The Relationship of Metacognitive Beliefs and Resiliency of Mothers with Hyperactive Children, a Cross-Sectional Study

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Introduction: metacognitive knowledge refers to the gained knowledge about the cognitive processes. Resiliency refers to the ability to cope with the threatening situations. Objective: this study aimed to investigate the relationship between metacognitive beliefs and Resilience Index of mothers with hyperactive children and carried out in Tehran. Methodology: for this purpose, a dependence design in the type of correlation, among parents of children with hyperactive neurodevelopmental disorder referred to rehabilitation and counseling centers in Tehran and using available sampling, 250 parents were selected. In this study, Connor and Davidson Resilience Scale (response rate = 94%) and metacognitive beliefs of Wells and Katrayt Hutton (response rate = 90%) was used. Data were analyzed through parametric tests of T and Pearson. Also, the qualitative data obtained from the demographic assessments were encoded and were analyzed using qualitative data analysis tool of Atlas.ti-5.2. Results: The results showed that there is a positive significant correlation between the metacognitive beliefs and resiliency of mothers with hyperactive children. Conclusion: Results of this study can be used to educate and alert parents of the students to metacognitive beliefs and its relationship with resiliency as one of the most important factors affecting on interpersonal relationships.

Keywords: metacognitive beliefs, resiliency, and hyperactive children.

Introduction

Hyperactivity / attention deficit, is a disorder which characterized by persistent irritability, impulsivity, and problems with concentration. In most cases, hyperactivity is associate with other problems such as stubbornness, disobedience to parents, behavioral problems and academic failure (Shafei and Tirgari, 2011). Hyperactivity disorder/attention deficit (hyperactivity) is one of the most common reason for referral to a psychiatrist and psychology.

In this regard, metacognitive knowledge refers to the gained knowledge about cognitive processes, knowledge that can be used to control cognitive processes (Saed et al, 2011).

Metacognitive approach is based on the belief that people face to emotional distress because their metacognitive leads to a certain pattern of response to inner experience. This pattern which would lead to the continuation of negative emotion and reinforce negative beliefs is including anxiety, rumination, established attention and self-regulation strategies or maladaptive coping behaviors. This pattern is called cognitive-attention syndrome because this incompatible pattern, effective self-regulation, makes the thoughts and emotions and learning reform information inefficient and flawed.

On the other hand, resiliency is a self-healing with positive emotional, affective and cognitive outcomes. Resilient individuals are more involved in health promotion behaviors and they welcome engaging in daily activities. They enjoy the challenges and prefer the changes for the stability (Kaveh, 2009).

Resiliency as the capacity to face, overcome and even getting stronger by experiencing the problems or damage is raised by the emergence of positive psychology by Seligman and his colleagues. According to the mentioned information and given the importance and urgency of the issue, in this study we examined the relationship between...
metacognitive beliefs and resiliency of mothers
with hyperactive children.

**Statistical Analysis**

In the present study, due to the nature of the study
and previous researches and with the aim to
evaluate the correlation between metacognitive
beliefs and resiliency and according to the distance
of both the mentioned scales, Pearson's parametric
test analysis was used and the significance of the
relationship were analyzed by T-test.

**Ethical considerations**

In this study, informed consent, without coercion,
threats, bribery and inducement was done and the
refusing to accept or continue to participate in the
study was respected. It has been tried to do the
research method according to the norms of religious
and cultural subjects and research participants in all
stages of design, implementation and reporting of
the study in terms of human dignity were respected
and protected against physical and mental integrity
so that doing the research do not damage or delay
their development of medical care.

**Methodology**

The current study in terms of the aim is categorized
among the applied researches. The methodology is
among descriptive, relationship (correlation) from
the kind of anticipation study. The population of the
present study is consisted of all parents (mothers)
of children with hyperactive neurodevelopmental
disorder who has referred to the rehabilitation and
counseling centers in Tehran. According to the
topic of this research, the sample size of the study is
a descriptive correlational and according to the
logic regression, the numbers of the samples were
chosen equal to 200 people and taking into account
the phenomenon of the subjects loss, 250 people of
mothers had hyperactive children which were
selected by the available sampling. Statistical
sample of mothers whose children have been
diagnosed as neurodevelopmental disorder were
selected among the rehabilitation centers and
counseling (Sharif, Ravan Pouya and Vesal) to
children with neurodevelopmental disorders. After
preparation of the questionnaires and selection of
the subjects, research questionnaires were
distributed among the mothers of hyperactive
children and then the necessary explanations by the
researchers on how to complete the questionnaire
was presented to them. The participants were asked
to demand more clarification from the researcher if
they faced some problems in completing the
questionnaires. After completing the questionnaire
by the subjects, the research questionnaires were
collected. In the next stage, the questionnaires were
scored and the data were entered into SPSS
software for statistical analysis.

**Tools**

**Resiliency questionnaires**: to measure the
resiliency, Connor-Davidson Resilience Scale was
used. Connor-Davidson Resilience Scale (2003) is
a 25 items tool that Connor and Davidson prepared
it by re-evaluating the research source of 1991-
1979 in terms of resiliency. Conner & Davidson
reported the Cronbach's alpha Resilience Scale
coefficient equal to 0.89, also reliability coefficient
resulted from retest method was 0.87 at a distance
of 4 weeks. KMO index was also reported equal to
91% and Bartlett sphericity was reported equal to
2.47.

**Metacognitive beliefs questionnaire**: this
questionnaire has been provided by Wells and
Katrayt- Hutton (2004) and has the 30 questions,
answers on this scale are scored based on 4-
points scale of Likert (1 I do not agree, to 4 I do agree
very much). The reliability of this instrument is
reposrted 0.68 to 0.87 and for subscales from 59%
to retest method and for the  all tests after a period
of 18 to 22 days have been reported equal to 75
(Wells, Katrayt Hutton, 2004).

**Results**

**Statistical indices**

<table>
<thead>
<tr>
<th>Research variables</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognitive beliefs</td>
<td>55.94</td>
<td>18.52</td>
<td>250</td>
</tr>
<tr>
<td>Resiliency</td>
<td>64.63</td>
<td>16.19</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 shows the descriptive indices, the mean and standard deviation scores of aspects of metacognitive
beliefs and resiliency of mothers with hyperactive children.

**Pearson's correlation test**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kind of correlation</th>
<th>Coefficient of correlation</th>
<th>Aspect of the correlation</th>
<th>Determination coefficient R²</th>
<th>Significant level of F-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognitive beliefs and resiliency</td>
<td>Pearson</td>
<td>0.60</td>
<td>Positive</td>
<td>0.36</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Table 2: Correlations between metacognitive beliefs and resiliency.
According to the above table and the obtained correlation (0.60) it can be concluded that there is a significant relationship between metacognitive beliefs resiliency (p<0.05).

Discussion

This study aimed to investigate the relationship between metacognitive beliefs and resiliency of mothers with hyperactive children and it was conducted in Tehran in 2015. Results showed that there is a significant positive relationship between metacognitive beliefs and resiliency of mothers with hyperactive children. In other words, the higher the metacognitive beliefs in mothers with hyperactive children, their resiliency will be higher at the same rate and vice versa. The results of this study is consistent with the results of Moghtadaei et al (2013), Bahadori et al (2012), Rasis (2012), Scrog (2012), Spada et al (2013).

Moghtadaei et al (2013) in a study entitled “the relationship of meta-cognitive components with anxiety and depression in mothers of boys with hyperactivity / attention deficit and compare them with mothers of normal children” have shown that there was a significant difference between the two groups of mothers in anxiety and depression with controlled for age and depression in mothers of children with hyperactivity disorder / attention deficit was much higher than mothers of normal children. In the meta-cognition, the average of the two groups of mothers was close to each other. Anxiety, depression and meta-variable coefficients were statistically significant. As a result, psychological health of mothers of hyperactive children was far weaker than mothers of healthy children and the need to focus on solving the problems of the family - which arose from the systematic approach in solving problems of such families with a more principled way, will be effective.

Abbaspoor (2011) studied the relationship between metacognitive strategies and creativity and resiliency in students and showed that there is a significant positive correlation between metacognitive strategies and resiliency. Also a significant positive correlation was observed between creativity and resiliency. There are a multiple relationships between these metacognitive strategies and creativity with resiliency. Spada et al (2013) in a study concluded that metacognitive beliefs are a mediator between stress and negative emotions. They found that the best predictor of mental health status is uncontrollability and danger. So metacognition was associated with stress and negative emotions. Arc Simmons et al (2012) showed that people with high resiliency in face with emotional events with neutral and unknown nature, were more likely to show positive emotions. They believed that this may be due to the ability of people to cope successfully when faced with challenging situations especially the situations with nature of interpersonal.

Based on the results it is suggested that a person's beliefs or mental schemas is determined due to his personal attitude, the world and the future. If these cognitive structures are logical and positive, the attitude of the person will be positive and hopeful to everything and if these cognitive structures are non-logical, their attitude toward the future and the world around them will be negative, so that the contradict realities are so interpreted that fit in the pre-formed context and directional perceptions and this directed interpretation cause to false process of cognitive errors, distortions and information. So mothers of hyperactive children born with multiple needs and are constantly try to fix problems. They have intense desire for love, affection and respect, growth, progress and wish, and avoid the failure and neglect strongly. In general, he is born with a lot of demands. Insists to everything be the best for his life. If these demands are not fulfilled quickly and perfectly, he may have two conflicting impressions based on their inherent tendency of this active event. When mothers of hyperactive children are adhered to the meta-cognitive beliefs, they will achieve to constructive and logical consequences and will have a normal and reasonable character and behavior. Logical consequences will be resulted in proper adoption of such mothers. But when the mothers of hyperactive children are adhered to irrational thoughts and beliefs, they will be suffered from unreasonable and illogical consequences. In this case, the person is experiencing emotional and behavioral disturbances. However, behavior and emotions of mothers with hyperactive children are assumed to be a function of her beliefs and opinions, and behavioral or emotional outcomes are largely independent of the events. Means that their emotional and behavior reactions are not exactly in a harmony with the occurred incident and the events, but also it is according to their perceptions and understanding of the events. It could be said that the belief systems of mothers with hyperactive children is an important aspect of her personality that is able to affect different aspects of their personalities.

Limitations

This study was conducted with some limitations which the most important of them are as follows: lack of matching the subjects based on intervention variables such as age, parental education level and
other demographic variables can be considered as one of the major limitations of this study. On the other hand, this research was conducted in Tehran and with a sample of mothers with hyperactive children and extending these findings with samples in other areas and grades should be done with caution. One limitation of this study which is specific for research questionnaire is that respondents sometimes show apathy and reluctance in reply to the questionnaires. Also, some individuals to present better image of itself does not answer some of the questions correctly.

Suggestions

It is suggested that in the future researches, cause and effect relationship of the studied variables be considered in experimental design. Also, it is suggested that such similar studies be done on other communities, because an increasing in range of such researches can prevent a lot of problems and trauma and prevent mental and social damages. It is better that in the similar studies, questionnaires with less questions be used in order to respondents answer to them with more patience. The research can also be done on a more general level and taking into account cultural and social conditions, economic and different groups in society and finally a research can be done in this field on the other groups, and its results can be compared with this study.

References