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## Locus of control and styles of coping with stress in students educated at Polish music and visual art schools – a cross-sectional study

**Abstract:** The article focuses on identifying differences in the locus of control and styles of coping with stress among young students who are artistically gifted within the fields of music and visual arts. The research group includes Polish students ( $n = 354$ ) of both music and visual art schools who develop their artistic talents in schools placing particular emphasis on professional training of their artistic abilities and competences within the field of music or visual arts respectively. We make an assumption that different types of difficult situations experienced by youth educated at music and visual art schools may generate differences in dominating personal traits as well as in their sphere of emotions. The results of cross-sectional research in 2013 confirm the assumption regarding differences among music and visual art school students both with regard to the source of the locus of control, understood as the personality variable, and dominating styles of coping with stress. Moreover, a positive correlation between the tendency towards internal locus of control and a task-oriented style of coping with stress in difficult situations has been observed in music school students.

**Key words:** locus of control, coping, stress, music and visual art school students

### Introduction

Gifted children and youth are provided by the Polish education system with an opportunity to study at music, visual art or ballet schools. These schools offer both general and artistic education, the latter of which comprises a wide range of obligatory and facultative classes aimed at augmenting knowledge, skills, and artistic competences<sup>1</sup>. Music, visual art, and ballet education in Poland is mostly aimed at developing professional competences in students, particularly students of upper-grade schools. It aims to evoke situations generating specific styles of functioning typical for students of these kinds of schools and one of the aspects which characterises the specific style of artistic education is a high level of student commitment to individual work aimed at improving their unique technique, whether it be in the field of music, visual art or ballet in

light of the inevitability of presenting the effects of their efforts in front of an audience.

Analysis of the literature (compare Konaszekiewicz, 1987; Sękowski, 1989; 2000; Hallam, 2008; North & Hargreaves, 2008; Popek, 2010; Noremborg, 2013; Manturzevska, 2014) as well as general observations of artistic school students prove that an elevated level of artistic capabilities is not a sufficient predictor of future success in artistic life connected with music, visual art or ballet. Equally important are specific traits of personality (Buttsworth & Smith, 1995; Lehmann et al., 2007; Stoeber & Eisman, 2007; O'Neill, 2009a), a potential resulting from the type of temperament (Kemp, 2000; Popek, 2010), an elevated level of intellectual potential (Gaunt & Hallam, 2009; Manturzevska, 2014) or certain social competences (McCormick & McPherson, 2003; Kemp, 2009; Klickstein, 2009). Additionally, when analysing the specificity of

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<sup>1</sup> Such classes augment knowledge, skills and artistic competences in accordance with the school profile (music, visual art or ballet). Polish education system includes general lower-level schools of music and general upper-level schools of music providing both general and musical education and lower-level schools of music and upper-level schools of music providing only musical education while the general education is continued in other schools, state visual art schools (providing both general and visual art education). And ballet schools (providing education from the fourth grade of primary school within the scope of general education and ballet education). Polish education system offers studying music, visual art and ballet at musical universities, music academies or academies of visual art. This issue, however, goes beyond the scope of the present work [on the basis of the Regulation of the Minister of Culture of 29 December 2004 on the types of public and private art schools (Journal of Laws of 2005, No. 6, item 42), on the basis of Article 9, paragraph 3 of the Act of 7 September 1991 on the education system (Journal of Laws of 2004, No. 256, item 2572, No. 273, item 2703 and No. 281, item 2781)].

artistic school student functioning, one should not ignore the influence of their families (Konkol, 1999; Creech, 2009; Sierszeńska-Leraczyk, 2011), their teachers – who are frequently outstanding artists (Mierzejewska-Orzechowska, 1999; Welch & Ockelford, 2009; Ossowski & Gluska, 2011), as well as their peers (Davidson et al., 2009).

The source of inspiration for conducting this research comes not only from analysis of the literature but also from noticeable changes occurring in Polish artistic schools resulting from new reform introduced in these schools by the Minister of Culture and National Heritage since September 2014. Besides the many innovative educational solutions, the most important elements of the reforms concern changes regarding the development of social competences (Changes in musical education, 2013). The theoretical justification for undertaking research on students of Polish music and visual arts schools was the intention to get the knowledge about spheres of psychosocial functioning not thus far examined, which, in turn, can significantly determine the quality of artistic education and, in consequence, the ability of graduates to manage effectively in the labour market in future.

Taking into consideration the complexity of the psychological situation of an artistic school student, in constant contact with the arts both in the course of their systematic education and in their individual efforts to develop techniques and performing skills, the range of the present research has been limited to defining differences between students of music and visual art schools with respect to locus of control and strategies for coping with stress and a control group comprising grammar school students receiving general education not including systematic artistic education. We have assumed that on account of differences in specificity of musical and visual art education, and particularly on account of the differing character of public performance of the effects of their work (a musician performs a piece of music in front of an audience without any chance to correct any mistakes, whereas a visual artist presents his or her accomplished piece of art without revealing applied methods or techniques), they would differ in their locus of control and stress coping strategies.

### **Significance of the locus of control and coping stress strategies in various contexts of artistic education**

Diverse contexts of musical and visual art education generate in young artists a spectrum of reactions, kinds of behaviour, and associations which may influence the process of self-perception and perception of others, both in situations of public exposure and other situations characteristic of an artistic education. The theory of the locus of control devised by Julian Rotter (1966; Oleś & Drat-Ruszczak, 2008) is part of a wider area of social learning theory emphasising that probability of human behaviour is determined by the value that a particular person attributes to a particular goal and an estimation of his or her capabilities enabling him or her to achieve that

goal (Brzozowski, 1995). Measurement of the locus of control spans a spectrum with a strong locus of internal control at one end and a strong locus of external control at the other. The former characterised by agency in pursuing a defined goal and the latter characterised by the lack of agency and conviction (attitude) that circumstances in life are a matter of chance, coincidence or other external factors (Rotter, 1966; Colman, 2009). Locus of control is considered as a relatively durable personality trait which develops from early childhood as a noticed effect of one's own activities (Judge et al., 2002).

Recognising the direction of the locus of control seems to be of particular interest in the context of musical education since optimal coping with the challenges which students meet, such as constant public evaluation of their individual work when they play their instrument in front of an audience together with participation in concerts and musical competitions, demands high resistance to stress and a certain toughness (compare Kobasa, 1990). Individuals who are psychologically tough demonstrate internal locus of control and higher resilience to stressful situations, they also reveal higher levels of control over the stress they feel and demonstrate a higher degree of control over their behaviour in a difficult situation (Rathus, 2004). Research results reveal a strong connection between locus of control and a trait or state of anxiety (Archer, 1979; Wilson, 1991).

Coping with stress, including stage fright, is one of the fundamental competences indispensable for a young musician. A positive correlation is frequently observed between efficient stress coping strategies and a high level of self-efficacy and artistic achievement (see McPherson & Schubert, 2004; Stoeber & Eisman, 2007; Kenny, 2011).

The issue of stress in students of visual arts is significantly less elaborated on in the literature (Popek, 2010). Visual art education is essentially focused on developing creative thinking and strengthening students' artistic individuality. However, during plain-air workshops, students of visual art schools reveal anxiety in fear of criticism coming from their teachers-artists. Therefore, considering significant personal traits of visual artists, such as independence and original thinking skills essential in the process of art creation, as well as cognitive curiosity and creativity, we should not ignore such aspects as resistance to situations causing anxiety and persistence in overcoming difficulties (Nęcka, 2003). Moreover, according to the Five-Factor Model, creative persons reveal significantly elevated levels of openness to experience (Costa & McCrae, 2005).

We will present the procedure used for the research and the results concerning differences in the locus of control and stress coping strategies as well as relationships between these features in Polish youth gifted in the field of music and visual arts.

### **Aim, research questions, and main hypothesis**

The research is aimed primarily at identifying the relationship between locus of control placement and strategies for coping with stress in students of artistic schools, with special regard being paid to students gifted in the field of

music and visual arts. An additional goal is to discriminate differences between students of music and visual art schools versus students not educated at artistic schools with regard to the locus of control and stress coping strategies.

The research allows us to find (1) answers to questions regarding significant differences between artistic school students and grammar school students and (2) a significant correlation between the variables in question with respect to the profile of the school:

- Are there any differences among music, visual art, and grammar school students with respect to the locus of control?
- Are there any differences among music, visual art, and grammar school students with respect to stress coping strategies?
- Is there a correlation between the locus of control and stress coping strategies among students from artistic and grammar schools?

Literature devotes special attention to the artist's psycho-physical readiness to effectively manage the challenges accompanying public presentations of their musical capabilities when performing a musical work (compare Lehmann et al., 2007) or presenting their own original pieces of music (compare Wróblewska, 2008; Popek, 2010). The different character of education in the field of music and visual arts allows us to suppose that students from these types of schools reveal diversified levels of locus of control and different stress coping strategies. Considering the fact that music school students experience a greater number of difficult situations and feel stronger emotions during performances (Stachowicz, 1975; Tsagarelli & Nikiforow, 1991; Steptoe, 2001) when compared to visual art school students, we assumed the following hypothesis:

- (H1) There are differences between music and visual art school students with regard to the locus of control and stress coping strategies.
- (H2) There is a relationship between the locus of control and stress coping strategies among students from various types of artistic schools and grammar schools.

### Characteristics of research tools

#### Questionnaire Measuring the Locus of Control (QMLC) by Grażyna Krasowicz and Anna Kurzyp-Wojnarska (1990)

The QMLC was designed to measure the personality variable, termed as the locus of control in a human being, described in the social learning theory devised by Julian Rotter (after: Oleś & Drat-Ruszczak, 2008). The key notion in this theory is expectancy, formed in the process of acquiring experience, when a person is exposed to various reinforcements such as success or failure. The locus of control, also referred to as the sense of control, is a stable expectancy, being a personal trait of an individual which exerts strong influence over his or her behaviour (Krasowicz & Kurzyp-Wojnarska, 1990).

The Questionnaire comprises 46 questions referring to simple life situations experienced by young people which are associated with their families, peers, free time, and school achievements. Particular questions reveal an internal or external locus of control and allow for interpreting of behaviour in categories of success or failure. The questionnaire has the following scale:

- **Success (S)** – an elevated result indicates strong locus of internal control with regard to positive experiences and shapes the belief in the efficiency of an individual's activity, while low results indicate conviction that positive and desirable situations experienced by an individual simply result from coincidence,
- **Failure (F)** – an elevated result suggests that all failures in life are the consequence of a lack of talent and insufficient personal engagement, while low levels in the F scale indicate that a person believes that negative experiences result from external factors arising from the degree of difficulty of the task or the unfriendliness of others,
- **Generalised locus of control (S+F)** – an elevated result signifies an internal locus of control while a low result indicates an external locus of control; a generalised result is the sum of questions from scale S and F, however, out of 46 questions in the questionnaire, there were no more than 18 questions assigned to each scale; 10 questions do not have a diagnostic value.

The reliability of the QMLC was valued on the basis of internal consistency estimation (the coefficient of internal consistency according to the Spearman-Brown formula for scale S = .71, for scale F = .78, and for scale S+F = .66; Cronbach's *alpha* coefficient of internal consistency for scale S = .40, for scale F = .54, for scale S+F = .62) and split-half estimate (Kristof's formula for scale S = .52, for scale F = .69, for scale S+F = .71). Because of the low reliability level of the tool, there was also a reliability position analysis conducted. In the success scale *alpha* = .60, in the defeat scale *alpha* = .63, in both scales *alpha* = .70. The removal of certain questions would increase the reliability of the tool by just one-tenth of a point, so, for a qualitative description of scale it would not have any meaning. Despite this limitation, the author of the study has chosen QMLC because it is currently the only diagnostic tool available in Poland to examine locus of control for the age group comprising school students.

Different measures of control were applied as external criteria to check the diagnostic validity of QMLC which significantly correlated with scale  $p < 0.05$ . It is notable that S+F scale achieved higher coefficients of correlation in comparison with S scale and lower in comparison with F scale.

Scale normalisation was performed on the basis of examination of a sample comprising 115 students between the ages of 13 and 18. The Questionnaire is intended to be administered to a group of individuals given a time limit of twenty minutes.

**Coping Inventory for Stressful Situations (CISS) adapted by Jan Strelau, Aleksandra Jaworowska, Kazimierz Wrześniewski, and Piotr Szczepaniak (2005)**

The questionnaire presented below is a Polish adaptation of Coping Inventory for Stressful Situations which was originally devised by Norman S. Endler and James D. A. Parker (1990). The authors assume that remedial actions undertaken by an individual in a particular stressful situation are the effect of interaction between the features of a given situation and coping styles specific for a particular individual.

Questionnaire CISS (Strelau et al., 2005) comprises 48 statements concerning various types of behaviour which individuals can demonstrate in various stressful situations. It contains three main scales as follows:

- **Task-Oriented Coping (TOC)** – a high level on this scale indicates that in stressful situations, an individual demonstrates a tendency to undertake efforts aimed at solving problems understood as accomplishing the task,
- **Emotion-Oriented Coping (EOC)** – a high level on this scale indicates that an individual reveals a tendency to concentrate on himself or herself, on his or her own emotions, experiencing feelings such as anger and a sense of guilt,
- **Avoidance-Oriented Copying (AOC)** – a high level on this scale reveals that, in stressful situations, an individual demonstrates a tendency to avoid thinking, feeling or experiencing the stressful situation, and instead, demonstrates substitute forms of behaviour such as:
  - **distraction strategies (DS),**
  - **social diversion (SD).**

Pilot research was carried out on three groups: (1) students ( $n = 316$ ) between the ages of 18 and 32, (2) male adults undergoing rehabilitation treatment in cardiology centres ( $n = 252$ ) between the ages of 31 and 59, (3) secondary school students ( $n = 1006$ ) between the ages of 17 and 20.

Cronbach's *alpha* reliability of scale ranges from .82 to .88 for TOC and EOC and from .74 to .78 for AOC (which may affect the reliability of SD below .7 due to an insignificant number of items). Moreover, to establish psychometric strength a stability of scale was performed on a group of students ( $n = 98$ ) with an interval of 2–3 weeks between the examinations. The results of the measurement indicated a good degree of scale stability and coefficient of correlation in particular scales ranging from .73 to .80.

Analysis of factor validity indicates that factor I explains 13.8% of variations and is positively correlated with items on the TOC scale; factor II explains 9.8% of variations and is positively correlated with items on the EOC scale; factor III explains 8.1% of variations and is positively correlated with items on the AOC scale. The results of factor validity analysis allow us to report a good degree of CISS results in correlation with external criterion in the form of a Ways of Coping Questionnaire (WCQ) devised by Susan Folkman and Richard Lazarus as adapted

by Kazimierz Wrześniewski in 1988 (compare Strelau et al., 2005). Particular scales of CISS correlated with WCQ scales positively or negatively within a range of between .69 and -.32.

Questionnaire normalisation was performed on individuals between the ages of 16 and 79 and the norms were devised for three age groups: (1) between 16 and 24 years of age, (2) between 25 and 54 years of age, (3) between 55 and 79 years of age.

**Model of research performance and characteristics of individuals under research**

The research was performed from January to March of 2013 among music, visual art, and grammar school students in the Kuyavian-Pomeranian Province in Poland. The sample represented almost all the students studying in artistic schools in this region at the time and thus the sample was not random. Furthermore, the students from a regular grammar school were not selected randomly; a school with a level of student educational achievement comparable with the level of artistic school student achievements was chosen. The students were between the ages of 16 and 19.

All tests were undertaken by students unassisted and in groups in the presence of the author and other persons supervising their performance. The students were asked to complete both tests, namely the QMLC and the CISS, anonymously.

The sample group comprised of over 350 students ( $n = 354$ ) of which 45% ( $n = 156$ ) were music school students (girls  $n = 99$ , boys  $n = 57$ ), 28% ( $n = 100$ ) visual art school students (girls  $n = 79$ , boys  $n = 21$ ) and 27% ( $n = 98$ ) the control group, being grammar school students (girls  $n = 54$ , boys  $n = 44$ ). The data demonstrates a significant difference in the distribution of girls and boys in artistic schools in comparison to grammar schools. This is a typical tendency occurring in the population in general and also confirmed in other research performed on a group of Polish artistic school students. Interpretation of the results was referenced to statistics published by GUS (General Statistic Office) (compare Chruszczewski, 2004). Due to the limited number of music and visual art schools in the Kuyavian-Pomeranian region, the studies included almost all students in the selected age groups in selected schools. In this province, there are no more art schools so the students examined are a representative sample of the student population of Polish art schools. The allocation of general education students to the research group was random.

**Results**

The results of the research were calculated using the STATISTICA programme. Analysis of normal distribution suggested using non-parametric tests. Answers to research questions were achieved on the basis of the Kruskal-Willis test and Mann-Whitney test as well as Spearman's ranks correlation coefficient.

Before answering the questions, it is important to show what the level of locus control is and what the level of particular stress coping strategies among music, visual art, and grammar school students is.

**Music school students** in the generalised scale of the locus of control (scale S+F) indicated undefined locus of control ( $M = 2.04$ ;  $SD = .72$  at the value min. = 1 and max. = 3). This result means that music school students demonstrate internal or external locus of control depending on the situation. However, the result of the variable coefficient indicates that music school students under research were a significantly differentiated group in this respect ( $V = 35.26$ ). It is also possible to note that a tendency towards undefined locus of control dominates among music school students on the S scale ( $M = 2.26$ ;  $SD = .72$ ) and external locus of control on the F scale ( $M = 1.9$ ;  $SD = .79$ ) when Scales of Success and Failure were analysed separately.

**Visual art school students** demonstrate external locus of control on the Success and Failure Scale as well as on the Generalized Result Scale S+F ( $M = 1.5$ ;  $SD = .64$ ), Scale S ( $M = 1.76$ ;  $SD = .81$ ), and Scale F ( $M = 1.57$ ;  $SD = .68$ ). The variable coefficient of the generalised result with respect to the locus of control reveals that the sample group under research demonstrate strong differentiation of individual results ( $V = 42.27$ ).

The results of the **control group**, comprising grammar school students, indicate that the students reveal undefined locus of control with respect to the S Scale ( $M = 2.29$ ;  $SD = .78$ ) and external locus of control with respect to the F Scale ( $M = 1.57$ ;  $SD = .68$ ) and Generalized Results ( $M = 1.51$ ;  $SD = .64$ ), as well as a strong differentiation of individual results ( $V = 42.27$ ).

The results of the analysis indicate an average level of occurrence of all kinds of stress coping strategies among students regardless of the type of school. The median, the middle value of each scale, is always an indicator of the average level of intensity of the scale ( $Me = 5$  or  $Me = 6$ ). This is evidenced by the results of all three researched

student groups. Music school students: (1) task-oriented coping style ( $M = 6.26$ ;  $SD = 1.81$ ;  $V = 28.86$ ), (2) emotion-oriented coping style ( $M = 6.21$ ;  $SD = 1.54$ ;  $V = 24.89$ ), (3) avoidance-oriented coping style ( $M = 5.19$ ;  $SD = 2.08$ ;  $V = 40.04$ ). Art school students: (1) task-oriented coping style ( $M = 5.67$ ;  $SD = 1.93$ ;  $V = 34.04$ ), (2) emotion-oriented coping style ( $M = 6.43$ ;  $SD = 1.92$ ;  $V = 29.80$ ), (3) avoidance-oriented coping style ( $M = 5.55$ ;  $SD = 2.24$ ;  $V = 40.42$ ). Grammar school students: (1) task-oriented coping style ( $M = 6.33$ ;  $SD = 2.03$ ;  $V = 32.12$ ), (2) emotion-oriented coping style ( $M = 6.13$ ;  $SD = 1.87$ ;  $V = 30.48$ ), (3) avoidance-oriented coping style ( $M = 5.17$ ;  $SD = 2.19$ ;  $V = 42.29$ ). However, certain differences can be noted with respect to the variable coefficient ( $V$ ) which indicates strong differentiation of results among students of all types of schools with respect to avoidance strategy.

### Results of the research concerning differences and relationships between variables

Analysis of the results concerning locus of control (Table 1) allows us to state that there are statistically significant differences among students attending music, visual art, and grammar schools with respect to the locus of control. In the case of visual art school students, external locus of control ( $M = 1.51$ ) is significantly more frequent than in music school students ( $M = 2.04$ ) and grammar school students ( $M = 1.88$ ). An analogous tendency is noticeable in subscales verifying the locus of control in the case of success and failure. In the Success Scale, visual art school students ( $M = 1.76$ ) express conviction that positive experiences happen by coincidence significantly more often than music school students ( $M = 2.26$ ) and grammar school students ( $M = 2.29$ ). However, significant differences appear in the Failure Scale only among artistic school students, including music school students ( $M = 1.9$ ) who more often demonstrate undefined locus of control than visual art school students ( $M = 1.57$ ) who reveal a tendency to attribute failure to situational factors.

**Table 1. The locus of control in the group of Polish music, visual art, and grammar school students; research undertaken from January to March of 2013**

LOCUS OF CONTROL PLACEMENT	Kruskal-Wallis test value (H)	Effect sizes Epsilon-square ( $\epsilon^2$ )	Level of significance (p)	Mediana test Chi <sup>2</sup>	df	P values for multiple comparisons TYPE OF SCHOOL		
						Music	Art	
Scale S+F (overall results)	30.18	.85	.0013*	13.23	2	Art	.01*	–
						Grammar	.22	.01*
Success Scale	25.86	.84	.0012*	13.46	2	Art	.01*	–
						Grammar	1.00	.01*
Failure Scale	9.24	.60	.0120*	8.85	2	Art	.01*	–
						Grammar	.50	.54

\* Factor of significance  $p < 0.05$

Analysis of the results concerning stress coping styles (Table 2) allows us to note significant differences among music, visual art, and grammar school students with respect to concentration on a task and concentration on avoidance oriented towards distraction activities. Music school students ( $M = 6.26$ ) in stressful situations significantly more frequently concentrate on performing a task than visual art school students ( $M = 5.67$ ) who demonstrate lower levels of concentration on performing a task in a stressful situation than grammar school students ( $M = 6.33$ ). Moreover, in stressful situations, music school students ( $M = 5.25$ ) are engaged in distraction activities less frequently than visual art school students ( $M = 6.13$ ).

The analyses presented above are sufficient to confirm hypothesis I assuming that *there are differences among music and visual art school students with respect to the locus of control and strategies of coping with stress*. Music school students significantly more often demonstrate undefined locus of control in comparison with visual art school students and grammar school students who demonstrate a tendency towards external locus of control. Moreover, music school students significantly more often concentrate on task performance in stressful situations and reveal less tendency to engage in distracting activities than visual art school students. This may well advocate the view that they are better adapted to stressful situations.

**Table 2. Stress coping style in the group of Polish music, visual art, and grammar school students; research undertaken from January to March of 2013**

STYLE of coping with the stress	Kruskal-Wallis test value (H)	Effect sizes Epsilon-square ( $\epsilon^2$ )	Level of significance (p)	Mediana test Chi <sup>2</sup>	df	P values for multiple comparisons TYPE OF SCHOOL	
						Music	Art
Task-oriented coping	8.32	.50*	.0156*	5.61	2	Art	.03*
						Grammar	1.00
							.05*
Emotion-oriented coping	2.10	-.10	.4734	1.49	2	Art	.68
						Grammar	1.00
							.60
Avoidance-oriented coping	2.24	.00	.3072	2.36	2	Art	.59
						Grammar	1.00
							.57
distraction strategies	9.85	.61*	.0330*	6.82	2	Art	.01*
						Grammar	.66
							.30
social diversion	4.58	.28	.6055	1.01	2	Art	.11
						Grammar	.83
							1.00

\* Factor of significance  $p < 0.05$

**Table 3. The results of Spearman's rang correlation between the locus of control and stress coping styles among Polish music, visual art and grammar school students; research undertaken from January to March of 2013**

Variables Type of school	Locus of control	Style of coping with the stress				
		Task-oriented coping	Emotion-oriented coping	Avoidance-oriented coping	Distraction strategies	Social diversion
Music school students	Success Scale (S)	.18*	-.19*	-.12	-.17	.09
	Failure Scale (F)	.15	.02	.01	.04	-.02
	Overall results (S+F)	.19*	-.12	-.04	-.05	.04
Visual art school students	Success Scale (S)	.21	-.10	.02	-.09	.13
	Failure Scale (F)	-.08	-.03	-.08	-.10	.02
	Overall results (S+F)	.12	-.07	.02	-.08	.13
Grammar schools students	Success Scale (S)	.32*	-.22*	-.12	-.32*	.20
	Failure Scale (F)	.08	.04	.06	.08	.09
	Overall results (S+F)	.25*	-.10	-.04	-.16	.19

\* Factor of significance  $p < 0.05$

A further analysis concerns verification of the power of the relationship between the locus of control and stress coping styles among music, visual art, and grammar school students. The results presented in Table 3 indicate significant correlations between the chosen variables.

Looking at the results of correlation in the three examined groups, it can be noted that similar correlation directions occur in the group of general education and music schools. The higher the level of internal self-control, especially in the range of success scale, the more frequent the tendency for task-oriented stress coping strategies. Among music school students, this correlation occurs at low level and among art school students at average level. The analysis by significance of differences test between the correlation coefficient in these groups showed that this is not a statistically significant difference ( $p = .25$ ).

Music and general education school students also distinguish negative correlation at low level, between internal positioning of self-control sense relative to positive events and emotion coping strategies. The higher the conviction about own operation the lower the level of emotion coping strategies. However, the comparison of difference significance between these correlation coefficients does not significantly differentiate music school students from general education school students ( $p = .81$ ).

In the group of general education school students, negative correlation can be noted at the average level between locus of control in the range of success scale and stress coping through taking substitute activities.

Isolating the results for visual art school students revealed no significant correlation among the variables.

Correlation analysis provides evidence to confirm hypothesis II assuming that: *There is a relationship between the locus of control and stress coping strategies among students of various types of artistic and grammar schools.* This correlation is characteristic of music school students and the control group.

## Discussion

Analysis of the results received from Polish music and visual art school students and the control group consisting of grammar school students leads to the conclusion that the locus of control and stress coping strategies constitute variables significantly differentiating the samples under research.

The differentiation among music and visual art school students occurs with respect to the locus of control. Music school students present the highest tendency towards undefined locus of control which is a good predictor of their individual development which, in turn, confirms their readiness to plan their activities more independently and responsibly (Hallam, 2008). Moreover, musically gifted youth demonstrate a range of psychosocial traits distinguishing them positively from the general population, which include an elevated level of introversion, independence, and openness to experience (Kemp, 2009), which as personal variables are consistent with a tendency

towards internal locus of control. The higher the internal level of control the lower the level of passivity and simultaneously the more elevated are the level of self-control, the sense of responsibility, and independence in accomplishing tasks (Brzozowski, 1995). External locus of control observed among visual art school students does not foster the shaping of psychological determinants indicating development of personal traits which would facilitate handling the challenges connected with artistic education. Visual art school students significantly more frequently demonstrate a tendency towards the lack of agency, distinguishing them from music school students especially in the experience of failure. Reflecting on this result, it may be concluded that music school students have more readiness and determination to work on their imperfections after they have experienced failure than their colleagues from art schools. This result is even more surprising since the personal traits typology of creative persons (Nęcka, 2003; Popek, 2010) underlines that artists represent a high level of independence and resistance to stress and a low level of susceptibility to social influences.

Students of all types of schools, namely music, visual art, and grammar schools, demonstrate an average level of styles concentrated on emotions, tasks or avoidance, and reveal significant differences when compared as groups. Music school students significantly more often demonstrate style concentrated on a task in stressful situations and far less frequently undertake distraction strategies than visual art school students. This kind of tendency, characteristic of music school students, has been confirmed by the results of numerous research on stress coping strategies and stage fright during public performances, which reveals a readiness by musicians for efficient and effective coping with psychological tensions which accompany a public performance (Wilson & Roland, 2002; Williamson, 2004; Kenny, 2011). At the same time, the above-cited results stand in opposition to opinions and research conducted in the second half of the previous century (Manturzevska, 2014; Kemp, 2000) which indicated highly elevated levels of neuroticism among gifted students of music schools. However, the research performed on contemporary Polish youth studying at music schools indicate a more diverse effect and an underlying low level of neuroticism, predicting a high level of musical achievements (Chruszczewski, 2004).

In the present study, among the statistical analyses covering socio-demographic variables, the surveyed students were not compared based on their age since it was too homogeneous group (the respondents were aged from 16 to 19 years). Also, the socioeconomic status of the family was not included, although the results in music psychology literature reveal that in an artistic school environment there are students from families of medium and good socio-economic status (Konkol, 1999; Davidson et al., 2009; Manturzevska, 2014).

The results of the research provide information about correlation of a particular locus of control and strategy for coping with stress. Relationships between the mentioned variables present in music school students allow us to

assume that in comparison with visual art school students, they reveal greater readiness for effective coping in the situation of a public performance, since in stressful situations, with the increase of internal locus of control, they demonstrate a more intense style of stress coping concentrated on task. This tendency has been confirmed in research concerning psychological resistance (Kobasa, 1990; Lehmann et al., 2007; Manturzevska, 2014) and reflections of outstanding instrumentalists (Wroński, 1996; Klickstein, 2009).

The above-mentioned correlation of general or internal locus of control and task-oriented style of coping with stress present in music school students may be the result of the different style of education they receive when compared with visual art school students. In music schools, offering more individual character of education, students enjoy an opportunity to confront their individual style of work, attitude, and approach to learning how to play musical instruments and the opportunity to discuss feelings they experience with their teacher-artists (musicians), which seems to influence the quality of their musical life (Markiewicz, 2008). Owing to this, music school students have an opportunity to learn efficient stress coping strategies (Jaślar-Walicka, 1999) and modify their behaviour to increase the efficacy and independence of their work. The tendency towards internal locus of control in music school students is achieved as a result of the fact that they exercise playing their instrument consciously and train their technical and performative self-control as they play (McCormick & McPherson, 2003).

This work has, however, revealed a limited scope for psychosocial functioning of young artists studying at music schools. The main limitation of this study was the lack of being able to take into account a wider socio-demographic variables context, such as, for example, socio-economic family status which can have an influence on locus of control (Espotio, 2003). The results presented in this article contribute to a need for further research of both an explorative and explanatory character because differentiation in psychosocial functioning of art school students is attributed not only to selected personal-emotional variables as presented in this article but also to a range of situational, social, and organisational factors, as well as individual differences characteristic of the ontogenetic development of a human being.

## References

- Archer, R.P. (1979). Relationships between locus of control, trait anxiety, and state anxiety: An interactionist perspective. *Journal of Personality*, 47(2), 305–316.
- Brzozowski, P. (1995). Poczucie kontroli jako wymiar osobowości – podstawy teoretyczne, techniki badawcze i wyniki badań [Locus of control as a personality aspect – theoretical basis, research techniques and the results]. In P. Brzozowski (Ed.), *Adaptacja kwestionariuszy osobowości [Adaptation of Personality Questionnaires]* (pp. 199–227). Warszawa: Wydawnictwo Naukowe PWN.
- Buttsworth, L.M., & Smith, G.A. (1995). Personality of Australian performing musicians by gender and by instrument. *Personality Individual Differences*, 18, 5, 595–603.
- Chruszczewski, M. (2004). Profile psychologiczne uczniów średnich szkół muzycznych i plastycznych mających osiągnięcia artystyczne oraz ponadprzeciętnie inteligentnych uczniów szkół średnich [Psychological profiles of music and visual art school students demonstrating artistic achievements and highly intelligent secondary school students]. In S. Popek (Ed.), *Twórczość w teorii i praktyce [Artistic creation in theory and practice]* (pp. 135–143). Lublin: Wydawnictwo UMCS.
- Colman, A.M. (2009). *Dictionary of Psychology*. New York: Oxford University Press.
- Costa, P.T. Jr., & McCrae, R.R. (2005). *Osobowość dorosłego człowieka [Personality of an adult]*. Kraków: Wydawnictwo WAM.
- Creech, A. (2009). The role of the family in supporting learning. In S. Hallam, I. Cross, & M. Thaut (Eds.), *The Oxford Handbook of Music Psychology* (pp. 295–306). New York: Oxford University Press.
- Davidson, J.W., Howe, M.J.A., & Sloboda, J.A. (2009). Environmental factors in the development of musical performance skill over the life span. In D.J. Hargreaves, & A.C. North (Eds.), *The Social Psychology of Music* (pp. 188–206). New York: Oxford University Press.
- Endler, N.S., & Parker, J.D.A. (1990). *Coping Inventory for Stressful Situations (CISS): Manual*. Toronto: Multi-Health System, Inc.
- Espotio, A.N. (2003). *Socioeconomic status and locus of control*. Rowan University; Rowan Digital Works – Thesis and Disertations (source: <http://rdw.rowan.edu/cgi/viewcontent.cgi?article=2293&context=etd>; from 27.02.2017.)
- Gaunt, H., & Hallam, S. (2009). Individuality in the learning of musical skills. In S. Hallam, I. Cross, & M. Thaut (Eds.), *The Oxford Handbook of Music Psychology* (pp. 274–284). New York: Oxford University Press.
- Hallam, S. (2008). *Music Psychology in Education*. London: Bedford Way Papers.
- Jaślar-Walicka, E. (1999). Różne modele nauczycieli w przebiegu edukacji muzycznej w świetle badań amerykańskich i polskich nad muzykami i talentami muzycznymi [Various models of teachers in artistic education in the light of American and Polish research on musicians and musicians highly gifted]. In M. Manturzevska (Ed.), *Psychologiczne podstawy kształcenia muzycznego [Psychological foundations of musical education]* (pp. 163–170). Warszawa: Akademia Muzyczna im. F. Chopina.
- Judge, T.A., Erez, A., Bono, J.E., Thoresen, C.J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, 83(3), 693–710.
- Kemp, A.E. (2000). *The Musical Temperament. Psychology and personality of Musicians*. New York: Oxford University Press.
- Kemp, A.E. (2009). Individual differences in musical behaviour. In D.J. Hargreaves, & A.C. North (Eds.), *The Social Psychology of Music* (pp. 25–45). New York: Oxford University Press.
- Kenny, D.T. (2011). *The Psychology of Music Performance Anxiety*. New York: Oxford University Press.
- Klickstein, G. (2009). *The Musician's Way. A Guide to Practice, Performance, and Wellness*. New York: Oxford University Press.
- Kobasa, S.C.O. (1990). Stress-resistant personality. In R.E. Ornstein, & C. Swencionis (Eds.), *The healing brain* (pp. 219–230). New York: The Guilford Press.
- Kobori, O., Yoshie, M., Kudo, K., & Ohtsuki, K. (2011). Traits and cognitions of perfectionism and their relation with coping style, effort, achievement, and performance anxiety in Japanese musicians. *Journal of Anxiety Disorders*, 25, 674–679.
- Konaszkiwicz, Z. (1987). *Tancerze polscy – wybrane problem kształcenia i zawodu [Polish dancers – chosen aspects of education and profession]*. Warszawa: Akademia Muzyczna im. F. Chopina.
- Konkol, G.K. (1999). Rodzina i środowisko rodzinne jako wyznacznik powodzenia w działalności muzycznej [Family and family environment as a determinant of success in musical activity]. In M. Manturzevska (Ed.), *Psychologiczne podstawy kształcenia muzycznego [Psychological foundations of musical education]* (pp. 137–146). Warszawa: Akademia Muzyczna im. F. Chopina.
- Krasowicz, G., & Kurzyp-Wojnarska, A. (1990). *Kwestionariusz do Badania Poczucia Kontroli [Questionnaire to Measure the Locus of Control]*. Warszawa: Polskie Towarzystwo Psychologiczne.
- Lehmann, A.C., Sloboda, J.A., & Woody, R.H. (2007). *Psychology for Musicians. Understanding and Acquiring the Skills*. New York: Oxford University Press.

- Manturzevska, M. (2014). *Psychologiczne wyznaczniki powodzenia w studiach muzycznych* [Psychological determinants of success in musical studies]. Warszawa: Centrum Edukacji Artystycznej, Uniwersytet Muzyczny Fryderyka Chopina.
- Markiewicz, L. (2008). *O sztuce pedagogiki instrumentalnej. Wybrane zagadnienia* [On the art of instrumental pedagogy. Selected issues]. Katowice: Akademia Muzyczna im. K. Szymanowskiego.
- McCormick, J., & McPherson, G. (2003). The role of Self-Efficacy in a Musical Performance Examination: An Exploratory Structural Equation Analysis. *Psychology of Music*, 31(1), 37–51.
- McPherson, G.E., & Schubert, E. (2004). Measuring Performance Enhancement in Music. In A. Williamon (Ed.), *Musical Excellence. Strategies and Techniques to enhance performance* (pp. 61–82). New York: Oxford University Press.
- Mierzejewska-Orzechowska, K. (1999). Cechy i charakterystyka optymalnego nauczyciela w szkole muzycznej w świetle doświadczeń psychologa [Personal traits and a profile of an optimal music school teacher in the light of psychologist's experience]. In M. Manturzevska (Ed.), *Psychologiczne podstawy kształcenia muzycznego* [Psychological foundations of musical education] (pp. 171–178). Warszawa: Akademia Muzyczna im. F. Chopina.
- Nęcka, E. (2003). *Psychologia twórczości* [Psychology of artistic creation]. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Noremborg, J. (2013). Uwarunkowania osiągnięć edukacyjnych uczniów szkół baletowych. *Zeszyty Psychologiczno-Pedagogiczne Centrum Edukacji Artystycznej* [Artistic achievement determinants of ballet school students. *Psychological and Pedagogical Booklets of the Centre of Artistic Education*], 1, 71–79.
- North, A., & Hargreaves, D. (2008). *The Social and Applied Psychology of Music*. New York: Oxford University Press.
- Oleś, P., & Drat-Ruszczak, K. (2008). Osobowość [Personality]. In J. Strelau, & D. Doliński (Eds.), *Psychologia. Podręcznik akademicki* [Psychology. University handbook] (pp. 651–764). Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- O'Neill, S.A. (2009a). The self-identity of young musician. In R.A.R. MacDonald, D.J. Hargreaves, & D. Miell (Eds.), *Musical identities* (pp. 79–96). New York: Oxford University Press.
- O'Neill, S.A. (2009b). Gender and music. In D.J. Hargreaves, & A.C. North (Eds.), *The Social Psychology of Music* (pp. 46–63). New York: Oxford University Press.
- Ossowski, R., & Gluska, A. (2011). Social Support as a form of psychological aid in the artistic education. In H. Liberska (Ed.), *Current Psychological Problems. Traditional and novel approaches* (pp. 169–186). Bydgoszcz: Wydawnictwo Uniwersytetu Kazimierza Wielkiego.
- Popek, S.L. (2010). *Psychologia twórczości plastycznej* [Psychology of visual art creation]. Kraków: Impuls.
- Poraj, G. (2012). Stres – motor czy hamulec procesu rozwoju i edukacji muzyków? [Stress – a driving force or a break in the process of musicians' development and education?]. In E. Kumik, & G. Poraj (Eds.), *Konteksty kształcenia muzycznego. Tom II. Prace teoretyczne i badawcze* [Contexts of musical education. Vol. 2. Theoretical and research works] (pp. 261–276). Łódź: Akademia Muzyczna im. G. i K. Baciewiczów.
- Rathus, S.A. (2004). *Psychologia współczesna. Lepiej – więcej – przystępniej* [Contemporary psychology. Better – More – Easier]. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General & Applied*, 80(1), 1–28.
- Sękowski, A. (1989). *Osobowość a osiągnięcia artystyczne uczniów szkół muzycznych* [Personality and artistic achievements of music school students]. Wrocław–Warszawa–Kraków–Gdańsk–Łódź: Zakład Narodowy im. Ossolińskich, Wydawnictwo Polskiej Akademii Nauk.
- Sękowski, A. (2000). Predyktory osiągnięć a koncepcje wybitnych zdolności [Predictors of achievements and concepts of outstanding talents]. In W. Jankowski, B. Kamińska, & A. Miśkiewicz (Eds.), *Człowiek – muzyka – psychologia* [A person – music – psychology] (pp. 295–307). Warszawa: Akademia Muzyczna im. F. Chopina.
- Sierszeńska-Leraczyk, M. (2011). *Środowisko rodzinne a ciągłość i jakość edukacji muzycznej* [Family environment and continuity and quality of musical education]. Poznań: Akademia Muzyczna im. I.J. Paderewskiego.
- Stachowicz, Cz. (1975). Z badań nad przyczynami niepowodzeń uczniów szkół muzycznych [Studies on the reasons of music school students' failures]. *Z doświadczeń pracy psychologów w szkołach artystycznych. Materiały informacyjno-Dyskusyjne nr XL* [Taken from psychologists experience in artistic schools. *Information and Discussion Materials*], 157, 19–23.
- Stepot, A. (2001). Negative emotions in music making: the problem of performance anxiety. In P.N. Juslin, & J.A. Sloboda (Eds.), *Music and Emotion* (pp. 291–307). New York: Oxford University Press.
- Stoeber, J., & Eismann, U. (2007). Perfectionism in young musicians: Relations with motivation, effort, achievement, and distress. *Personality and Individual Differences*, 43, 2182–2192.
- Strelau, J., Jaworowska, A., Wrześniewski, K., & Szczepaniak, P. (2005). *Kwestionariusz Radzenia Sobie w Sytuacjach Stresowych* [Coping Inventory for Stressful Situations]. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego.
- Tsagaralli, J., & Nikiforov, G. (1991). Samoregulacja muzyka jako element jego niezawodności podczas występu koncertowego [Self-control of a musician as an element of his/her reliability at the concert performance]. In K. Miklaszewski, & M. Meyer-Borysewicz (Eds.), *Psychologia muzyki. Problemy – zadania – perspektywy* [Psychology of music. Problems – tasks – perspectives] (pp. 444–454). Warszawa: Akademia Muzyczna im. F. Chopina.
- Welch, G., & Ockelford, A. (2009). The role of the institution and teachers in supporting learning. In S. Hallam, I. Cross, & M. Thaut (Eds.), *The Oxford Handbook of Music Psychology* (pp. 307–319). New York: Oxford University Press.
- Williamon, A. (2004). *A guide to enhancing musical performance*. In A. Williamon (Ed.), *Musical Excellence. Strategies and techniques to enhance performance* (pp. 3–18). New York: Oxford University Press.
- Wilson, G.D. (ed.), (1991). *Psychology and Performing Arts*. Amsterdam: Swets & Zeitlinger.
- Wróński, T. (1996). *Techniki gry skrzypcowej* [Techniques of playing the violin]. Warszawa–Łódź: Wydawnictwo Naukowe PWN.
- Wróblewska, M. (2008). Cechy przystosowania emocjonalnego i społecznego a predyspozycje do zachowań twórczych [Features of emotional and social adaptation versus predispositions to creative behaviour]. In W. Limont, J. Cieślukowska, & J. Dreszer (Eds.), *Zdolności, talent, twórczość* [Capability, talent, creativity], vol. 1 (pp. 179–189). Toruń: Wydawnictwo Naukowe UMK.
- Zmiany w szkolnictwie muzycznym. Broszura Informacyjna* [Changes in musical education. *Information booklet*], (2013). Warszawa: Ministerstwo Kultury i Dziedzictwa Narodowego [Ministry of Culture and National Heritage].