Factor Structure of Boredom in Iranian Adolescents

Ali Farhadi Assistant Prof.,
Dept. of Social Medicine, Lorestan University of Medical Sciences Kamalvand,
Khorramabad, Iran
farhadi@lums.ac.ir
Tel: +98 916 661 7338

Hamid-Reza Pouretemad Associate Prof.,
Dept. of Psychology, Shahid Behshti University G.C. Tehran, Iran
h-pouretmad@sbu.ac.ir

Ali Asgari Assistant Prof.,
Dept. of Educational Sciences, University of Tehran Tehran, Iran
asgary@ut.ac.ir

Katayon Khoshabi Associate Prof.,
Dept. of Psychiatry, University of Social Welfare and Rehabilitation Sciences Tehran, Iran
k_khoshabi@yahoo.com

Abstract- Boredom is a mental state, characterized by lack of concentration and motivation to tackle everyday duties, usually associated with depression, anxiety, inadequate interpersonal relationships, educational drop out and substance abuse. The purpose of this exploratory study was to identify the components and factor structure of boredom among Iranian adolescents. This study was consisted of two phases. During the first phase, a data pool was established based on three major sources: theoretical foundations of boredom, measurement scales of boredom available in the literature and interview-based data taken from 50 adolescents (girls=25 and boys=25, mean age= 15years, SD=2). An eighty-five items questionnaire, entitled: Boredom Assessment Scale (BAS) was developed for the purpose of the second phase. This questionnaire was further applied on 426 adolescents (girls= 227 & boys=199, mean age=14.5, SD=2). Early analyses confirmed validity for 58 items. Exploratory factor analysis and confirmatory factor analysis identified 7 factors in BAS: 1) Amotivation and Purposelessness, 2) Weariness, 3) Negative Thoughts, 4) Acedia and lethargy 5) Sustained Attention 6) Anger and 7) Hypohedonia. Thus, motivational and emotional aspects of boredom were appeared to be dominant in Iranian adolescents. The results are compared with similar studies in other cultures.

Keywords- Boredom, Exploratory factor analysis and Confirmatory factor analysis Factor structure, Iranian Adolescents.

I. INTRODUCTION

Boredom is a mental state, which has various negative outcomes. Professional and educational decrements, increasing occurrence probability of mental disorders such as anxiety and depression, hopeless, loneliness, and purposelessness in life and overall the increase of risk of substance abuse are most common outcomes of boredom [1-4]. This phenomenon that was characterized as lack of attentional concentration [5], has considered in recent years especially in children and adolescents. Informally, every one seems to know what it is to be bored [6]. But boredom was defined
as aversion for repetitive experience of any kind, routine work, or dull and boring people and extreme restlessness under conditions when escape from constancy is impossible [7]. Boredom is an internal state raging from mild to serve unpleasant. People describe as a feeling of tedium, meaningless, emptiness, wearisomeness, and lack in interest or connection with current environment [6]. Proximal behavior often associated with the state of boredom includes yawning and signs of inattention and restlessness [6]. Boredom proneness is trait or predisposing to be bored, a tendency to experience boredom in many situations’ interest in one’s life [6]. Distal behavior often associated with the trait of boredom proneness includes absenteeism, safety problems at work, and withdrawal or acts of rebellion in institutions [6].

Based on Theories and models, structure of boredom was consisted from various components. Factor analytic evidence on Boredom Proneness Scale (BPS) has largely indicated the existence of between two to five factors [7]. Vodanovich and Kass (1990) found evidence for the existence of at least five factors. They labeled the five resulting factors external stimulation, internal stimulation, affective responses, perception of time, and constraint. External stimulation measured one’s perception of need for excitement, change, and challenge. Second, internal stimulation measured the ability to keep oneself entertained. Third, affective responses measured one’s 70 emotional reactions to boredom. Fourth, perception of time measured the use and perception of the passage of time. Last, constraint measured the reaction to waiting or feeling that one’s activities are being constrained [8]. But the largest agreement across these studies appears to be emergence of two factors (external stimulation and internal stimulation) [7, 9].

The purpose of this study was to identify the components and factor structure of boredom among Iranian adolescents.

II. METHODS

This exploratory study consisted of two phases. During the first phase, a data pool was established based on three major sources: 1. theoretical foundations of boredom, 2. measurement scales of boredom available in the literature and 3. Interview-based data taken from 50 adolescents (girls=25 and boys=25, mean age= 15 years, SD=2). An eighty-five items questionnaire, entitled: Boredom Assessment Scale (BAS) was developed for the purpose of the second phase. In the second phase this questionnaire was further applied on 426 adolescents (girls= 227 & boys=199, mean age=14.5, SD=2). Data were analyzed using SPSS to assess validity of scale and LISREL for exploratory factor analysis and confirmatory factor analysis.

III. FINDINGS

At first, test reliability has been studied by use of Cronbach alpha. Reliability coefficient was equal to 0.87 then nine questions with weakness relationship to the test have been omitted to increase test reliability coefficient into 0.93. So questions and exploratory factor analysis has been done with due to 76 items scale. Exploratory factor analysis and confirmatory factor analysis results were shown on 76 pools by use of LISREL software and promax rotation performance that 18 items had factor loading less than 0.30. Factors number which can be used to define final characteristics were seven in this step. Based on factors structure matrix pool collections that are related to one factor commonly have held one part test as following rank it has been entitled with due to maximum factor loading. Factors and items number are in the table I.
In order to confirm constituent factors of scale, LISREL software complement executive instruction as LISREL PROJECT was used.

Their goodness of fit indices was shown in table No.II.

These criteria include goodness of fit index model with observed data have been evaluated by 6 criteria. These criterions are: 1) Chi-square,

<table>
<thead>
<tr>
<th>Factor</th>
<th>( \chi^2 )</th>
<th>DF</th>
<th>P</th>
<th>( \chi^2/df )</th>
<th>ECVI</th>
<th>SCVI</th>
<th>GFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>33.58</td>
<td>27</td>
<td>0.18</td>
<td>1.243</td>
<td>0.16</td>
<td>0.21</td>
<td>0.98</td>
<td>0.99</td>
<td>0.02</td>
</tr>
<tr>
<td>2nd</td>
<td>6.75</td>
<td>3</td>
<td>0.04</td>
<td>2.25</td>
<td>0.075</td>
<td>0.071</td>
<td>0.98</td>
<td>0.99</td>
<td>0.95</td>
</tr>
<tr>
<td>3rd</td>
<td>13.61</td>
<td>9</td>
<td>0.13</td>
<td>1.151</td>
<td>0.088</td>
<td>0.099</td>
<td>0.98</td>
<td>0.98</td>
<td>0.035</td>
</tr>
<tr>
<td>4th</td>
<td>31.44</td>
<td>25</td>
<td>0.17</td>
<td>1.257</td>
<td>0.17</td>
<td>0.21</td>
<td>0.97</td>
<td>0.97</td>
<td>0.025</td>
</tr>
<tr>
<td>5th</td>
<td>168.85</td>
<td>101</td>
<td>0.003</td>
<td>1.671</td>
<td>0.56</td>
<td>0.64</td>
<td>0.92</td>
<td>0.96</td>
<td>0.04</td>
</tr>
<tr>
<td>6th</td>
<td>9.88</td>
<td>9</td>
<td>0.36</td>
<td>1.108</td>
<td>0.080</td>
<td>0.099</td>
<td>0.99</td>
<td>0.99</td>
<td>0.015</td>
</tr>
<tr>
<td>7th</td>
<td>18.65</td>
<td>17</td>
<td>0.34</td>
<td>1.94</td>
<td>0.13</td>
<td>0.17</td>
<td>0.96</td>
<td>0.98</td>
<td>0.015</td>
</tr>
<tr>
<td>Total scale</td>
<td>2235.32</td>
<td>1572</td>
<td>0.21</td>
<td>1.47</td>
<td>10.62</td>
<td>8.02</td>
<td>0.92</td>
<td>0.92</td>
<td>0.04</td>
</tr>
</tbody>
</table>

### TABLE I

ITEMS NUMBERS AND FACTOR TITLES OF BOREDOM ASSESSMENT SCALE (BAS)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Items</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>17, 56, 47, 41, 79, 24, 42, 2, 22</td>
<td>Anomie &amp; purposelessness</td>
</tr>
<tr>
<td>2nd</td>
<td>65, 65, 29, 37, 38</td>
<td>Wastiness</td>
</tr>
<tr>
<td>3rd</td>
<td>32, 35, 21.11, 27.39</td>
<td>Negative thoughts</td>
</tr>
<tr>
<td>4th</td>
<td>8.23, 30.11, 15.43, 19.25</td>
<td>Absence &amp; Lethargy</td>
</tr>
<tr>
<td>5th</td>
<td>74.56, 66, 68, 69, 52, 50, 61, 73, 69, 56, 72</td>
<td>Sustained Attention</td>
</tr>
<tr>
<td>6th</td>
<td>35.4, 49.9, 28, 62, 36</td>
<td>Auster</td>
</tr>
<tr>
<td>7th</td>
<td>38.57, 67.49, 76.77</td>
<td>Hypochronia</td>
</tr>
</tbody>
</table>

The First International Conference on Interdisciplinary Research and Development, 31 May - 1 June 2011, Thailand
2) Chi- square ratio to freedom degree ($\chi^2$/df)

3) Adjusted Goodness of Fit Index (AGFI)

4) Goodness of Fit Index (GFI)

5) Comparative of Fit Index (CFI)

6) Root Mean Square Error of Approximation (RMSEA).

It is observed in table No.II Almost all of the factors have goodness of fit to data. Chi- square with freedom degree less than 2 (except factor 2) and according to proposed criteria of Marsh and Hocever (1985) [10], Bayern (1989) [11]. Expected Cross Validation Index (ECVI) is equal to 0.16 and in Saturated Cross Validation Index (SCVI) model is 0.21 according to Joreskog and Sorbom criterion [12]. GFI and CFI indices have shown goodness of fit. RMSEA is less than 0.05. It is obvious that model approximation degree in community is not extra [13]. Then a scale with 58 questions for Boredom Assessment Scale (BAS) has been established. Convergent validity of scale has shown appropriate validity because its correlation rate was accounted with BPS $r=0.70$

IV. CONCLUSION

There are many different points of view about boredom essence, but what is common in all these studies is boredom is an intricacy phenomenon [14]. This intricacy on the one hand is caused by overlapping with the concepts such as anxiety and depression [2], and on the other hand can be resulted from social and cultural conditions. It is difficult to understand this phenomenon during adolescence. Because it is combined with developmental processes and socio-cultural structures of the society that teens live in. In other words, boredom is taken into account as a consequence of cultural fields [15]. So, there is no agreement about its factors. Different studies have indicated factors such as internal simulation, external simulation, constrain and time slowness. [8]

The results showed that boredom in Iranian adolescents is consisted of amotivation and purposelessness, weariness, negative thoughts, acedia and lethargy, anger, sustain attention and hypohedonia. generally, it is suggested that cognitive and emotional components contribute to boredom [8]. Comparison of factors found in this study with past studies shows that in spite of congruence between factors of this study and many factors of other studies, they emphasized on cognitive factors role such as concentration- attention external environmental weak simulations but the results of this exploratory study are emphasize on motivational and emotional aspects of boredom. In other words it is possible to say emotional and motivational components play immense role on Iranian adolescents. Mean while cognitive components are more important in western cultures.

ACKNOWLEDGMENT

Authors wish to thank appreciate managers of Khorramabad regional areas 1 and 2 of education organization for all of their collaborations.

REFERENCES


Factor Structure of Boredom in Iranian Adolescents


