had a direct and significant effect on both mental health disorder ($\beta = -0.16$, $P< 0.001$) and religious identity ($\beta = 0.31$, $P< 0.001$). In addition, the results showed that religious identity had a direct and significant effect on mental health disorder ($\beta = -0.16$, $P< 0.001$). Furthermore, religious identity played a mediator role in the relationship between mother-child interaction and mental health disorder ($\beta = -0.05$, $P< 0.05$). Multiple indices were used to evaluate the model and the results showed that the proposed model had goodness-of-fit.

Conclusion: Religious identity, as a protecting resource, helps adolescents against the stress and dangers, which arise from the puberty-related problems and increases their mental health. A good mother-child relationship has direct and significant relationship with the religious identity of adolescent girls. Therefore, the quality of relationship with mother, as a result of the religious identity development, can increase the mental health of female adolescents.

Keywords: Mother-Child Interaction, Religious Identity, Mental Health, Adolescent Girls

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The Mediating Role of Religious Identity between Mother-Child Interaction and Mental Health

Introduction

Adolescence is the most important and critical period of life for each individual. In this period, adolescents encounter many difficulties: problems related to identity crisis as well as biological and mental changes, which happen as a result of their puberty. So, adolescence is a delicate, sensitive, and vulnerable period during each individual’s growth period. Considering the sensitivity of this period for the girls as the future mothers and the importance of mental health in performing mother roles, it is quite necessary to pay attention to female adolescents’ psychological state.

Mental health is usually defined as the individuals' adjustment to the world, happiness, and positive interpretation with their lives. Studies conducted on adolescents’ mental health indicate that mental health is the result of the multi-dimensional interaction between biological, environmental, and familial factors.

One of the effective familial factors on adolescents’ mental health is the parent-child interaction. This relationship is the first and the most elementary form of social interaction through which child’s basic needs such as love, security, and intimacy are fulfilled. Furthermore, it is a model for other social communications. Various studies proved that any problem or lack of suitable relationship between parent and child could cause different damages and reduce the quality of life for teens.

KhajeNoori and Dehghani discussed that marital conflicts weakened the parent-child interaction and reduced the mental health as a result. Moreover, Amin-Khandaghi and Pakmehr showed that high quality parent-child interaction and other social communications can be important predictors of the adolescents’ mental health. Onayli also referred to the eminent role of the parent-child interaction in relation to the girls’ feelings of life satisfaction and self-esteem. By the same token, Pyun emphasized the key role of the positive parent-child interaction in decreasing mental problems, hyperactivity, and lack of attention.

Religious identity is considered as another predictive factor of the mental health. Religious beliefs give relief and peace of mind to individuals by making their lives meaningful. These beliefs not only help the individuals to move on hopefully in facing with problems, but also protect them against their social and mental problems.

In this regard, Jackson et al. indicated that individuals with more powerful religious identities and beliefs experience death anxiety to a less degree. Galek et al. Also indicated that religious identity played an effective role in increasing mental health, since it gave meaning to life. Darvishi, Ghazi Vakili, and Mohammadi indicated that religious dispositions had a negative relation with the level of anxiety and depression among university students. Religious identity, as a supporting and protecting resource, not only helps the adolescents against the puberty-related stressors and dangers, but also is effective in formation of their sense of identity. It also can play an important role in individuals’ better adjustment to life.

Among various factors that lead to the formation of religious identity in individuals, the parent-child relationship plays a significant role. Parents, especially mothers, are the first role-models for children and are considered as one of the most important sources of identity formation in children. The parent-child positive interaction provides the basis for transformation of the feelings of love, security, and intimacy to children. It also helps the teens to choose their parents as role models and move toward their parents’ values instead of being attracted to modernist and self-made values of their peers and the society. In this regard, Rahpeima and Sheykholeslami indicated that children’s identification with their parents had direct significant relationship with formation of their religious identity and could increase resilience among adolescents.

As the literature shows, various studies have investigated the relationships among parent-child interaction, religious identity, and adolescents’
mental health. However, no study has ever explained the intermediate mechanisms between parent-child relationship and adolescents’ mental health. Moreover, it is important to note that various studies were directly conducted on this issue. Considering the cultural differences and the variety in the nature of religious identity and beliefs among different societies, this study should be conducted in different cultures and within different age groups. Therefore, the present study was conducted with the purpose of investigating the mediating role of religious identity in the relationship between mother-child interaction and mental health of adolescent girls.

**Methods**

**Statistical population:** The statistical population included all the second-grade female students of high school in Yazd city, Iran in 2017-2018.

**Sampling and sampling method:** This study was conducted using the correlational method of structural equation modeling. Multi-stage cluster sampling method was applied among the three educational districts of Yazd and district 1 was selected randomly. In the next stage, four female high-schools were chosen randomly from district 1 and then three second-grade classes were chosen from each high school randomly. The sample size was calculated according to Cochran’s sample size formula. Finally, 319 students entered the research considering the inclusion and exclusion criteria of this research.

**Instruments:** In this study, three tools were used as follows:

A. **Goldberg General Health Questionnaire (GHQ-28):** This questionnaire includes 28 questions and 4 scales of somatic symptoms, anxiety and insomnia, social dysfunction, and depression; each of these scales has 7 items. These questions are required to be answered on a four-point Likert scale (with the scores of 0, 1, 2, and 3). The scores of 23 and higher indicate lack of public health and scores lower than 23 indicate mental health. Goldberg introduced the 28-substantial-item version. The results of the meta-analysis on Goldberg's questioner showed that its average sensitivity was 84% (between %77 and %89). The reliability of the questionnaire was also examined in the pilot study. For this purpose, all the students who had completed the GHQ in the pilot study were invited for the psychological interview and after that the sensitivity of the questionnaire was calculated. Chung found that the validity coefficient of the 28-question version of this questionnaire, according to the test/retest method, was 0.55 for the total test, 0.44 for the scales of somatic symptoms, 0.42 for anxiety, and 0.47 for depression. This questionnaire was also used by John-Bozorgi in a sample group of 223 university students in 2000 and its validity coefficient, based on Cronbach test, was calculated as 0.94 (18).

B. **Child-Parent Relationship Scale (CPRS):** The child-parent relationship scale was used to determine the parent-child relationships. This scale was designed by Pianta for the first time in 1992 and includes 33 questions, which measure the parents' perception on their relationship with their child. This scale contains closeness, dependency, conflict, and the overall positive relationship parts between mother and child. This tool consists of a 5-point Likert scale ranging from 5 (completely agree) to 1 (completely disagree). The total score of positive relationships obtained from the total scores of the closeness and the reverse scores of the conflict and dependency. The content validity and reliability of this questionnaire were obtained by Abarashiet al. (19). This scale includes conflict, closeness, dependency, and overall positive relationship with Cronbach's Alpha of 0.83, 0.69, 0.46, and 0.84, respectively. The reliability scores of these areas were reported as 0.60, 0.70, 0.84, and 0.86, respectively.

C. **Religious Identity:** For assessing the religious identity, LotfAbadi's questionnaire of religious and national identity, designed in 2004, was used. The items of this questionnaire should be answered on a six-point spectrum (completely agreed, agreed, little agreed, little disagreed, disagreed, completely disagreed). The scores can range from 22 to 132. ParsaMehr and AsghariYangjieh employed five components by
using factor analysis method and analysis method of main components using Varimax rotation method. These factors include political and geographical, lingual and literal, cultural, historical, as well as ethnic and religious identity dimensions. Then, the stability of each indicator was calculated using Cronbach Alfa and the amount of stability coefficient for the total scale was calculated as 0.74, which showed a good domain (20). In the present research, the total score attained for religious identity dimension was investigated.

Inclusion Criteria:
- Having conscious satisfaction
- Having alive parents
- Living with the parents.

Exclusion Criteria:
- Receiving any psychological and counseling treatments while participating in the research

Procedure: In the first stage of the research, a meeting was held with the teachers, the study goals and procedures were explained and they were asked to cooperate with the researcher in devoting part of their class time. In the second stage, the importance of giving exact answers to the questionnaires and the importance of the study results were explained to the students of each class and they were reassured about confidentiality of their information. In the next stage, the questionnaires were answered by the students of each class after collecting the questionnaires; the method of structural equation modeling was used to analyze the research data using AMOS software version 25.

Results
This study was carried out on 319 female students, at the grades of 10-12 in high schools. The demographic characteristics of the participants showed that 106 students were in the tenth grade (%32/2), 108 in the eleventh grade (%33/9), and 105 in the twelfth grade (%32/9). The mean and standard deviation of the research’s variables are presented in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship with mother</td>
<td>121.6</td>
<td>39.07</td>
</tr>
<tr>
<td>Religious identity</td>
<td>29.7</td>
<td>6.22</td>
</tr>
<tr>
<td>Mental health</td>
<td>26.85</td>
<td>16.45</td>
</tr>
</tbody>
</table>

The mean of the mental health scores show that the adolescent girls suffer from mild discomfort. The total mean score of the quality of relationship with mother shows that the female adolescents’ relationship with mother is in the average level. Moreover, the total mean score of the religious identity shows that the female adolescents’ religious identity is in the average level. The results of the correlation test among the quality of mother-child interaction, religious identity, and mental health are represented in Table 2.

Table 2. Correlation matrix of the mother-child interaction, religious identity, and mental health

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mother-child interaction</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Religious identity</td>
<td>0.23**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3 Mental health</td>
<td>-0.18**</td>
<td>-0.14*</td>
<td>1</td>
</tr>
</tbody>
</table>

**P<0.01  *P<0.05

The results of Pierson’s correlation showed that the quality of mother-child interaction was negatively related with the total score of mental health (P= 0.01, r =-0.18). In other words, as the quality of the mother-child interaction improved, the adolescent girls showed less mental problems. The quality of mother-child interaction was positively related with the total score of religious identity (P= 0.01, r =-0.23). In other words, as the quality of the relationship with mother improves,
the religious identity in adolescent girls develops.

In order to test the research hypotheses, structural equations modeling with AMOS software version 25 were used and the whole model was assessed based on goodness of fit indices.

In explaining goodness of the fit indices, it can be said that the most important fitness statistic is chi-square statistic \( \chi^2 \). This statistic measures the amount of difference between the observed matrix and the estimated one. This statistics is very sensitive to the volume of the sample. So, in the samples with high volume, it will be divided by the degree of freedom. If the result is less than 5, it will be suitable. In the case that the indices of CFI, GFI, AGFI, NFI, and NNFI are more than 0.90 and RMSEA index is less than 0.05, a suitable and desirable fit is implied. Moreover, the RMSEA index is \( \geq 0.05 \) for the models that have good fit and values of more than 0.08 represent reasonable errors in the society.

As table 3 indicates, the CFI, DFI, AGFI, NFI, and IFI indices are more than 0.90 and RMSEA index in the present research is 0.04. It can be said that a very good fit is observed and the test’s total indices of goodness of fit indicate the total fit of the model.

<p>| Table 3. Goodness of fit indices of the final model |
|-----------------|---|---|---|---|---|---|</p>
<table>
<thead>
<tr>
<th>( \chi^2 / \text{df} )</th>
<th>GFI</th>
<th>AGFA</th>
<th>CFI</th>
<th>NFI</th>
<th>IFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.97</td>
<td>0.93</td>
<td>0.91</td>
<td>0.93</td>
<td>0.90</td>
<td>0.94</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Figure 1. Structural relationships of religious identity, mother-child interaction, and mental health.
The Mediating Role of Religious Identity between Mother-Child Interaction and Mental Health

Table 4. Direct effects, indirect effects, total effect, and the significance level of the model

<table>
<thead>
<tr>
<th>Path</th>
<th>Non-standard estimation</th>
<th>T</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>From mother-child interaction to religious identity</td>
<td>0.01</td>
<td>4.19</td>
<td>0.31**</td>
<td>-</td>
<td>0.31**</td>
</tr>
<tr>
<td>From religious identity to mental health</td>
<td>-0.65</td>
<td>-2.02</td>
<td>-0.16**</td>
<td>-</td>
<td>-0.16**</td>
</tr>
<tr>
<td>From mother-child interaction to mental health</td>
<td>-0.04</td>
<td>-2.37</td>
<td>-0.16**</td>
<td>-0.05*</td>
<td>-0.21**</td>
</tr>
</tbody>
</table>

*p< 0.05  **p<0.01

The table 4 indicates that a high-quality relationship with mother can directly increase the religious identity and decrease mental health disorder among adolescent girls. Moreover, the findings show that religious identity can directly decrease mental health disorder among the participants.

In order to determine the significance of the intermediary relationships and the indirect effect of the independent variable on the dependent variable through the mediator variable, Bootstrap test was used. The bottom limit of the confidence interval for religious identity as a mediator variable between the quality of mother-child interaction and mental health was 0.10 and its upper limit was 0.01. The confidence level for this confidence interval was 0.95 and the number of Bootstrap resampling was 1000. Since Zero is not included in this confidence interval and the significance level of the test is less than 0.05, this result is statistically significant. Therefore, religious identity has mediating role in the relationship between the quality of mother-child interaction and mental health.

Discussion

The purpose of this study was to investigate the mediating role of religious identity in the relationship between mother-child interaction and the mental health of second-grade female students of high school. The study results showed a significant relationship between quality of mother-child interaction and mental health; that is the mediating role of religious identity.

The findings showed that quality of the mother-child interaction had a positive significant effect on religious identity. These findings are in line with the results reported by Rahpeima and Sheykhoslam (17). They reported a positive relationship between children’s religious identity and family functioning.

In this regard, it can be said that the quality of the mother-child interaction in childhood and adolescence can form the basis of a child’s future with regard to cognitive and emotional development. Mother-child interactions show the mother’s parental style revealed during mutual communications between mother and child. Mother-child interactions include child acceptance, over-supporting, leniency, and child rejection. Child acceptance indicates the efficacy of mother-child relationships regarding honesty in expressing emotions, interest in entertainments and activities, child progress, and child perception as a good human. However, over-supporting, instead of conveying a sense of safety to child, creates a sense of vulnerability, the need for protection, a warning state and finally biased cognitive evaluations. Child rejection shows that the mother hates her child or does not like him or her (21). Therefore, in both over-supporting and rejection style the quality of mother-child interaction is regarded as undesirable. As the result of many studies show, different parenting styles are closely related to the formation and development of religious identity in children. Religious identity is a form of identity that refers to one’s values, beliefs, emotions, symbols, and his or her ways of thinking about a holy conception (22). It should be noted that family is the first institution that conveys values, and religious beliefs to children and as already indicated, mother plays a more effective role in forming her children’s beliefs, moral values and their behavior. Therefore, as the quality of mother’s emotional, spiritual, and verbal relationship with her children increases, children
will show higher levels of trust in her and will look at her as a role model in different contexts especially in religious ones. In this way, they will accept mother’s religious values and beliefs more easily. The study findings revealed that a mother-child interaction of higher quality resulted in the development of religious identities in children in accordance with their mother’s religious commitments.

The results also showed that religious identity had a negative significant effect on mental health disorders. This result is also consistent with the findings of other studies (13, 14, 15, and 16). The mentioned studies reported negative significant relationship of religion, religious beliefs, and religious identity with anxiety, depression, and mental disorder. Moreover, Fabricatore in his study found that religious coping acted as a mediator. For example, being religious plays a mediating role during stressing experiences and changes the relationship between stress factors and mental health (23). In the same vein, Kézdyet al. (2011) expressed that adolescents who attended religious ceremonies more frequently showed less aggression at home and school; they had a higher sense of self-esteem. Furthermore, less evidence of anxiety and depression was observed among them. However, having religious doubts had a positive correlation with anxiety and depression (24).

As the results of the research conducted by Sharifi et al. on the relationship between national, religious identity, and mental health shows, a positive and significant relationship exists between mental health and the religious identity of the university students. Belief in a God who controls situations and supervises his creatures can decrease the situation-related anxiety to a great extent. This is so because these students believed that trust in God helped them to control the uncontrollable situations (25). The results of this section of the present study are also similar to the results of the research conducted by ParsaMehr and AsghariYangije. They found that a positive and significant relationship exists between the students’ mental health and religious identity. As the results of their study show, religiosity brings about happiness and more life satisfaction. As the students in this research mentioned, their religious beliefs gave them a sense of hopefulness, power, and peace of mind. Their beliefs also helped them to adapt to life and face its problems more successfully (20).

Results also showed that quality of mother-child interaction had a negative significant effect on mental health disorder. This finding is consistent with the results of several studies (8, 9, 11). According to ZareBahramabadi et al., quality of the interaction between adolescents and their parents has a close relationship with their behavior and their psychological adjustment (26). Moreover, adolescents’ feeling free to talk with their parents about the problems that annoy them can affect their mental health as a protecting factor (7). In line with the results of this section, Karimi and FatemiAghda (27) pointed out that having easy relationship with parents and having satisfaction from this relationship are crucial for young people. As the quality of the relationship with parents improves, adolescent girls show less mental problems. Parents, especially if they have a high quality relationship with their children, can act as a shield against stresses of the adolescence. In the case that girls have a nice feeling about their parents, they will feel a sense of belongingness and security to a greater extent. Close and intimate relationship between parents and adolescents provides the suitable condition for the adolescents’ growth and progress; therefore, they can experience maturity in their family as a result of the parents’ attention and respect.

Conclusion
The findings indicated an association between relationship quality with mother and mental health of adolescents; that is the mediating role of religious identity. Therefore, it can be concluded that if the mother-girl interaction is of a high quality, the girl trusts her mother and accepts her as a role model and copies her mother’s behavior, especially her religious behaviors. Moreover, the children appreciate religious beliefs and values of their mothers, examine these beliefs in an atmosphere full of trust in mother and choose
these beliefs freely as their own. As a result, the girls’ religious identity develops more completely. Individuals with iron beliefs in religious values experience feelings of hopelessness, discouragement, depression, and anxiety less than others and enjoy higher levels of mental health.

Limitations: It should be considered that this study has been conducted among second-grade, high school female adolescents in Yazd city. Therefore, there is a precaution for generalizing the findings of this study to all male and female adolescents in other educational grades.

Recommendations: Given the effective and basic role of mothers in mental health and religious identity of the adolescents, mother-daughter relationships should be improved among adolescents. In this regard, educational programs can be conducted in schools and family educational centers. Moreover, relationship enhancement courses in the form of group therapy are recommended for mothers.

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Conflict of Interest
The authors declared no conflicts of interest.

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