Research on the Correlation Between Emotional-Gnostic and Personal Characteristics with Parameters of Adolescents’ Creativity

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**Research on the Correlation Between Emotional-Gnostic and Personal Characteristics with Parameters of Adolescents’ Creativity**

Дослідження взаємозв’язку емоційно-гностичних та особистісних особливостей із параметрами творчості підлітків

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Abstract

The aim is to research the correlation of the most significant emotional-gnostic and personal characteristics with parameters of adolescents’ creativity. Methods. 150 adolescents aged 10–12 took part in the research. They gave answers to the statements of the method, aimed at determining the manifestation of creativity features, namely: an adapted author’s expert assessment, based on the diagnostic technique of creative personality traits by O. Tunik (2013) and the questionnaire of personal propensity for creativity by G. Davis (1989); as well as for the study of emotional-gnostic and personal characteristics: the children’s version of the multifactorial personality questionnaire by R. Cattell et al. (1993); scale of personal anxiety by H. Prykhodzh (2007). Cattell et al. (1993); scale of personal anxiety by H. Prykhodzh (2007). The results. A certain variability in the manifestation of creativity features of the subjects and the absence of a high propensity for creativity was found out on the general sample of subjects. Direct correlations of indicators of the manifestation of creativity traits with impatience (p < .010), independence (p < .010), emotional stability (p < .010), determination (p < .010), psycho-emotional stress (p < .010), extraversion (p < .050), self-confidence (p < .050) were established. Using cluster analysis, groups of adolescents with significant differences in manifestations of creativity traits and propensity to this activity were identified. In particular, these are 1) children who were inclined to creativity and were able to realize it at the highest level among other adolescents; 2) children who were able to show creativity and had no interest in it; 3) subjects who were inclined to engage in creativity, however, their manifestations of creativity were insignificant. Analysis of variance of emotional-gnostic personality indicators was applied, and it was established that the groups differ in manifestations of psycho-emotional stress (p < .01), extraversion (p < .05) and conscientiousness (p < .01). Discussion and conclusions. It was clarified and explained that the set of emotional-gnostic and personal characteristics, which have statistically significant correlations with the manifestations of creativity features, include the following: a high level of psycho-emotional stress, activity in social interactions, openness, impermanence, flexibility and uncertainty in decision-making.

Keywords: traits of a creative personality, propensity for creativity, psycho-emotional stress, extraversion, conscientiousness, anxiety.

Introduction

The research of emotional-gnostic and personal correlations of the creativity features manifestation is one of the urgent tasks of modern...
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psychology (Kryshtanovych et al., 2021: 34). This especially applies to adolescents, since this period is characterized by sensitivity to its development (Gralewski et al., 2016: 152).

Summarizing numerous studies in developmental psychology and the psychology of creativity has shown that there is a number of issues that require careful analysis, based on the modern conditions of educational activities of adolescents. It is known that the consequences of the COVID-19 pandemic and martial law in Ukraine significantly complicated this process. According to certain studies (Khmiliar et al., 2020), such conditions are filled with stressogenic factors. Along with this, the transition to online learning and the limitation of interpersonal interaction, the emergence of new forms of communication and interaction among adolescents could not help but reflect on the safety of the educational space (Blynova et al., 2022; Popovych et al., 2020), on the change of priorities of creative activity. All this causes the need to know the emotional-gnostic and personal interrelationships of the manifestation of creativity among adolescents in modern conditions.

Considering creativity as an expression of one’s abilities in creating new, original, innovative samples in various spheres of life, it should be noted that they are based on a certain human potential. However, only a small part of humanity manages to realize it at a high level (Eschenauer et al., 2023). As recent research shows, such an opportunity depends on a range of factors, namely: the diversity and uniqueness of this potential, talents, ideas and opportunities that can serve as a basis for creative activity (van der Zanden et al., 2020); self-esteem, confidence, self-significance, belief in one’s abilities (Álvarez-Huerta et al., 2021); flexibility and openness to new experiences, desire to learn something new (Shi et al., 2016; Popovych & Blynova, 2019); self-determination, motivation, gnostic emotions (Cheban et al., 2020; Chebykin, 2023). There are also studies that indicate the connection between creativity and emotional intelligence (Xu et al., 2019), empathy, a tendency to cooperate (Oboeuf et al., 2023; Zhuravlova & Chebykin, 2021), communicative abilities (Aini et al., 2020) and others. Thus, as we can see, the realization of this potential depends on
a variety of factors, combining the emotional and gnostic characteristics of the personality. Summarizing these and other data, it can be stated that creativity is naturally connected with a wide range of various personal traits, among which there may be emotional-gnostic ones, which are actually integrated with all manifestations of the individual’s cognitive activity.

**Hypothesis.** In formulating the hypothesis, we assumed that the dimensions of creativity will have statistically significant correlations with a certain complex of emotional-gnostic and personal characteristics. Conventionally, there could be two main complexes. The first includes emotional and gnostic characteristics that act as a necessary potential for creativity (such as emotional and communicative qualities, gumption, optimism, risk propensity, impatience, determination, etc.), the second complex includes characteristics that can complicate the creative process (such as excessive psycho-emotional stress, anxiety, caution, shyness, conformity, pessimism, etc.). Within these outlined complexes, there may be varieties of them that can probably have the strongest correlation.

**The aim** is to research the correlation of the most significant emotional-gnostic and personal characteristics with the creativity parameters of adolescents.

**Methods**

**Methodology.** The logic of testing the formulated assumption implied that certain emotional-gnostic and personal characteristics are correlated with manifestations of creative personality traits. Therefore, the analysis of the research results consisted of three consecutive steps. First, determination of general trends of creativity in contemporary adolescents. Secondly, establishing the nature of correlations between probable dimensions and manifestations of creative personality traits. Thirdly, a comparison of groups of subjects with different levels of ability and propensity for creativity.

**Participants.** The total sample consisted of 150 subjects aged 10–12 years, each of whom spent 21 days at the recreational facility of Ukrainian Children Center “Moloda Hvardiia” (Odesa, Ukraine) at different times. Our focus was on adolescents as representatives of a certain

Отже, як бачимо, реалізація цього потенціалу залежить від розмаїття чинників, поєднуючи емоційно-гностичні особливості особистості. Узагальнюючи ці та інші дані, можна стверджувати, що творчисть закономірно зв'язана з широким переліком різних особистісних рис, серед яких можуть бути емоційно-гностичні, які інтегруються фактично з усіма проявами пізнавальної діяльності особистості.

**Гіпотеза.** При побудові гіпотези ми виходили з припущення про те, що виміри творчості матимуть статистично достовірні зв’язки з певним комплексом емоційно-гностичних та особистісних особливостей. Умово таких основних комплексів може бути два. Перший охоплює емоційно-гностичні особливості, які виступають необхідним потенціалом творчості (як то емоційно-комунікативні якості, кмітливість, оптимізм, ризикованість, нетерплячість, рішучість та ін.), другий комплекс охоплює особливості, які можуть ускладнювати творчий процес (як то надмірна психоемоційна напруженість, тривожність, обережність, сором'язливість, конформність, пессимізм та ін.). У межах наведених комплексів можуть бути їх різновиди, які вірогідно можуть володіти найміцнішими зв’язками.

**Метою** є дослідження взаємозв’язку найбільш суттєвих емоційно-гностичних та особистісних особливостей із параметрами творчості осіб підліткового віку.

**Методи**

**Методологія.** Логіка перевірки сформульованого припущення передбачала, що певні емоційно-гностичні та особистісні особливості корелюють з проявами рис творчої особистості. Тож аналізування результатів дослідження складалося з трьох послідовних кроків. По-перше, визначення загальних тенденцій творчості у сучасних підлітків. По-друге, встановлення характеру взаємозв’язків між імо- вірними вимірами та проявами рис творчої особистості. По-третє, порівняння груп досліджуваних із різними рівнями здатності та схильності до творчості.

**Учасники.** Загальну вибірку склали 150 досліджуваних віком 10–12 років, кожний з яких у різні часи впродовж 21 дня перебував
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generation, united by the factors of increasing influence of active use of social networks, changes in communication paradigms, and complex socio-political living conditions in Ukraine.

**Procedures and instruments.** Psychological diagnostic methods aimed at studying manifestations of creativity features and emotional-gnostic, personal characteristics, which are their probable correlates, were carried out with the subjects. Data on creativity were determined according to the author’s adapted expert assessment, which is based on the diagnostic method of creative personality traits (Tunik, 2013) and the questionnaire of personal propensity to creativity (Davis, 1989). The choice of these methods is due to the fact that they provide an opportunity to obtain meaningful assessments of the creative potential of adolescents from the perspective of personality development, which, against the background of developed curiosity, imagination, a desire to solve complex tasks and risk propensity, will be engaged in activities to create new, original products in any spheres. Emotional-gnostic and personal characteristics were determined using the personality anxiety scale (Prykhozhan, 2007), the children’s version of the multifactorial personality questionnaire (Cattell et al., 1993).

**Variables.** The dimensions of adolescents’ creativity, emotional-gnostic and personal characteristics were determined by a set of the following indicators: firstly, inquisitiveness, imagination, desire to solve complex tasks (complexity), risk propensity (risks), propensity for creativity and generalized parameter of the ability to be creative; secondly, introversion, emotional stability, conscientiousness, determination, dreaminess, optimism, psycho-emotional stress, anxiety and self-confidence.

**Statistical analysis** was carried out using the IBM SPSS Statistics 21. A one-sample t-test, Spearman’s rank correlation analysis (r), k-means clustering, Kruskal-Wallis variance analysis (H), and group comparisons using the Mann-Whitney criterion (U) were applied.

**Results**
The data obtained in our study (Tabl. 1) proved that adolescents can be characterized by quite diverse levels of the manifestation of creativity features.

...
The data in the table shows that the values of the general indicator of ability to be creative varied from low to high with the center likely lying within the range of 45.57 – 50.18 points (95.00% CI 45.57 – 50.18) and variability being close to the normal distribution (СV = 29.40 %). It is noteworthy that compared to the primary statistics with the average value provided in the interpretive scheme (Torba, 2021: 56), the representatives of the researched sample have a lower ability to be creative by an average of 19.96 points, which is a statistically significant difference (t = 17.33; p<.0001). Examining the data obtained in the children according to other indicators of this method, we can find out that they also have certain differences from the values provided by other authors. For example, according to the indicator of risk propensity, they are distributed in the range from minimal to high severity with a confidence interval for the mean value (95.00% CI 10.93 – 12.43) and an excessively high coefficient of variation (СV = 39.30%). It follows that the risk propensity on average is lower than the values presented in the original version of the method by 5.32 points (t = 14.18; p<.0001). The inquisitiveness of the subjects varied from the minimum to the maximum possible ratings and on average was (95.00% CI 13.56 – 15.06) for normal variability (СV = 32.42%). Compared to the information provided

Table 1. Descriptive statistics of indicators of the manifestation of creativity features manifestation in adolescents (n = 150)

<table>
<thead>
<tr>
<th>Indicators of the manifestation of creativity features</th>
<th>Descriptive statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>General indicator of ability to be creative</td>
<td>M  SD  Me  min  max</td>
</tr>
<tr>
<td>Загальний показник здатності до творчості</td>
<td>48.04 14.11 49.00 16.00 74.00</td>
</tr>
<tr>
<td>Risk propensity</td>
<td>11.68 4.59 12.00 1.00 21.00</td>
</tr>
<tr>
<td>Inquisitiveness</td>
<td>14.31 4.64 15.00 1.00 24.00</td>
</tr>
<tr>
<td>Complexity</td>
<td>11.23 4.97 12.00 1.00 20.00</td>
</tr>
<tr>
<td>Imagination</td>
<td>10.83 4.73 11.00 .00 18.00</td>
</tr>
<tr>
<td>Propensity for creativity</td>
<td>10.77 2.33 11.00 5.00 15.00</td>
</tr>
</tbody>
</table>

Note: M – arithmetic mean; SD – standard deviation; Me – median; min, max – the minimum and maximum value of the distribution; n – sample size.

Table 1. Первинні статистики показників прояву рис творчості в підлітків (n=150)

Це дослідження відображає, що підлітки можуть характеризуватися різними рівнями прояву рис творчості.

З таблиці видно, що значення загального показника здатності до творчості коливалися в діапазоні від низьких до високих із центром, який, вірогідно, знаходиться в межах 45.57 – 50.18 бала (95.00% CI 45.57 – 50.18) та близькою до нормального розподілу варіативністю (СV = 29.40%). Зазначимо, що в порівнянні цих первинних статистик із середнім значенням, наданим у інтерпретаційній схемі (Торба, 2021: 56), представники досліджуваної вибірки мають нижчу здатність до творчості в середньому на 19.96 бала, що є статистично значущою різницею (t = 17.33; p<.0001). Якщо розглянути дані, отримані у дітей за іншими показниками цієї методики, то можна з’ясувати, що вони так само мають певні відмінності від значень, наданих іншими авторами. Наприклад, за показником схильності до ризику вони розподілені в діапазоні від
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by O. Tunik (2007), the adolescents were less inquisitive by 3.69 points (t = 9.76; p<.0001). The desire to solve complex tasks (complexity) showed similar trends as the other indicators. The data are distributed across a wide range with a center (95.00% CI 10.43 – 12.03) of a point and a greater variation (CV = 44.26%), and a one-sample t-test confirms the lack of the adolescents’ learning about complex phenomena, compared to the data of the author of the methodology by 5.77 points (t = 14.23; p<.0001). Regarding the level of imagination development, the adolescents demonstrated a wide range of manifestations of this indicator, from the minimum possible to above-average values. The center is located within the range (95.00% CI 10.06 – 11.59) of the score with a large coefficient of variation (CV = 43.7%). The mean value is lower than that provided by the author of the method by 5.17 points (t = 13.39; p<.0001), indicating significant differences in this aspect between the studied group and the accepted norms. The presented results are evidence that the adolescents of the surveyed sample show the manifestation of creative traits which is significantly lower than the average level. The proof of this statement is the data on the expressiveness of propensity for creativity according to the method of G. Davis (1989), where the distribution center (M = 10.77; Me = 11.00) is on the border between low and medium levels, based on the information provided in the study (Kornyat & Tsimbala, 2016: 42). At the same time, 45.30% of the subjects indicate a relative propensity for creativity, and 54.70% show a moderate level.

Based on the above, we claim that, in general, today’s adolescents demonstrate a relatively low level of ability to be creative and propensity for creativity. However, there are some children among them who possess the above-average level of inquisitiveness and imagination, strive to solve complex problems, are prone to risky decisions and have a moderate propensity for creativity. At the same time, the researched sample is quite representative for solving the tasks.

Subsequent correlation analysis revealed statistically significant correlations of adolescents’ emotional-gnostic and personal characteristics with indicators of the manifestation of creativity features. Referring to the data presented in Tabl. 2, it can be seen that such correlations are quite common.
We have found that direct correlations with indicators characterizing creativity features reveal the following emotional-gnostic and personal characteristics: impatience ($p < .01$), independence ($p < .01$), emotional stability ($p < .01$), determination ($p < .01$), psycho-emotional stress ($p < .01$), sociability ($p < .05$), self-confidence ($p < .05$). The rest of the hypothetical factors either did not correlate with indicators of creativity (carelessness, psychological barriers), or demonstrated significant correlations of different orientations. The latter included:

We have found that direct correlations with indicators characterizing creativity features reveal the following emotional-gnostic and personal characteristics: impatience ($p < .01$), independence ($p < .01$), emotional stability ($p < .01$), determination ($p < .01$), psycho-emotional stress ($p < .01$), sociability ($p < .05$), self-confidence ($p < .05$). The rest of the hypothetical factors either did not correlate with indicators of creativity (carelessness, psychological barriers), or demonstrated significant correlations of different orientations. The latter included:

### Table 2. Coefficients of correlations between indicators of the manifestation of creativity features in adolescents and their emotional-gnostic, personal characteristics ($n = 150$)

**Probable emotional-gnostic and personal determinants**

<table>
<thead>
<tr>
<th>Probable emotional-gnostic and personal determinants</th>
<th>Indicators of the manifestation of creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General indicator of ability to be creative and sociable</td>
</tr>
<tr>
<td></td>
<td>Загальний показник здатності до творчої активності</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.188*</td>
</tr>
<tr>
<td>Emotional stability</td>
<td>.110</td>
</tr>
<tr>
<td>Impatience</td>
<td>.021</td>
</tr>
<tr>
<td>Independence</td>
<td>-.013</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-.176*</td>
</tr>
<tr>
<td>Determination</td>
<td>.182*</td>
</tr>
<tr>
<td>Dreaminess</td>
<td>.148</td>
</tr>
<tr>
<td>Pessimism</td>
<td>.072</td>
</tr>
<tr>
<td>Self-control</td>
<td>-.051</td>
</tr>
<tr>
<td>Psychoemotional stress</td>
<td>.269**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.046</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>.095</td>
</tr>
</tbody>
</table>

Note: * – $p < .050$; ** – $p < .001$.

Примітка: * – $p < .050$; ** – $p < .001$.
conscientiousness, which was directly correlated with inquisitiveness (p < .05), and negatively correlated with interest in complex tasks (p < .05) and imagination (p < .01); dreaminess, which was directly related to inquisitiveness (p < .01) and negatively correlated to creativity; self-control, which showed a direct correlation with a propensity for creativity (p < .05) and a negative correlation with risk propensity in creativity (p < .01); anxiety, which was directly correlated with inquisitiveness (p < .01) and negatively correlated to creativity; self-control, which showed a direct correlation with a propensity for creativity (p < .05) and a negative correlation with risk propensity in creativity (p < .01); docility, which was directly correlated to inquisitiveness (p < .01) and negatively correlated to creativity; self-control, which showed a direct correlation with a propensity for creativity (p < .05) and a negative correlation with risk propensity in creativity (p < .01); anxiety, which was directly correlated with inquisitiveness (p < .01) and negatively correlated to creativity; self-control, which showed a direct correlation with a propensity for creativity (p < .05) and a negative correlation with risk propensity in creativity (p < .01).

The presented results give reason to talk about the probable influence of impatience, independence, determination, psycho-emotional stress, sociability, and self-confidence on the manifestation of creativity features. It can also be predicted that inquisitiveness develops under the condition of a certain manifestation of conscientiousness, dreaminess, anxiety, while imagination and the attractiveness of complex tasks are stimulated by impermanence, a tendency to creative risk – by disorganization. In its turn, the propensity for creativity is stimulated by self-control and practicality.

Such data made it possible to consider certain emotional-gnostic and personal characteristics as factors that can determine the manifestation of creativity features in adolescents. The latter positions are the basis for further in-depth research of groups of adolescents with different levels of the manifestation of creativity features.

In this aspect, the division of children into groups was carried out according to the procedure of cluster analysis, carried out by two parameters: the general indicator of the ability to be creative and the propensity for creativity. Due to the application of this procedure, the studied sample of adolescents was divided into three groups. The first group included 70 teenagers whose general indicator of the ability to be create corresponded approximately to the centers of distribution in the general group (M = 44.74; SD = 5.29; Me = 45.00; min = 37.00; max = 53.00), i.e., these are children with moderate, below average ability and the lowest propensity for creativity (M = 10.26; SD = 2.41; Me = 10.00; min = 5.00; max = 14.00). The second group consisted of...
of 26 adolescents who had the lowest values of the ability to be creative (M = 26.08; SD = 5.08; Me = 27.00; min = 16.00; max = 33.00) and moderate values of propensity for creativity (M = 11.08; SD = 2.31; Me = 11.00; min = 7.00; max = 15.00). The third group consisted of 54 individuals who showed the highest scores in terms of ability to be creative (M = 62.89; SD = 5.92; Me = 61.00; min = 54.00; max = 74.00) and propensity for creative activity (M = 1.29; SD = 2.13; Me = 11.00; min = 8.00; max = 15.00).

The analysis of variance proved that the groups differ significantly in the manifestation of all indicators of the ability to be creative at the level of p < .001 and for the parameter of propensity for creativity at the level of p < .05. At the same time, according to the indicators we considered to be probable emotional-gnostic personal determinants of this development, the difference was less obvious (Tabl. 3).

We note that the most significant differences between the groups are noticeable in the indicators of psycho-emotional stress (p < .01), anxiety (p < .01), extraversion (p < .05) and conscientiousness (p < .01).

Further qualitative analysis revealed that the highest expression of the indicator of psycho-emotional stress occurs in the third group, it was lower in the second group, and the lowest in the first group. A pairwise comparison of all three groups showed that the differences between groups 3 and 1 (U = 1138.00; n₁ + n₃ = 124; p < .01) and between groups 3 and 2 acquire statistically significant values according to the Mann-Whitney test (U₁ = 378.00; n₁ + n₂ = 80; p < .01). Therefore, it is appropriate to state that the greatest psycho-emotional stress was noticed in the subjects with a higher than average ability to be creative and the greatest propensity for creativity, while children with a lower ability to be creative and less propensity for creative activity were more calm.

Comparing the distributions of anxiety indicators, it was established that the first group was distinguished by its highest manifestation, the adolescents from the third group had lower anxiety, and those from the second group had the lowest anxiety. At the same time, the value of the U-test confirms the presence of significant differences only when comparing data on anxiety in groups 1 and 3 (U = 1352.00; n₁ + n₃ = 124;
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Table 3. Results of variance analysis of the indicators of emotional-gnostic and personal characteristics of adolescents with different levels of the manifestation of creativity features (df = 2)

<table>
<thead>
<tr>
<th>Probable emotional-gnostic and personal determinants</th>
<th>Groups; statistical indicators</th>
<th>Kruskal-Wallis Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (n = 70)</td>
<td>Group 2 (n = 26)</td>
<td>Group 3 (n = 54)</td>
</tr>
<tr>
<td>Me min max</td>
<td>Me min max</td>
<td>Me min max</td>
</tr>
<tr>
<td>Extraversion</td>
<td>5.00 1.00 10.00</td>
<td>4.00 .00 9.00</td>
</tr>
<tr>
<td>Emotional stability</td>
<td>5.00 .00 7.00</td>
<td>5.00 .00 7.00</td>
</tr>
<tr>
<td>Impatience</td>
<td>5.00 2.00 9.00</td>
<td>5.00 1.00 8.00</td>
</tr>
<tr>
<td>Independence</td>
<td>5.00 2.00 7.00</td>
<td>4.00 2.00 8.00</td>
</tr>
<tr>
<td>Carelessness</td>
<td>6.00 3.00 7.00</td>
<td>4.00 3.00 7.00</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>6.00 2.00 8.00</td>
<td>7.00 3.00 8.00</td>
</tr>
<tr>
<td>Determination</td>
<td>6.00 3.00 10.00</td>
<td>6.00 3.00 9.00</td>
</tr>
<tr>
<td>Dreaminess</td>
<td>6.00 3.00 9.00</td>
<td>6.00 4.00 8.00</td>
</tr>
<tr>
<td>Pessimism</td>
<td>6.00 2.00 10.00</td>
<td>6.00 3.00 9.00</td>
</tr>
<tr>
<td>Self-control</td>
<td>5.00 1.00 9.00</td>
<td>5.00 2.00 8.00</td>
</tr>
<tr>
<td>Psychoemotional stress</td>
<td>4.00 2.00 9.00</td>
<td>5.00 2.00 7.00</td>
</tr>
<tr>
<td>Anxiety</td>
<td>10.00 1.00 92.0</td>
<td>3.00 1.00 54.00</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>13.00 5.00 18.00</td>
<td>13.00 4.00 15.00</td>
</tr>
<tr>
<td>Psychological barriers</td>
<td>5.50 11.00 99.0</td>
<td>60.00 11.00 91.00</td>
</tr>
</tbody>
</table>

Note: \( \chi^2 \) – the value of the Kruskal-Wallis test; p – level of significance; df - the number of degrees of freedom.
Примітка: \( \chi^2 \) – значення критерію Крускала-Уоллеса; p – рівень достовірності; df – кількість ступенів свободи.

p < 0.01), as well as in group 1 and 2 (U = 478.00; \( n_1 + n_2 = 96; p < 0.01 \)). It should be noted that anxiety was the lowest in the subjects with a higher ability to be creative, and the highest in the children who were capable, but did not want to participate in creative activities.

Regarding extraversion and conscientiousness, it was noted that they were significantly different а також між групами 3 та 2 (U = 378.00; \( n_1 + n_2 = 80; p < 0.01 \)). Тобто, доцільно стверджувати, що в досліджуваних із вищою здатністю до творчості та найбільшою схильністю до неї помічали найбільша психемоційна напруженість, в той час як діти з меншою здатністю до творчості та менші схильні до творчої діяльності були більш спокійними. Порівнюючи розподіли показників
from the second and third groups. Thus, according to extraversion, the center of the distribution in the second group is characterized by a lower value than in the third one, and this difference is statistically significant (U = 438.00; n₂ + n₃ = 80; p<.010). And, on the contrary, the median value of the conscientiousness indicator in the second group was much higher compared to the third group. The latter is confirmed by the value of the Mann-Whitney test (U = 482.00; n₂ + n₃ = 80; p<.050).

Summing up, it can be stated that adolescents with the highest manifestation of creativity features really have a certain complex of emotional-gnostic and personal characteristics at the level of expressed openness, sociability, interest in social contacts, etc. However, they are less conscientious and more unstable when compared to peers who are less creative and less willing to engage in this activity.

Discussion

We should note that the researched adolescents have a relatively low level of the manifestation of creativity features (see Tabl. 1), compared to the results given in similar studies (Kornyat & Tsymbala, 2016: 42; Torba, 2021: 56). We explain such results through the analysis of modern factors, such as the martial law and the consequences of the COVID-19 pandemic, as conditions for the development of adolescents' personalities (Wu et al., 2022), including their ability to be creative. In favor of such substantiation, we refer to studies that indicate that such circumstances are characterized by a certain passivization of social behavior, a narrowing of the sphere of communication, and a loss of interest in previously important matters (Yatsyna, 2022: 565). In particular, the mentioned study revealed that adolescents were not ready to make non-standard decisions and take risks, showed insufficient interest in the new and the desire to understand the surrounding world. Only a limited number of children was open to understanding and solving complex problems. Collectively, this affected their creative activity, innovative and creative potential, inhibited creative thinking and manifested itself in a weak propensity to this activity.

The results of the correlation analysis (see Tabl. 2) partially testify in favor of the proposed
Research on the Correlation Between Emotional-Gnostic and Personal Characteristics with Parameters of Adolescents' Creativity

hypothesis, as they indicate that certain emotional-gnostic and personal characteristics interact with the ability and propensity to creative activity. Impatience, independence, emotional stability, determination, self-control, and dreaminess are positively correlated with various manifestations of creativity, emphasizing their importance for the effective deployment of the corresponding abilities. On the other hand, anxiety was associated with a lower propensity for creativity. Such results indicate that the manifestation of emotional-gnostic and personal characteristics has systematic relationships with the dimensions of adolescents' creativity. However, it is quite logical that based only on the results of correlational analysis, it is impossible to establish an unequivocal correspondence between certain personality traits and the individual's ability and desire to engage in creative activities. For example, impatience really stimulates activity in the creative process, accelerating the deployment of ideas and experiments. However, it is also true that for optimal results it is important for adolescents to use this trait constructively, avoiding excessive haste, which adversely affects the quality of results (López-Aymes et al., 2020). Similarly, independence can promote independent thinking and a critical view of ideas, but only under the conditions of the child's ability to work in a team and find a common ground, independence is quite capable of promoting collective creativity (Hao et al., 2020). There is no doubt about the importance of determination, which can contribute to the implementation of ideas, but it is possible under the conditions of the development of skills to effectively manage one's own resources to achieve creative goals (Zhou, 2021). Regarding self-control, it is important for organizing the creative process and maintaining structure (Nosov et al., 2020). However, to promote creativity, the adolescent must be flexible and open to unexpected ideas and opportunities (Richard et al., 2018). Dreaminess can promote imagination and fantasy, but it is important to turn dreams into clear and achievable creative tasks for optimizing the creative process (Finn, Wylie, 2021).

Therefore, the presence of correlations only to some extent proves that the specified emotional-gnostic and personality characteristics are
natural connections of the manifestation of creativity features in adolescents, as they establish separate statistical correspondences. At the same time, the presence of these connections provided a basis for comparing adolescents with different levels of the manifestation of creativity features, which was carried out using cluster analysis. This analysis, on the one hand, reflected the presence of children with significant differences in the ability and propensity for creativity in the sample. On the other hand, it emphasizes the importance of taking into account individual differences in the creative potential of adolescents and confirms the idea that manifestations of creativity can be differentiated and individualized. Based on the data obtained during the further comparison of the groups, it can be summarized that the adolescents with higher manifestations of creativity features differed in higher psycho-emotional stress, irresponsibility and inconsistency in their decisions. An exaggerated level of anxiety dominated in the children who were capable, but not inclined to creativity. The research participants with the lowest ability to be creative and a moderate tendency to it compared to creative children.

Based on these data, it is possible to ascertain only the relative regularity of the determination of the level of creativity by the complex of emotional-gnostic and personal characteristics of adolescents. However, it is important to note that such data do not fully reflect cause-and-effect relationships, and therefore have a probabilistic nature. Thus, we can talk about the confirmation of the hypothesis regarding the presence of statistically significant correlations of emotional-gnostic and personal complexes that determine creativity. It was established (see Table 3) that psycho-emotional stress, social activity and openness, impermanence, flexibility and uncertainty in decisions contribute to the development of creative potential, since they were characteristic of adolescents with the highest manifestations of creativity features. Based on the analysis of the group of adolescents who are not inclined to creativity, it was shown that a high level of anxiety can be an obstacle to the realization of creative potential. These data do not contradict, but only complement the research
that examines other factors, including social, educational, motivational ones, that influence creativity.

Conclusions
Firstly, it was shown that, in general, today's adolescents demonstrated a low level of creativity and were not interested in its implementation. Most of them were not inclined toward non-standard solutions and avoided risky actions. They also showed limited interest in new experiences and did not demonstrate a desire to understand the world around them. A significant part of adolescents was not open to solving complex problems. All these factors, obviously, negatively affect their creative activity, innovative and creative potential, as well as inhibit the development of creativity, reflecting in a low propensity for corresponding creative activities.

Secondly, it was established in the study that manifestations of creativity features are associated with impatience, independence, determination, psycho-emotional stress, extraversion, and self-confidence, which have natural correlations with creativity. In addition, it should be added that inquisitiveness correlates with conscientiousness, dreaminess, anxiety, imagination and attractiveness of complex tasks with impermanence, risk propensity with disorganization, and propensity for creativity with self-control and practicality.

Thirdly, it was determined in the variance analysis that three groups of children with different abilities and inclinations to creative activity differ in certain emotional-gnostic and personal factors. It was found that the complex of emotional-gnostic and personal characteristics, which can probably determine the manifestations of creativity features, include a high level of psycho-emotional stress, activity in social interactions, openness, impermanence, flexibility and uncertainty in decision-making. At the same time, psycho-emotional stress, extraversion and conscientiousness can be leading in its content.

Thus, the obtained data deepen the theoretical-empirical understanding of emotional-gnostic and personal determinants of creativity and encourage future comprehensive empirical research of them on a wider sample, taking into account age and gender differences, using an expanded range of statistical procedures.
References

виступити психоемоційне напруження, екс-траверсії та сумліність.

Таким чином, отримані дані поглиблюють теоретико-емпіричні уявлення про емоційно-гністичні та особистісні детермінанти творчості та спонукають на майбутнє до все- бічного їх емпіричного дослідження на більш широкій вибірці з урахуванням вікових та ста- тевих відмінностей із використанням розши- реного кола статистичних процедур.

Список використаних джерел


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