The Relevance of the Dimensions of Creativity with Perfectionism and Goal Orientation at Students, a Cross-Sectional Study

Vida Esfahani¹*, Monir Cheraghi², Ahmad Souri³, Leila Movasagh⁴, Sanaz Shafigh⁵

¹M.A Student in Educational Psychology, Islamic Azad University, Saveh, Iran ²M.A in Psychology, Islamic Azad University, Saveh, Iran ³Associate Professor, Department of Psychology, Police University, Tehran. Iran ⁴M.A Student in Psychology, Shahid Beheshti University, Tehran. Iran ⁵M.A in Educational Technology, Tarbiat Moallem University, Tehran. Iran

Abstract

Introduction: Understanding the psychological factors affecting teaching is always the goal of educational researchers. This study was conducted aimed to investigate the relationship between creativity and perfectionism dimensions with purposiveness at secondary school students.

Methods: in a descriptive study in the form of the relationship assessment, from the society of Tehran high school students, 573 students selected by multistage cluster sampling method and after obtaining informed consent, clinical interview and demographic characteristics were carried out and then the students entered into the process of the research. To assess creativity index, Torrance (response rate = 0.91), perfectionism index from Shevert (response rate = 0.94) and in order to asses goal orientation index, Elliot and McGregor scale (response rate = 0.89 ) were used. Data were analyzed by stepwise regression and Pearson correlation test through SPSS software (version 20).

Results: Data analysis showed that there is a direct relationship between creativity and perfectionism and goal orientation. Creativity in all dimensions had a significant relationship with creativity (r=0.47, p<0.05). There was a significant correlation between the creativity and goal orientation indices (r=0.5, p<0.05). In terms of initiative dimension, there was no significant correlation between creativity and goal orientation (p>0.05). The multiple dimensions of creativity were identified by indicators of perfectionism (28%) and goal orientation (38%).

Conclusion: These findings can be important in applied educational planning and strategic planning.

Keywords: Creativity, Perfectionism, Goal orientation

Introduction

Although human culture and civilization are the result of the efforts of all human in all eras, but its richness and grandeur is indebted of a group of people who are called the explorer, inventor, artist, thinker and creator. Creativity means the use of mental abilities to create a new thought or concept that some researchers consider it as the combination of ideas or the creation of unity between ideas (Heidari, 2011). Creativity, while more than a cognitive or personality trait that may vary in individuals, is an activity that develops and evolves throughout human history and is a public potential and it would be possible to grow and flourish it by understanding the factors affecting it, and by accelerating the creativity it is possible to help people to find and create new frameworks for their life (Pirkhaefi et al., 2009). Creativity can be defined as the process of the evolvement of exquisite perspectives about different situations (Mooghi, 2013). In fact, creativity is any type of thought process that solves a problem through a useful and exquisite way (Ghaderi et al., 2012). In recent years, different classifications of creativity are presented which the most important category, Torrance, is provided creativity into four parts, including fluidity, originality or initiative, flexibility and expandability (Mousavi et al., 2011). Learners must learn critical and creative thinking skills to solve complex problems of society and learn to make proper decisions to enter the era of wisdom and facing the amazing transformations of 21st century (Jabali and Sobhani, 2012). On the other hand, perfectionism is known as a character who introduces tries to be impeccable and provide high standards for performance along with tendencies for critical assessments (Salibi and Ahmadi, 2013). However, perfectionism is not necessarily known as a...
negative factor, but as a factor that can have a positive and useful performance (Assadi, 2012). In this regard, researchers and theorists have provided different categories of perfectionism, that in the most important category, perfectionism is divided into two categories: positive and negative perfectionism. In this regard and in other dimensions, goal orientation is a series of behavior intentions which determine the attitude of the individual to be involved in the activities (Qadiri et al., 2011). This problem in academic situations suggests the motivation of the individual from the study and for this reason it affects the desires, actions and responses of the individual to situations in learning situations (Moshtaghi, 2012). Goal orientation, represent a consistent pattern of beliefs, documents and emotions that has set its purposes of its behavior and causes to have more tendency towards some situations and act in a certain way (Kehvelt, 2012). Goal orientation refers to a set of attitudes and behavioral intentions which determine the attitudes of the individual to be involved in learning activities (Qadiri et al., 2011). Several categories of goal orientation have been provided that in the most important category, Elliott et al. (2001) identified four types of goal orientation among students which are including proficiency orientation, performance orientation, performance-objectives orientation and performance-avoidance targets (Koushafar, 2014). Some researchers admit that orientation affect the purpose of the individuals, their academic performance and the degree of their satisfaction and feeling of happiness (Kehvelt, 2012). It can be said that goal-oriented people follow to develop their competence and skills in a task or more understanding of a subject (Selar, 2010). Lack of purpose, threatens the mental health of students and affect the formation of their character and talent flourish (Sarbaz, 2012).

Today, the most important educational goals which have always been of interest to researchers, is nurturing motivated, goal-oriented, development-oriented and efficient learners. Goal-orientation of students is among the topics that its role as a key structure is approved. According to the abovementioned content and the importance perfectionism and goal-orientation in individual’s life and education of the students and the role that it can have on success or failure of a student or student achievement, several studies in this area have been studied, but less research has been conducted on the evaluation of the relationship between creativity and goal-orientation and perfectionism and there is little research and experience in this field. According to what has been discussed and given the importance of this study, we are going to investigate the relationship between creativity index and perfectionism and purposiveness at students.

Method

This research is a causal-comparative study in the category of descriptive studies. In the present study, the method of data collection is a combination of field and library studies. For this purpose, from secondary school students in Tehran, 573 students were selected through multistage cluster sampling method according to the suggested size in Morgan table and after obtaining informed consent and doing some interviews, they were entered into the study. In order to increase the accuracy of the participant's response to the questionnaire, the goals of questionnaire was explained to them. In this study, a demographic questionnaire, the Structured Clinical Interview for Disorders, Torrance creativity questionnaire, perfectionism questionnaire and goal-oriented questionnaire were used. The collected data were analyzed by stepwise regression and Pearson correlation test. From the other hand, informed consent was obtained from the participants in this study and refusing to accept to participate in the study were respected. It has been tried to do the study according to religious and cultural principles and research participants were protected in all stages of design, implementation and reporting of the study from human dignity perspective, respect and physical and mental integrity in order to doing of the research does not interfere or stop the process of medical care of participants.

Ethical Principles

In this study, the informed consent was obtained without coercion, threat, enticement and seduction and their decision to refuse or accept to participate in the study were respected.

Instruments

In this study, a demographic questionnaire, the Structured Clinical Interview for Disorders, Torrance creativity questionnaire, perfectionism questionnaire and goal-oriented questionnaire were used.

Clinical structured interview for disorders (SCID): is a Clinical Interview that is used for diagnosis of disorders I Axis based on DSM- IV. Reliability coefficient for SCID has been reported equal to 0.60 (Firest et al., 2002). The diagnostic agreement of this tools in Persian for most specific and overall diagnosis with the reliability above 0.60 was desirable, Kappa coefficient for all current diagnosis and lifetime diagnoses were
obtained equal to 0.52 and 0.55, respectively (Sharifi et al., 2009).

**Demographic questionnaire:** this questionnaire was used by the researcher to collect personal information such as age, education, socioeconomic status, history of illness, history of drug use and treatment duration.

**Torrance Tests of Creative Thinking (TTCT):** Torrance (1979) believes that the creativity is containing of 4 core element and it a 60-item questionnaire is used to measure it. To obtain the test result, each answers to (a) has 0 point, answer to (b) has 1 point, and answer to (c) has 2 points. Torrance Test of Creativity enjoys international fame and has attracted most of the attention and much research has been done about it and the reliability of this test among a group of students by Pirkhaefi (2005) has shown the reliability coefficients equal to 80.0. Also Bidokhti (2008) in a study investigated the relationship between creativity and the philosophical mindset in school principals at elementary, middle and high schools in Sanandaj Province that its reliability is obtained equal to 86.0, which shows good reliability of it. So that it can be said that the Torrance Test of Creativity has high power for differentiating in the assessment of components of the creativity such as fluidity, flexibility, initiative and expanding. Therefore, this test is a reference in the field of creativity.

**Perfectionism questionnaire:** Shevert et al (1995) developed a tool to measure perfectionism that is comprised of 40 items that 20 items asses the positive perfectionism and 20 items asses the negative perfectionism. Items in 5 point Likert scale, measures individuals perfectionism from grade 1 to 5 in two of positive and negative fields. Besharat (1967) to determine the reliability and validity of this scale, used from Cronbach’s alpha and correlation coefficient between the sub-scales of this test with the sub-scales of General Health Questionnaire of Goldber (1972) and Self Esteem Scale of Smith (1967) and the analysis the main components of the test. The obtained coefficients and results confirms the validity of the scale of positive and negative perfectionism questionnaire of Shevert et al (1995). The alpha coefficient for the sub-scales of positive and negative perfectionism was calculated equal to 90.0 and 87 for all participants, respectively, and 89.0 and 86.0 for female and male students that show the high internal consistency of this scale.

**Goal orientation questionnaire:** this questionnaire was prepared to measure educational achievement goals, according to a four-sided pattern by Elliot (2005) and is consists of 12 articles. 5-point Likert scale is in front of each article from completely agree to completely disagree with. The scores on this questionnaire are from 12 to 60. This questionnaire has acceptable reliability and validity. For example Koushafar (2014) in his study reported the reliability of the questionnaire equal to 84.0. In order to determine the structural validity of the questionnaire, confirmatory factor analysis method was used. GFI index value has reported equal to 92.0 and x² index value in Bartlett test of sphericity equal to 108.12 in the probability level of 0.001 has been reported significant.

**Results**

In the present study, due to the presence of causal-comparative design as well as the presence of dependent variables with space scale, stepwise regression and Pearson regression was used. Before the research, the normal assumption of distribution of variables was evaluated by Kolmogorov–Smirnov test and the establishment of the preconditions was met. For data analysis, SPSS software, version 20 was used.

**Table 1- distribution of the participants based on educational level**

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>first grade</td>
<td>181</td>
<td>48.3</td>
</tr>
<tr>
<td>second grade</td>
<td>194</td>
<td>51.7</td>
</tr>
<tr>
<td>Total</td>
<td>375</td>
<td>100</td>
</tr>
</tbody>
</table>

According to Table 1, 18 students (48.3%) belong to the first grade of high school and 194 students (51.7%) belong to the second grade of high school.

The distribution of scores of participants in three investigated variables is provided in Table 2.

**Table 2- distribution of the scores of participants in three variables of the study**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dimension</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>Fluidity</td>
<td>58.16</td>
<td>62</td>
<td>63</td>
<td>11.31</td>
<td>54</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
<td>42.54</td>
<td>55</td>
<td>54</td>
<td>87.24</td>
<td>46</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Initiative</td>
<td>71.54</td>
<td>55</td>
<td>55</td>
<td>2.82</td>
<td>48</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Expanding</td>
<td>96.49</td>
<td>49</td>
<td>49</td>
<td>5.41</td>
<td>37</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>68.20</td>
<td>222</td>
<td>222</td>
<td>7.63</td>
<td>205</td>
<td>239</td>
</tr>
</tbody>
</table>
According to the data presented in Table 2, the highest and lowest mean belong to expansion and fluidity, respectively.

One of the assumptions of parametric tests is to establish normal index distribution of the variable. In order to investigate this index, Kolmogorov–Smirnov test was used and the establishment of the mentioned assumptions was verified ($P>0.05$), hence the use of parametric tests is allowed.

### Table 3- the results of Pearson correlation about goal orientation and creativity variables

<table>
<thead>
<tr>
<th>Component</th>
<th>R</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluidity</td>
<td>62.0</td>
<td>0.000</td>
</tr>
<tr>
<td>Flexibility</td>
<td>39.0</td>
<td>0.000</td>
</tr>
<tr>
<td>Initiative</td>
<td>57.0</td>
<td>0.52</td>
</tr>
<tr>
<td>Expanding</td>
<td>17.0</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The results of Table 3 shows that there is a significant correlation between the variable of goal orientation and three variables of fluidity, flexibility and expansion ($P<0.000$). No significant correlation was observed on initiative component ($P>0.52$). In order to more investigate and determining the role of each component, regression test was used. The results of this test is provided in Table 4.

### Table 4- the result of regression analysis test about the relationship between goal orientation and creativity dimensions

<table>
<thead>
<tr>
<th>Row</th>
<th>Component</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Constant</td>
<td>0.063</td>
<td>0.083</td>
<td>-</td>
<td>0.084</td>
<td>0.082</td>
</tr>
<tr>
<td>2</td>
<td>Fluidity</td>
<td>0.582</td>
<td>0.029</td>
<td>0.625</td>
<td>15.17</td>
<td>0.000</td>
</tr>
<tr>
<td>3</td>
<td>Flexibility</td>
<td>0.382</td>
<td>0.031</td>
<td>0.393</td>
<td>36.75</td>
<td>0.000</td>
</tr>
<tr>
<td>4</td>
<td>Initiative</td>
<td>0.47</td>
<td>0.019</td>
<td>0.057</td>
<td>44.11</td>
<td>0.073</td>
</tr>
<tr>
<td>5</td>
<td>Expanding</td>
<td>0.166</td>
<td>0.026</td>
<td>0.172</td>
<td>55.47</td>
<td>0.000</td>
</tr>
</tbody>
</table>

$R=0.38$  $R^2=0.62$  $F=58.18$  $P<0.000$

The results of Table 4 indicate the determining effect of creativity dimensions on goal orientation. In order to investigate the relationship between creativity and perfectionism, Pearson correlation test was used. The results showed a significant correlation between the two variables ($P<0.000$).

### Conclusion and Discussion

This study was performed aimed to investigate the relationship between creativity and perfectionism dimensions with purposiveness at secondary school students. The study demonstrated the relationship among components of the study. The results of the regression analysis of the impact of creativity and perfectionism also specifies facts so that it can be concluded that the set dimensions of creativity is able to explain the changes perfectionism of the students and in this regard the value of the correlation coefficient between variables is ($r=0.53$) and according to the adjusted coefficient of determination which is equal to 0.28, it could be said that 28% of the total variation is the amount of perfectionism among the students dependent on independent variable in this equation, that is creativity. Among the creativity dimensions, fluidity dimension had the highest effect, and flexibility dimension had the lowest effect on perfectionism. According to the researcher, creativity that is a social phenomenon arises from the needs and demands of society and family circumstances and it is a personal effect and it depends on the motivation, emotions and learning factors and it can also be dependent to perfectionism, because the initiative individuals have perfectionism characterization. Perfectionism can also lead to creativity.

From the other hand, the result showed that creativity has a significant correlation with the goal-orientation index. So according to the obtained results, it could be acknowledged that the relationship between creativity and goal-orientation ($r=0.62$), flexibility with goal-orientation ($r=0.39$), expanding with goal-orientation ($r=0.17$) is significant. Also in the field of ingenuity to the goal-orientation, this relationship is significant. The dimensions of creativity, except from the...
initiative, there is a positive and significant relationship. In the field of overall correlation, there is a significant correlation between creativity and goal-orientation \( (r=0.50) \). The results of regression analysis for the effect of creativity dimensions on goal-orientation also show that creativity can be a good predictor for goal-orientation.

On the other hand, there is a correlation between the set of independent variables, creativity dimensions except from initiative. The adjustment factor which is equal to 0.38 indicates that 38% of the total variation is the amount of goal-orientation among students dependent on the independent variable that is creativity.

The results of the present study are consistent with internal and external findings in most cases. So Zareinezhad (2015) showed a significant positive relationship between perfectionism and creativity. In addition, the study of Bakhshi (2014), shows that there is a significant relationship between perfectionism and educational performance. Because educational performance is somewhat dependent on the progress of goal setting. Although in this study the relationship between the dependent variable has not been investigated, but the results of many studies such as Atarodi and Karshki (2013) shows that there is a significant relationship between these two variables. According to the study, the studied three variables in this study have mutual correlation and can be effective in the future innovation and progress. Considering all the studied variables in education is important. Creativity provides the context of perfectionism and goal-orientation. On the other hand, perfectionism can predict academic self-efficacy and progress goals of the students, or vice versa. So in general it can be said that the findings of this study is consistent with the findings of Zareinezhad (2015), Bakhshi (2014), Behpazhoh (2014), Atarodi and Karshki (2013), Moltafet and Sadati (2013), Behpazhoh et al (2010), Hashemi and Latifian (2009), Sadati et al (2008), Parker (2013), Davison (2013), Stamp and Parker (2012), Selva (2010), Hanchun (2010) and Rand Philon and Gaordinio (2010), Western (2010) and Onica (2009), which all emphasize on the relationship between the studied variables. So in education of students, the studied variables should be considered important to provide all-round development of the students.

Zareinezhad (2015) in a study titled "The prediction of academic adjustment based on perfectionism and creativity at high school students" examines the relationship between the mentioned indices. The results indicated that the perfectionism predict the scores of academic adjustment. Emotional creativity was also a significant negative predictor of academic adjustment score. In the study of Bakhshi (2014) titled "examining the relationship between perfectionism and depression and academic performance and the relationship between socio-economic status of students", it was shown that there is a significant positive and negative correlation between perfectionism variable and depression and academic performance variables.

Behpazhoh (2014) in a study titled "the relationship between perfectionism and creativity in high school students studying in Talent schools. The results showed that there is a significant relationship between dimensions of perfectionism and creativity. That perfectionism dimensions explain 20% of the creative variance. So that among the positive perfectionism as positive and negative perfectionism as negative, is negatively correlated with creativity. Moltafet and Sadati (2013) in a study titled "the relationship between perfectionism and creativity in high school students in Shiraz". The results showed that perfectionism affect students' creativity and on the other hand it showed that dimensions of perfectionism predict creativity in different ways and negative perfectionism has a negative effect on student creativity. Behpazhoh et al (2010) in a study titled "the relationship between goal orientation and creativity in high school students studying in Talent schools". The results showed that there was a significant relationship between the dimensions of goal orientation and creativity. The findings also suggest that male and female students were significantly different in terms of goal orientation and creativity. Hashemi and Latifian (2009) in a research titled "the investigation of the relationship between perfectionism and Goal Orientation among public pre-university school students". Perfectionism egocentric tendency negatively associated with learning and apartments available for selection for the Orientation negative forecasts. Sadati et al (2008), in a study titled "the relationship between perfectionism and creativity in students of high schools". The results showed that there was a significant relationship between dimensions of perfectionism and creativity.

Davies (2013) in a study titled "The relationship between creativity and excellence, problem solving and self-harm among the population impulsivity and self-harming a civilian population". The results of the research data showed that there is a relationship between creativity and perfectionism, problem solving, and impulsiveness and this relationship is more observed in the non-self-harming population compared to self-harm group.
Silva (2010) in a study titled "the orientation of the staff and its relation to creativity". The results of the research data showed that the orientation of the staff is effective on their creativity.

Annika (2009) in a research titled "The effect of goal orientation and risk on creativity". The results of the research data showed that there is a positive relationship between risk and goal orientation and creativity of the staff.

The results of Hashemi and Latifian (2009), Hanchun (2010), Werner Philon and Gaordinio (2010) also confirms the findings of the current study. Wester (2010) also showed that implantation is associated with innovation of the students, and finally Annika (2009) showed that there is a significant relationship between the orientation and creativity. Therefore, previous researches all confirm the findings of the current study.

Creativity in all dimensions was correlated with creativity. There was a significant correlation between the indices of creativity and goal orientation. In terms of initiative dimension, there was no significant correlation between creativity and goal orientation. These findings can be important in applied educational planning and strategic planning.

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Conflict of Interests

The author declared no conflict of interests.

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