Relationship between Creativity and Perfectionism in Secondary School Students

Abstract

The aim of this study was to examine the relationship, including its nature, between creativity and perfectionism in secondary school students. Its research section is focused on quantitative research analysing relationships between figurative and verbal creativity on the one hand and perfectionism and perfectionist thoughts on the other hand. Our findings indicate that there is a weak positive relationship between figurative creativity and perfectionism and also a moderate positive relationship between verbal creativity and perfectionism.

Keywords: figurative creativity, verbal creativity, perfectionism, relationship between creativity and perfectionism

Introduction

At present, creativity is increasingly becoming a topic of interest, because everyday situations require new, original, creative ideas and solutions. Creativity is not only about socially important products, but it is part of an individual's normal functioning. We can say that creativity is the ability of personality to create new cultural, technical, intellectual and material values in all branches of human activity (Köningová, 2007).

Based on research (Jurčová, 2009), when looking at creativity as the ability of personality, it is influenced by factors also including perfectionism. According to available sources, perfectionism can be considered a relatively stable personality trait considerably influencing personal and professional life of a person. In
connection with the term perfectionism, such synonymous terms as flawlessness, exactness, precision, absolute correctness and accuracy, completeness in every case, freedom of error and mistake, lack of the slightest fault, and excellent condition are used (Winter, 2006). However, most frequently this concept is regarded as a negative phenomenon. The roots of the negative perception of perfectionism can be seen in the theory of B. Sorotzkin, who perceived perfectionism as an obsessional neurosis, thus as a faulty cognitive style leading to dichotomous thinking, overly moralistic self-evaluation and over-generalization in the individual to avoid the feeling of guilt when failing to satisfy his/her strict expectations he/she has set up for himself/herself.

M. Buck (2006) relates perfectionism to self-destructive thoughts and behaviour aimed at the achievement of extremely high and unrealistic goals.

Perfectionism is also perceived negatively by G. Flett and P. Hewitt (2005), who regard it as a hindrance to success, but perceive it also positively, while suggesting distinguishing three degrees of perfectionism: neurotic, unhealthy perfectionism; normal, healthy perfectionism and non-perfectionism (Winter, 2006). Some authors use the terms adaptive and maladaptive perfectionism or functional and dysfunctional perfectionism instead of the terms normal and neurotic perfectionism.

Although perfectionism persists to be perceived as a negative construct, at present some authors (e.g. Rice et al; Stoeber & Eysenck, in Wigert et al., 2012) attempt to point out positive aspects of perfectionism and its influence on an individual. They associate perfectionism with performance enhancement, its positive influence on personal expectations, self-esteem, attention and effort.

A question remains open whether perfectionism has an impact on creativity and if it has, whether it stimulates and supports creativity or, on the contrary, is a hindrance to creativity.

1. Relationship between creativity and perfectionism

As known from professional literature, there are only a few studies addressing the relationship between creativity and perfectionism. However, many of them have shown that perfectionism is related to individual performance (Wigert et al., 2012).

So far, studies have primarily focused on perfectionism as a unidimensional construct and its impact on gifted children and their creative strivings (e.g. Gallucci et al.; Joy & Hicks, as cited in: Wigert et al., 2012). These authors found that perfectionism as a unitary construct was negatively related to the need to be different and
open to experience; two main components of creativity. They also examined the
direct relationship between perfectionism and creativity, using the MPS measure.
Perfectionism was negatively related to the subscale of “creative striving”.

As opposed to previous research, the study by B. Wigert et al. (2012) considered
the multidimensional nature of perfectionism. It showed that in general, creativity
was maximized in persons with a moderate level of adaptive perfectionism.
A weak positive relationship between adaptive perfectionism and creativity was
proved there. On the contrary, the expected negative relationship between maladap-
tive perfectionism and creativity was not confirmed. Out of the perfectionism
dimensions, the dimension of “personal standards“ correlated with creativity in the
strongest way. The authors admitted that the non-existence of a negative relation-
ship between creativity and maladaptive perfectionism in this research calls for
further examination.

Other authors, too, arrived at similar conclusions (e.g.: Rieke, Berlund &
Wennberg, as cited in: Nekoie-Moghadam et al., 2012). Their findings also showed
a relationship between healthy, functional perfectionism and creativity.

In their research, M. Nekoie-Moghadam et al. (2012) found not only a moderate
positive relationship between functional perfectionism and creativity, but
also a moderate positive relationship between dysfunctional perfectionism and
creativity. The latter proved to be even slightly stronger.

However, it should be stressed that the majority of the research and studies
conducted did not account for the multidimensional nature of perfectionism.
That is also why we consider it as important to carry out quantitative research to
evaluate the relationship between creativity and perfectionism as a multidimen-
sional construct, with the aim to find out whether perfectionism hinders or, on the
contrary, facilitates creativity.

2. Research Problems and Research Aim

We perceive creativity as a very important phenomenon in a person’s practical
life. We subscribe to the definition by M. Zelina (2004), stating that creativity is
production of new, useful and acceptable ideas, solutions, thoughts and products,
while we perceive it as a complex phenomenon influenced by a number of factors
that contribute to it or, on the contrary, hinder it. Perfectionism may be one of
such factors.

We perceive perfectionism as a multifactorial construct which, on one hand, if
in a healthy, functional form, may act as a driving force when delivering perfor-
performance, achieving goals and may also influence personality development, but, on the other hand, if in an unhealthy, dysfunctional form, may even be an obstacle in pursuit of the set goals, in exceptional performance, and even in performance of everyday activities. Both forms, or types, of perfectionism were the object of our research.

Our research was drafted as quantitative. Its aim was to find out whether there is a relationship between creativity and perfectionism and if there is one, whether perfectionism may be considered a construct facilitating creativity, or, on the contrary, whether perfectionism may be considered a hindrance to creativity.

**Research Sample**

The research sample consisted of the total of 150 secondary school students, out of whom 74 were girls and 76 boys. The research comprised 3 secondary schools, each representing a different type of secondary education (art school, grammar school, school of mechanical engineering). 50 students from each type of school participated in the research.

The age of the respondents ranged from 15 to 19; at the beginning of the research the average age of the participants was 17.6.

The research sample was selected using quota sampling. The quota criteria included the region, type of school attended and number of respondents (50 students from each school).

**Research Methods**

Four research methods were used in the research: *the subtest Sentences from Meili’s Analytical Intelligence Test* (AIT, to determine the level of verbal creativity), *Urban’s Figurative Test of Creative Thinking* (TSD-Z, to determine the level of figurative creativity), *Multidimensional Perfectionism Scale* (MPS, to identify the perfectionism score and to determine functional and dysfunctional perfectionism) and *Perfectionism Cognitions Inventory* (PSI, to determine the level of perfectionism cognitions).

AIT was created by R. Meili in 1928, as a tool for identifying the structure of intelligence. The test adapted by V. Smékal was published in Bratislava in 1972. Meili’s Analytical Intelligence Test consists of six subtests: Pictorial Materials, Numerical Series, Sentences, Gaps, Drawings and Analogies. The Sentences and Drawings subtests focus on creativity and activate the mobility and adaptability of thought (Svoboda, 2010). In our research, the *Sentences subtest* was used, by means of which the level of verbal creativity was identified in secondary school students.
Urban’s Figurative Test of Creative Thinking began to materialize in the 1980s, thanks to H. Jellen, and it was completed by K. Urban in 1994. The author of the Slovak version published in Bratislava in 2002 is T. Kováč (Urban, Jellen, Kováč, 2002).

The Multidimensional Perfectionism Scale, consisting of 35 items, was created by R. Frost et al. in 1992. In 1997 W. Parker used MPS for cluster analysis and identified two groups of perfectionists – dysfunctional, maladaptive perfectionists and functional, adaptive perfectionists (Frost et al., in: Bachnová, 2012).

The Perfectionism Cognitions Inventory constructed by G. Flett et al. in 1998 (as cited in: Stoeber et al., 2010) is a unidimensional method consisting of 25 items expressing automatic thoughts typical of perfectionism, e.g. “I should be perfect”, “My work must be better”, “I should not make the same mistake twice”, “It would be great if everything in my life were perfect” (Stoeber et al., 2010).

We added three items to the above methods, for the respondents to supply their basic demographic data.

Results were processed using quantitative analysis. To test the distribution of individual variables for normality, Kolmogorov-Smirnov’s normality test was applied. Kolmogorov-Smirnov’s normality test of the distribution of individual variables for normality returned the following variables as normally distributed: the level of figurative creativity, degree of perfectionism, dysfunctional type of perfectionism, CM and PS dimensions of perfectionism and the level of perfectionism cognition, therefore Pearson’s parametric correlation coefficient was used. The variables: level of verbal creativity, functional type of perfectionism, and score in the DA, PE, PC and O dimensions of perfectionism could not be considered as normally distributed in our research. Therefore, this group of variables was applied non-parametric statistic procedures (Spearman’s correlation coefficient).

All data obtained were processed using the table processor Excel and the statistical program SPSS Statistics version 17.0.

### 3. Analyses and Interpretation of Results

#### 3.1. Relationship between figurative, verbal creativity and perfectionism

The existence of relationships between figurative, verbal creativity and perfectionism was examined with the use of correlation analysis – Pearson’s and Spearman’s correlation coefficients. The correlation coefficients and their p-values are presented in Table 1.
Table 1. Correlation coefficients for the figurative and verbal creativity variables and perfectionism

<table>
<thead>
<tr>
<th></th>
<th>N = 150</th>
<th>Perfectionism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figurative creativity</td>
<td>r</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>p – value</td>
<td>0.10</td>
</tr>
<tr>
<td>Verbal creativity</td>
<td>R</td>
<td>0.41**</td>
</tr>
<tr>
<td></td>
<td>p – value</td>
<td>0.00</td>
</tr>
</tbody>
</table>

** p < 0.1

The results of correlation analysis show that the perfectionism variable is related to figurative creativity as well as to verbal creativity. While the relationship between perfectionism and figurative creativity is statistically insignificant, there is a statistically highly significant relationship between the variables of perfectionism and verbal creativity.

3.2. Relationship between figurative and verbal creativity and the level of perfectionism cognitions

This relationship was examined by means of Pearson’s and Spearman’s correlation coefficients. Results of the correlation analysis and their p-values are presented in Table 2.

Table 2. Results of correlation analysis for figurative and verbal creativity and the level of perfectionism cognitions

<table>
<thead>
<tr>
<th></th>
<th>N = 150</th>
<th>Perfectionism cognitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figurative creativity</td>
<td>r</td>
<td>0.18*</td>
</tr>
<tr>
<td></td>
<td>p – value</td>
<td>0.03</td>
</tr>
<tr>
<td>Verbal creativity</td>
<td>R</td>
<td>0.36**</td>
</tr>
<tr>
<td></td>
<td>p – value</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* p < 0.05. ** p < 0.01

The above results show that there is a positive statistically significant relationship, at the significance level of p < 0.05, between figurative creativity and the level of perfectionism cognitions. The relationship between verbal creativity and the level of perfectionism cognitions proves to be positively highly statistically significant (p < 0.01).
3.3. Correlations between verbal and figurative creativity and individual dimensions of perfectionism

Correlations between verbal and figurative creativity and the dimensions of perfectionism were examined using correlation analysis – Pearson’s and Spearman’s correlation coefficients. The correlation coefficients and their p-values are shown in Table 3.

**Table 3. Correlation coefficients for figurative and verbal creativity and the dimensions of perfectionism**

<table>
<thead>
<tr>
<th></th>
<th>CM</th>
<th>DA</th>
<th>PE</th>
<th>PC</th>
<th>PS</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Figurative</td>
<td>0.14</td>
<td>0.10</td>
<td>0.05</td>
<td>-0.10</td>
<td>0.21*</td>
<td>-0.05</td>
</tr>
<tr>
<td>creativity</td>
<td>p-value</td>
<td>0.08</td>
<td>0.25</td>
<td>0.54</td>
<td>0.24</td>
<td>0.01</td>
</tr>
<tr>
<td>Verbal</td>
<td>0.38**</td>
<td>0.18*</td>
<td>0.26**</td>
<td>-0.05</td>
<td>0.41**</td>
<td>0.20*</td>
</tr>
<tr>
<td>creativity</td>
<td>p-value</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.56</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* p < 0.05. ** p < 0.01

Explanations: CM = score in the subscale Concern over Mistakes; DA = score in the subscale Doubts about Actions; PE = score in the subscale Parental Expectations; PC = score in the subscale Parental Criticism; PS = score in the subscale Personal Standards; O = score in the subscale Organization.

The above results show that out of the individual dimensions of perfectionism, the relationship with figurative creativity can be found only in two dimensions, i.e., PS = Personal Standards and CM = Concerns over Mistakes; while the relationship between figurative creativity and the dimension PS = Personal Standards is statistically significant, the relationship between figurative creativity and the dimension CM = Concerns over Mistakes is not statistically significant.

The existence of a relationship between verbal creativity and the dimension PC = Parental Criticism is not proved. Weak positive statistically significant correlations are found between verbal creativity and the dimensions DA = Doubts about Actions, PE = Parental Expectations and O = Organization.

3.4. Relationship between Perfectionism Types (Dysfunctional and Functional) and Figurative and Verbal Creativity

To examine this relationship, correlation analysis – Pearson’s and Spearman’s correlation coefficients were used as above. Results of the correlation analysis and relevant p-values are presented in Table 4.
Table 4. Results of correlation analysis for figurative and verbal creativity, and the dysfunctional and functional types of perfectionism

<table>
<thead>
<tr>
<th></th>
<th>N = 150</th>
<th>DYS</th>
<th>FUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figurative creativity</td>
<td></td>
<td>0.08</td>
<td>0.10</td>
</tr>
<tr>
<td>r/R</td>
<td></td>
<td>0.32</td>
<td>0.21</td>
</tr>
<tr>
<td>p-value</td>
<td></td>
<td>0.32</td>
<td>0.21</td>
</tr>
<tr>
<td>Verbal creativity</td>
<td></td>
<td>0.34**</td>
<td>0.36**</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>p-value</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* p < 0.05. ** p < 0.01

Explanations: DYS = dysfunctional type of perfectionism, FUN = functional type of perfectionism

The results in the table allow us to say that none of the two types of perfectionism is related to figurative creativity (there are no relationships here). On the contrary, relationships between the dysfunctional and functional types of perfectionism and verbal creativity proved to be positive, highly statistically significant.

4. Discussion

Our research examined whether there is a relationship between creativity and perfectionism in secondary school students. Due to the lack of professional and research studies in this field, there were only a few opportunities to compare our results with the results of other researchers.

The aim of our research was to find out whether there is a relationship between creativity – figurative and verbal – and perfectionism. The correlation analysis showed a weak positive statistically insignificant relationship between figurative creativity and perfectionism and a moderate positive statistically highly significant relationship between verbal creativity and perfectionism. As for the relationship between figurative creativity and perfectionism, we arrived at similar findings as some previous research (e.g., by Rieke; Berglund & Wennberg, as cited in: Nekoie-Moghada et al., 2012; Wigert et al., 2012). Thus, we can assert that although perfectionists in general do not display much figurative creativity, perfectionism cannot be considered as a barrier to creativity, since no negative relationship was shown here.

In this connection, we find the resulting positive relationship between verbal creativity and perfectionism very interesting as well as surprising, because many experts still consider perfectionism to be expressly negative. The negative rela-
tion between creativity and perfectionism was found out, e.g., by S. Joy and S. Hicks, N. Gallucci et al. (as cited in: Wigert et al., 2012). On the basis of our findings we can state that the higher the perfectionism level, the higher the level of verbal creativity in the students of secondary schools where the research took place. The above findings are supported also by other results of our research, in particular the proven weak positive statistically significant relationship between figurative creativity and the level of perfectionism cognitions and the moderate positive relationship between verbal creativity and the level of perfectionism cognitions. The latter also confirms that perfectionist thoughts that should impede creativity in the subtest Sentences (Meili’s Analytical Intelligence Test) had no time to take full effect.

Since some foreign research confirmed a high correlation between the Multi-dimensional Perfectionism Scale (MPS) and Perfectionism Cognitions Inventory (PCI), it is not surprising that the results in these scales and tests of figurative and verbal creativity were very similar in our research. We believe that it is essential to mention that MPS is the only method in Slovakia, not even standardized, which captures the perfectionism variable. We decided to use the Perfectionism Cognitions Inventory as a supplementary method to MPS not only to capture the perfectionism variable better and bring something new to the field of this area, but also to point out the lagging study of perfectionism as such in our conditions.

We decided to examine the very relationship in depth, which was why we further focused on individual dimensions of perfectionism – Concerns over Mistakes (CM), Doubts about Actions (DA), Parental Expectations (PE), Parental Criticism (PC), Personal Standards (PS), and Organization (O) – in relation to figurative and verbal creativity. We wanted to find out which components of perfectionism correlate with creativity the closest. The relationship between figurative creativity and the perfectionism dimensions showed only in two of them – PS and CM. In both cases, it concerned weak positive relationships, statistically significant in the case of the PS dimension. The relationship between the verbal creativity and perfectionism dimensions was found in the DA, O, CM, PE and PS dimensions. In the case of DA and O, the relationships were moderately positively significant. It is noteworthy that the CM and PS perfectionism dimensions correlated with both types of creativity the closest. The Concern over Mistakes (CM) dimension reflects fear of errors and subsequent negative responses to one’s own errors. The Personal Standards (PS) dimension represents setting high goals for oneself and self-assessment based on achievement/failed achievement of the set goals. The relationship between these very perfectionism dimensions and the particular types of creativity can be explained by the fact that setting high goals and demands for
oneself while having concerns over failure to meet the demands and goals may act as a driving force and motivate the person to better and thus more creative performance. The above statement was confirmed also in the research by L. Ďuricová (2009) and B. Žitniaková-Gurgová (2012).

Further, we focused on the examination of relationships between two types of perfectionism – dysfunctional and functional perfectionism and verbal creativity. Dysfunctional perfectionists are characterized by setting high goals for themselves and reluctance to accept any failure in achieving them. Also, they are accompanied with feelings of dissatisfaction with their achievement. Functional perfectionists also set high goals and demands for themselves, but they are able to accept occasional failure while enjoying their effort for achievement of the goals set for themselves (Hamachek, as cited in: Bachnová, 2012). Thus, it is not strange that a positive moderate statistically significant relationship was found between functional perfectionism and verbal creativity. What is surprising is the relationship between verbal creativity and dysfunctional perfectionism, where the correlation was even slightly higher. M. Nekoie-Moghadam et al. (2012) obtained the same result. We believe, especially with regard to this finding, that further research in this field is necessary to explain these relationships. The only explanation of the relationship found out between the dysfunctional type of perfectionism and verbal creativity may be the fact that the reluctance to accept failure could lead to an extreme effort for success and thus avoidance of failure in all types of achievement including creative achievements.

**Conclusion**

The aim of our study was to bring new knowledge into the field of creativity, particularly to the theory of the creativity of personality, perfectionism and their relationship. We believe that this aim was reached and at the end, we would like to offer a few suggestions and stimuli for further research on this issue. In our opinion, it would be interesting to examine the issue also with a different research sample where both variables have a specific impact, e.g., various artists, actors, painters, writers, etc. New, enriching results could be obtained also by inclusion of creativity self-assessing methods in research, or work with other methods aimed at examination of perfectionism already used abroad. Last, but not least, we believe that it is important to mention that it would be useful for further research to work with a larger research sample to ensure higher representativeness of the target population.
References


