Зборник радова
Педагошког факултета, Ужице
Година 27 • Број 26 • Децембар 2024

УДК 37.042:159.928.23
Оригинални научни чланак
157–178
Примљен: 28. 2. 2024.
Прихваћен: 26. 3. 2024.

https://doi.org/10.5937/ZRPFU2426157M

MARINA D. MATEJEVIĆ[*]

University of Niš – Faculty of Philosophy

MARIJA D. ĐORĐEVIĆ[*]

University of Niš – Faculty of Philosophy

PARENTING STYLE AND EDUCATIONAL LEVEL OF TALENTED STUDENTS' PARENTS[**]

Abstract: The aim of the research was to determine the parenting style and education level of parents of talented students. The subjects of the research were high school art students and art faculty students, as well as those from specialized classes of grammar schools for the gifted in mathematics, physics, and informatics. The authoritative style was found to be the most common, but also warm-restrictive and permissive, which points to warm-directive parenting. The mothers of musically talented students and fathers of students talented in computer science have a slightly more evident warm-restrictive style compared to the other groups, according to assessments of students. Finally, the mothers of talented students have a higher level of education than students' fathers. These results indicates the importance of mothers' education for talent development. The relatively even distribution of warm parenting styles indicates the importance of parents' emotional relationship and warm accepting upbringing for the development of creativity, but also imposes the question of parental consistency, which further implies the need for the pedagogical education of parents.

Keywords: *parenting styles, giftedness, education level, talent, talented students.*

[*] marina.matejevic@filfak.ni.ac.rs
[*] marija.djordjevic@filfak.ni.ac.rs

[**] This study was supported by the Ministry of Science, Technological Development and Innovations of the Republic of Serbia (Contract No. 451-03-66/2024-03).

Introduction

The role of the environment, especially the family's role, is undoubtedly of great importance in the process of talent development. The likelihood of successfully nurturing talented children often depends on parents' ability to create appropriate material resources and their parenting skills (Feldman & Piirto, 2002). The prevailing scientific view categorizes the family as an 'essential context' for developing giftedness (Freeman, 2000). The role of the family as an environmental factor in the development of giftedness is considered more significant than that of the school (Cross & Coleman, 2005). Thus, parenting styles contribute to a home atmosphere that shapes the intellectual development, motivation for learning, and academic achievement of gifted and talented children. Parents of talented children encourage significant independence and freedom, promoting autonomy and expecting their children to make their own decisions, even with specific risks.

These families are usually more cohesive and less conflict-prone than families with non-gifted children. Talented youth who become scientists, mathematicians, and classical musicians come from more stable families compared to families of actors, writers, popular musicians, visual artists, and dancers – artists (Piirto, 1998). What sets these groups of talented individuals apart is primarily the extensive education, seen as the result of a family whose members collectively strive to develop the potential of the talented child (Feldman & Piirto, 2002).

Academically gifted youth usually have highly educated fathers and mothers, although these mothers do not work full-time outside their homes (Feldman & Piirto, 2002). They can dedicate themselves to their children and their development. Parents with high education levels create intellectually stimulating environments for their children (Hoff, 2003), and research emphasizes the long-lasting effects of parental supervision and monitoring even into adolescence (Chiu, 2021). Although research consistently highlights the level of education and family income as essential variables for gifted and talented individuals (Bégin & Gagné, 1995; Kaya, Stough, Juntune, 2016), it is important to emphasize that giftedness also develops in less affluent and less educated families. Some authors (Van Tassel-Baska & Olszevski-Kubilius, 1989) note that certain seemingly inhibitory or harmful adversities can greatly benefit talent development. These factors include cultural and economic disadvantages, physical deformity, rejection by parents or peers, family tension, and loss of parents. Simonton (1988) referred to this as the 'orphanhood effect' – for many children, the death of a parent is precisely the impetus for achievement. Sometimes, emotional and educational problems within the family pose a more significant obstacle for gifted children than material challenges. In such circumstances, a parent's attitude and focus on knowledge encourage the gifted child more than material prospects.

The mentioned characteristics and traits of families and parents can support, nurture, and develop talent, but they cannot create it. This undoubted influence of family factors cannot be declared generative (Freeman, 2000). Conversely, a child

with above-average potential will have difficulty reaching the ultimate capacity of their abilities if they grow up in an inadequate family environment (Pekić, 2012). In fact, it is shown to be a mutual relationship, very likely bidirectional, meaning that appropriate parental influences are antecedents of talent development, and the understanding of a child's giftedness contributes to the formation of a specific educational climate (Cornell & Grossberg, 1987). Sometimes, a child is multiply talented. However, parents often focus on the area that could enable the child to function well in a traditional school – academic talent (Feldman & Piirto, 2002). This means that the type of talent plays a crucial role in parents' assessment of whether and to what extent they will support further development.

Research shows that the family environment must ensure the fulfillment of the particular needs of a gifted child to motivate them to develop their talent further. They include the need for love and security, new experiences, the need to achieve success, and a sense of responsibility and independence (Paser, Vujasin, Božin, 2008), which is a feature of the specific parenting style – in many typologies referred to asthe authoritative/democratic.

This research must explain Matejević's typology, which relies on the typology of Baumrindand the three basic types of parent-child relationships: authoritative, authoritarian, and permissive. Matejević (2007) offers a model with another aspect related to parenting partnership and the basic dimensions (affective and control-autonomy dimensions). By combining these dimensions, five parenting styles are obtained. Parents who primarily demand obedience and respect from the child and reward the child with tenderness, praise, or gifts when he is well-behaved and obedient have the warm-restrictive parenting style (*patriarchal style*). Parents who are strict in raising their child and often criticize, believing that this is the only way the child will become a good person in the future, have the cold-restrictive style (*rejecting style*). Parents who are very gentle with their children and try to meet all the child's demands, even if it sometimes causes a problem for them, have a warm-permissive style (*permissive style*). Parents who often pay no attention to their children when occupied with their own problems, who try to give them enough freedom, thinking that this way the children will manage better in life, have the cold-permissive style (*neglectful style*). Finally, parents whoconsider their child's opinion when making important family decisions respect the needs and feelings of their child but also demand that the child respects their needs and feelings have the democratic parenting style (*authoritative style*).

According to Schaefer's research (Schaefer, 1959, according to Matejević & Todorović, 2012), this review generally pinpoints two dimensions on which typologies of parenting styles are mainly grounded and which determine parenting practices: parental warmth and control. When the affective dimension is concerned, Pekić (2012) realized there is a high degree of consistency in empirical findings that indicate the importance of emotional warmth and the acceptingattitude of parents in developing the child's advanced abilities. On the other hand, research on the role of control in raising a gifted child leads to different conclusions; doubts arise from the attempt to determine the optimal intensity of this dimension. It is difficult to give an

indisputable answer about the most optimal combination of parents'educational practices because it depends on the context in question – the domain of manifestation of giftedness and the age of the gifted child. Namely, Bloom (Bloom, 1985) notes that parents of children who are gifted in the domain of music have the most directive approach, and parents of children who are gifted in the domain of visual arts are the least directive, while parents of academically gifted children are somewhere in between. This can be interpreted by the fact that the development of musical talent requires constant, long practice, i.e., a long-lasting and demanding period of practice, which requires parental encouragement. At the same time, a sense of freedom and autonomy is more important for the development of talent in the field of visual arts. Thus, researchers suggest that parents of musically talented children are much more receptive to restrictive educational practices due to emphasizing the importance of discipline, while parents of children talented in visual arts show greater openness and honesty in communication with their children (Freeman, 2000). In the area of academic achievements, it seems to be important to favor self-actualization together with the appropriate demands and motivation for hard work, which is a characteristic of an authoritative style, and this has been confirmed by numerous studies (Dehyadegary, Yaacob, Juhari, Mansor, 2012; Morin, Rodriguez, Fallu, Maïano, Janosz, 2012; Rudasill, Adelson, Callahan, Houlihan, Keizer, 2013). Apart from the differences in the domain, the differences in children's age should also be considered. Thus,a gradual reduction of control as a child grows up is optimal for the development of talent (Genc, 1988), which is recommended and applies to all children regardless of the nature of their talent. All in all, the results show that control must not overpower the emotional warmth of parents because the child will experience control negatively and will not accept socialization in the broadest sense.

In fact, it appears that all three styles produce talented adults. However, the authoritarian style seems to provoke resentment and suppression, causing talented students to hide, conceal, and sublimate their talent expression, manifesting either outside the home or later in life (Feldman & Piirto, 2002). This would mean that for talent development, the most optimal styles are authoritative and permissive, although we would specify that the permissive style is likely more associated with talent development in the visual arts domain. In other domains and generally, it is undoubtedly important to correlate the authoritative style with talent development.

Methods

The aim of the research is to determine the assessment of talented students of dominant parenting styles and the level of education of their parents. In order to determine the parenting style and the education level of talented students' parents, three tasks were defined:

(1) Determine and analyze the dominant parenting style of talented students' mothers and fathers, according to assessments of talented students.

(2) Determine and analyze the dominant parenting style of talented students' parents in each area, according to assessments of talented students.

(3) Determine and analyze whether there is a connection between the education of parents and the area of talent of the student.

In the research, we started from the main hypothesis that there is a connection between assessment of talented students on dominant parenting styles and the level of education of their parents. More specifically, we defined hypotheses that the dominant educational style of mothers and fathers of talented students is authoritative, according to assessments of talented students; the dominant educational style of the parents of talented students (according to assessments of talented students) differs for each area; and that there is a connection between the level of education of the parents and the area of talent of the student.

The main research variables are:

– Assessment of talented students on dominant parenting styles (authoritative, warm-restrictive, dismissive, neglectful, and permissive).

– The area in which a student is gifted, in conjunction with age, expressed in the form of school/faculty and department they attend (Faculty of Arts (music), Faculty of Arts (fine and applied arts), secondary music school, grammar school – mathematics, grammar school – physics, grammar school – IT).

Since there is no consensus among authors and researchers who examine the development of talent in young people regarding the causal connection between the influence of the family environment, parenting style, and the talent of students, it is not easy to determine which variable is the predictor of another, the double approach was used in the data analysis,and those results that were more suitable to the defined tasks were chosen.

The control variables of the research are sociodemographic:

– Age (pupil, student).

– Gender of a parent (father, mother).

– Parents' Education level (primary school, high school, college, postgraduate studies).

The subjects of the research are pupils and students, we believe that their subjective experience of their parents' educational style is more important, and their assessments, not their parents' assessments, were taken into account. The sample of talented individuals consists of students from certain schools and faculties who enroll in programs designed for children gifted in a specific field. Although not all are officially designated as talented, we believe that without talent, they would not have the ability to enroll and attend these schools. The total number of respondents is 186.

The structure of the respondents is presented concerning the areas in which the students are talented.

Table 1. Characteristics of the sample in relation to talent/school

	Frequency	Percent	Valid Percent
Faculty of Arts (music)	25	13.4	13.4
Faculty of Arts (fine and applied arts)	34	18.3	18.3
Secondary music school	31	16.7	16.7
Specialized class for informatics	20	10.8	10.8
Specialized class for physics	37	19.9	19.9
Specialized class for mathematics	39	21	21
Total	186	100	100

The structure of the respondents by age is presented, in the form of the level of education they are currently attending.

Table 2. Characteristics of the sample in relation to age

	Frequency	Percent	Valid Percent
High school	127	68.3	68.3
Faculty	59	31.7	31.7
Total	186	100	100

Scaling and survey techniques were used as a part of the descriptive method, as well as the following instrument:

PSOMAF scale (Matejević, 2007) – Parenting style of mothers and fathers. The scale contains a total of 60 items, 30 for mothers and 30 for fathers, which reflect different parenting styles of mothers and fathers according to the classification into warm-restrictive (patriarchal), rejecting, permissive, neglectful, and authoritative style (e.g.,"My mother demands obedience and respect from me", "My mother does not understand my feelings, needs, and desires,but demands obedience", "My father is preoccupied with his own problems and does not notice my problems", "When making important decisions, my father takes my opinion into account", etc.). It is a numerical scale, and its numbers are defined as follows: 1. Almost never, 2. Rarely, 3. Sometimes, 4. Often, 5. Almost always. The reliability of the instrument was measured, and as Cronbach's Alpha is 0.800, we can say that the instrument meets the reliability criteria and has good reliability.

This research was conducted in Serbia during the 2019/20 school year. The research was conducted at Svetozar Marković Grammar School in Niš, Bora Stanković Grammar School in Niš, Music School in Niš, and at the Faculty of Arts, also in Niš. The purpose of the research was presented to the participants. The

examination was completely anonymous; it took place in classrooms and was based on the principle of voluntariness. A small number of students did not complete their questionnaires, but we used the data we obtained from them to process and analyze the results. Quantitative data processing was carried out during the research, followed by qualitative analysis. We presented the obtained results in a tabular form, and data processing was performed by using the SPSS program for Windows 20.0.

Results analysis

The analysis of the results will be shown in accordance with the set tasks.

Assesments of parenting style of mothers and fathers of talented students. The presentation of the results will start with descriptive statistics for the examined assessment of talented students on dimensions of mothers' and fathers' parenting styles separately: warm-restrictive (patriarchal), rejecting, neglectful, permissive, and authoritative style. The data is shown in the table below.

Table 3. Arithmetic means of assessments of mothers' and fathers' parenting styles

Parenting style	N	M	SD
patriarchal–mothers	186	3.90	.62
rejecting–mothers	186	2.18	.64
permissive–mothers	186	3.87	.72
neglectful–mothers	186	1.83	.71
authoritative–mothers	186	4.11	.80
patriarchal–fathers	180	3.75	.68
rejecting–fathers	180	2.26	.76
permissive–fathers	180	3.72	.84
neglectful–fathers	186	1.83	.71
authoritative–fathers	180	3.94	.85

Based on the arithmetic means of the above data, it is clear that the estimates of mothers' and fathers' parenting styles are predominantly high with the authoritative style (M = 4.11 for mothers, M = 3.46 for fathers), but the arithmetic means of the warm-restrictive (patriarchal) style, as well as the permissive style, are also very high and close to the authoritative (M = 3.90 patriarchal style of mothers and M = 3.75 for fathers, etc.).

Mothers were assessed as more authoritative than fathers (M = 4.11 mothers, M = 3.46 fathers), but at the same time, the patriarchal style of parenting was assessed

somewhat higher in mothers than in fathers (M = 3.90 mothers, M = 3.75 fathers). The interesting data from the table is that talented students, on average, equally evaluate the neglecting style of fathers and mothers (M = 1.83).

Assesments of parenting style of parents of students who are talented in different fields. By comparing the arithmetic means of the examined areas of talent and the different parenting styles of talented students' parents, according to assessments of talented students, we obtained data that we divided in relation to the gender of aparent.

Table 4. Comparison of arithmetic means of assesments of mothers' parenting styles in relation to talent

Area of talent	Assesments of parenting style of mothers				
	Patriarchal	Rejecting	Permissive	Neglectful	Authoritative
Music	4.19	2.40	3.89	1.75	4.26
Fine and applied arts	3.95	2.01	4.05	1.67	4.11
Informatics	3.95	2.31	3.67	1.99	4.10
Physics	3.66	2.19	3.79	1.90	4.12
Mathematics	3.64	1.95	3.85	1.95	3.91
Total	3.90	2.18	3.87	1.83	4.11

We see that, according to assessments of talented students, mothers are predominantly authoritative in their parenting style in all areas of talent (M = 4.26; 4.11; 4.10; 4.12; 3.91; 4.11). However, since it is possible to separate musically talented young people into students of music and music school students in the sample, we examined whether there would be any difference in data. The results are shown in the following table.

Table 5. Comparison of arithmetic means of assesments of mothers' parenting styles in relation to talent

Talent/school	Assesments of parenting style of mothers				
	Patriar-chal	Reje-cting	Permis-sive	Neglect-ful	Authorita-tive
Faculty of Arts (music)	4.03	2.52	3.7867	2.04	4.02
Faculty of Arts (fine and applied arts)	3.9	2.01	4.05	1.67	4.11
Secondary music school	4.32	2.31	3.98	1.52	4.45
Spec. class for informatics	3.95	2.31	3.67	1.99	4.10
Spec. class for physics	3.66	2.19	3.79	1.90	4.12
Spec. class for mathematics	3.64	1.95	3.85	1.95	3.91
Total	3.90	2.18	3.87	1.83	4.11

Although we concluded that both mothers and fathers are predominantly authoritative in their parenting style, according to assessments of talented students, from the previous tables, in this table,the mothers of children talented in the field of music who study music at the Faculty of Arts are clearly distinguished in their assessments as somewhat more patriarchal (M = 4.03) than authoritative (M = 4.02). However, it has beenfound that mothers of students who are talented in music and still in secondary school estimates their mothers as more authoritative (M = 4.45) than patriarchal (M = 4.32).

Table 6. Comparison of the arithmetic means of assesments of fathers' parenting styles in relation to the area of talent

Area of talent	Assesments of parenting style of fathers				
	Patriarchal	Rejecting	Permissive	Neglectful	Authoritative
Music	4.02	2.46	3.93	1.75	4.11
Fine and applied arts	3.83	2.12	3.81	1.67	4.20
Informatics	3.89	2.29	3.65	1.99	3.86
Physics	3.52	2.24	3.49	1.90	3.64
Mathematics	3.42	2.10	3.58	1.95	3.77
Total	3.75	2.26	3.72	1.83	3.94

From the table above, we can see that assessments of fathers' parenting style in almost all areas of talent are dominantly authoritative, except for the talented in the field of informatics, where fathers are assessed as dominantly patriarchal (M = 3.89).

Table 7. Comparison of arithmetic means of assesments of fathers' parenting styles in relation to talent

Talent/school	Assesments of parenting style of fathers				
	Patriarchal	Rejecting	Permissive	Neglectful	Authoritative
Faculty of Arts (music)	3.83	2.56	3.94	2.04	4.02
Faculty of Arts (fine and applied arts)	3.83	2.12	3.81	1.67	4.20
Secondary music school	4.18	2.38	3.91	1.52	4.2
Spec. class for informatics	3.89	2.29	3.65	1.99	3.86
Spec. class for physics	3.52	2.24	3.49	1.90	3.64
Spec. class for mathematics	3.42	2.10	3.58	1.95	3.77
Total	3.75	2.26	3.72	1.83	3.94

From this table we can also see that assesments of fathers' style are predominantly authoritative, even those of music students, but the fathers of students talented in the field of informatics stand out as somewhat more patriarchal in their parenting style, according to assessments of students.

In order to examine the statistically significant differences that occur among assessments of parents of children talented in various fields, we used the analysis of variance technique (ANOVA), which is presented in the following tables.

Table 8. F-test analysis of assesments of mothers' parenting styles in relation to talent

Assessments of parenting style of mothers	Talent (school)	AS	SD	F-test	p
Warm-restrictive (patriarchal) style	Faculty of Arts (music)	4.03	.56	6.340	0
	Faculty of Arts (fine and applied arts)	3.9	.54		
	Secondary music school	4.32	.51		
	Spec. class for informatics	3.95	.56		
	Spec. class for physics	3.66	.72		
	Spec. class for mathematics	3.64	.54		
Rejecting style	Faculty of Arts(music)	2.52	.81	3.407	.006
	Faculty of Arts (fine and applied arts)	2.01	.57		
	Secondary music school	2.31	.57		
	Spec. class for informatics	2.31	.62		
	Spec.class for physics	2.19	.61		
	Spec. class for mathematics	1.95	.56		
Permissive style	Faculty of Arts (music)	3.78	.73	1.08	.373
	Faculty of Arts (fine and applied arts)	4.05	.73		
	Secondary music school	3.98	.81		
	Spec. class for informatics	3.67	.66		
	Spec. class for physics	3.79	.73		
	Spec. class for mathematics	3.85	.62		
Neglectful style	Faculty of Arts (music)	2.04	.91	2.543	.03
	Faculty of Arts (fine and applied arts)	1.67	.63		
	Secondary music school	1.52	.51		
	Spec. class for informatics	1.99	.73		
	Spec. class for physics	1.90	.75		
	Spec. class for mathematics	1.95	.63		
Authoritative style	Faculty of Arts(music)	4.02	.73	1.738	.128
	Faculty of Arts (fine and applied arts)	4.11	.70		
	Secondary music school	4.45	.38		
	Spec. class for informatics	4.10	.63		
	Spec. class for physics	4.12	1.11		
	Spec. class for mathematics	3.91	.84		

A post hoc analysis showed a significant difference between the assessments of patriarchal style of music students' mothers (M = 4.32) and mothers of grammar school students attending specialized classes for physics (M = 3.66) and mathematics (M = 3.64), it being that mothers of music students are more warm-restrictive.

Furthermore, the post hoc analysis revealed a significant difference in the prominence of the rejecting style of mothers between students talented in the field of music (M = 2.52) on the one hand and students of fine and applied arts, as well as grammar school students talented in the field of mathematics (M = 1.95) on the other, according to assessments of students. Another statistically significant difference also emerged for the neglectful style of mothers, once again involving music students (M = 2.04). Their mothers were found to be more neglectful compared to the mothers of secondary music school students (M = 1.52), according to assessments of students.

Table 9. F-test analysis of assessments of parenting styles of fathers in relation to talent

Assessments of parenting style of fathers	Talent (school)	AS	SD	F-test	p
Warm-restrictive (patriarchal) style	Faculty of Arts (music)	3.83	.65	5.922	0
	Faculty of Arts (fine and applied arts)	3.83	.64		
	Secondary music school	4.18	.72		
	Spec. class for informatics	3.89	.60		
	Spec. class for physics	3.52	.66		
	Spec. class for mathematics	3.42	.52		
Rejecting style	Faculty of Arts (music)	2.56	.98	1.518	.187
	Faculty of Arts (fine and applied arts)	2.12	.64		
	Secondary music school	2.38	.61		
	Spec. class for informatics	2.29	.71		
	Spec. class for physics	2.24	.88		
	Spec. class for mathematics	2.10	.68		
Permissive style	Faculty of Arts (music)	3.94	.73	1.525	.184
	Faculty of Arts (fine and applied arts)	3.81	.82		
	Secondary music school	3.91	.96		
	Spec. class for informatics	3.65	.78		
	Spec. class for physics	3.49	.86		
	Spec. class for mathematics	3.58	.79		
Neglectful style	Faculty of Arts (music)	2.04	.91	2.543	.03
	Faculty of Arts (fine and applied arts)	1.67	.63		
	Secondary music school	1.52	.51		
	Spec. class for informatics	1.99	.73		
	Spec. class for physics	1.90	.75		
	Spec. class for mathematics	1.95	.63		

Assessments of parenting style of fathers	Talent (school)	AS	SD	F-test	p
Authoritative style	Faculty of Arts (music)	4.02	.76	2.446	.036
	Faculty of Arts (fine and applied arts)	4.20	.65		
	Secondary music school	4.20	.89		
	Spec. class for informatics	3.86	.85		
	Spec. class for physics	3.64	.98		
	Spec. class for mathematics	3.77	.83		

When fathers' parenting styles are concerned, the post hoc analysis showed a significant difference in the patriarchal style of fathers of secondary music school students (M = 4.18) and grammar school students from specialized classes for physics (M = 3.52) and mathematics (M = 3.42), according to assessments of students.

A statistically significant difference also appeared with the neglectful style of fathers, especially between students (M = 2.04) and pupils (M = 1.52) talented in music, according to their assessments. Fathers have a more neglectful parenting style with older than with younger musically gifted children, according to their assessments.

The post hoc analysis showed that there is a significant difference in the assessments of prominence of the fathers' authoritative style between students talented in different fields and favor of students talented in the field of art, especially students of fine and applied arts (M = 4.20), compared to students talented in the field of physics (M = 3.64).

The education level of talented students' parents

The last task was related to analyzing the possible correlation between parents' education and the children's talent area. First, we used descriptive statistics to separate and analyze the tables that provide information on the parents' education of all the talented in the sample.

Table 10. Education level of talented students' mothers

	Frequency	Percent	Valid Percent
Elementary school	2	1.1	1.1
High school	56	30.1	31.6
College	92	49.5	52
Postgraduate studies	27	14.5	15.3
Total processed data	177	95.2	100
Total	186	100	

The analysis of this table shows that the most significant number of talented children's mothers have a university degree (half of the sample, 49.5%), and a third of the sample of talented children have mothers who have only graduated from high school (30.1%).

Table 11. Education level of talented students' fathers

	Frequency	Percent	Valid Percent
Elementary school	3	1.6	1.7
High school	83	44.6	47.2
College	69	37.1	39.2
Postgraduate studies	21	11.3	11.9
Total	176	94.6	100
Total	186	100	

The table analysis shows that the distribution of the education levels of fathers is quite different from the table that shows the distribution of mothers' education levels. Namely, almost half of the fathers of talented children only have a high school education (44.6%), and slightly more than a third have graduated from college (37.1%). In the next step of analyzing the connection between parents' level of education and the talent of students, we used the chi-square test.

Table 12. Chi-square test onthe correlation between mothers' education level and talent

Talent/school	The education level of mothers				Total
	Elementary school	High school	College	Postgraduate studies	
Faculty of Arts (music)	0 0%	13 54.2%	10 41.7%	1 4.2%	24 100%
Faculty of Arts (fine and applied arts)	1 3.1%	16 50%	12 37.5%	3 9.4%	32 100%
Secondary music school	1 3.6%	6 21.4%	16 57.1%	5 17.9%	28 100%
Spec. class for informatics	0 0%	4 21.1%	13 68.4%	2 10.5%	19 100%
Spec. class for physics	0 0%	14 38.9%	17 47.2%	5 13.9%	36 100%
Spec. class for mathematics	0 0%	3 7.9%	24 63.2%	11 28.9%	38 100%
Total	2 1.1% 100%	56 31.6% 100%	92 52% 100%	27 15.3% 100%	177 100% 100%

($\chi^2 = 31.912$, p = .007, df = 15, C = .308)

The chi-square test shows that the education level of talented students'mothers differs significantly (χ^2 = 31.912, p = .007, df = 15). The correlation coefficient indicates a low connection between the variables (C = .308). While half of the Faculty of Arts students' mothers, i.e., talented young people in the field of art, have high school education only, the mothers of talented young mathematicians have a significantly higher level of education (63% have a university degree, and almost all of the rest even attended postgraduate studies).

Table 13. Chi-square correlation test of fathers' educational level and talent

Talent/school	The education level of fathers				Total
	Elementary school	High school	College	Postgraduate studies	
Faculty of Arts (music)	0 0%	15 62.5%	8 33.3%	1 4.2%	24 100%
Faculty of Arts (fine and applied arts)	2 6.3%	20 62.5%	7 21.9%	3 9.4%	32 100%
Secondary music school	1 3.7%	12 44.4%	13 48.1%	1 3.7%	27 100%
Spec. class for informatics	0 0%	7 36.8%	9 47.4%	3 15.8%	19 100%
Spec. class for physics	0 0%	17 47.2%	16 44.4%	3 8.3%	36 100%
Spec. class for mathematics	0 0%	12 31.6%	16 42.1%	10 26.3%	38 100%
Total	3 1.7%	83 47.2%	69 39.2%	21 11.9%	176 100%

(χ^2 = 25.735, p = .041, df = 15, C = .357)

The chi-square test shows that the education level of talented young people's fathers also differs significantly (χ^2 = 25.735, p = .041, df = 15). The correlation coefficient indicates a low connection between the variables (C = .357). While the majority of fathers (62%) of the students of fine and applied arts have only completed high school, only a third of talented young mathematicians'fathers have a high school education, the majority (42%) have a university degree, and even a fifth of fathers (26%) have completed postgraduate studies as well). Therefore, the fathers of young mathematicians have a higher level of education than the fathers of artists.

The main hypothesis that there is a connection between assessment of talented students on dominant parenting styles and the level of education of their parents is confirmed. In the research, we started from the hypotheses that the dominant educational style of mothers and fathers of talented students, according to assessments

of talented students, is authoritative, which the research confirmed; that the dominant educational style of the parents of talented students, according to assessments of talented students, differs for each area, which is also confirmed; and that there is a connection between the level of education of the parents and the area of talent of the student – which was also confirmed. We can conclude that all the set hypotheses have been confirmed.

Discussion

This research mainly focused on the correlation between assessments of parenting style and talent. Overall, it was found that the assessments of the parenting styles of talented students' mothers and fathers are predominantly high in the case of the authoritative style. Still, the arithmetic means of assessments of the warm-restrictive (patriarchal) style and the permissive style is also quite high and close to the authoritative. As the evaluations are predominantly high on the features that have parental warmth in common as opposed to coldness within the affective dimension, it can be concluded that the parents of talented students primarily demonstrate warmth, according to assessments of students, meaning that the affective dimension is essential and that the control dimension does not have a significant role. This distinction was expected, considering that a high degree of consistency of results is observed in various empirical findings, testifying to the importance of emotional warmth and the accepting attitude of parents towards the development of a child's advanced abilities, while differences appear only in the other important dimension of parenting styles research – control – in its intensity above all (Miller, 1981; Pekić, 2012). Nevertheless assessments of the prominence of the warm-restrictive (patriarchal) style is quite surprising because research (Albert, 1978, according to Chan, 2008; Rudasill et al., 2013) predominantly addresses the more frequent authoritative style and somewhat less the permissive style as optimal for talent development, a patriarchal style as warm-authoritarian is rarely dominant among parents of talented children (for example Morawska & Sanders, 2008). The presence of this style can be regarded as a part of transgenerational transmission or perhaps in the context of parents' efforts to protect their children from the attack of negative influences that are increasingly present in our contemporary social context.

Compared to fathers, mothers were assessed as more authoritative but also more warm-restrictive (patriarchal). We believe that these results only confirm the greater involvement of mothers in the upbringing compared to fathers, which is a default phenomenon in our social tradition.

The next step in analyzing the connection between parenting styles and talent clearly identified the mothers of students talented in music as somewhat more warm-restrictive (patriarchal) than authoritative, according to assessments of students. This result contradicts some previous research (Kostić et al., 2020), which pointed out that parents of children talented in music prefer the authoritative style. However, the

assessments of the authoritative style was found to be more prominent in mothers of students who are talented in the field of music but are still in high school. It can be concluded that mothers tend to adopt a more directive approach during college than during high school towards musically gifted children. This is surprising, considering that more autonomy is expected to be given with age. Whether this would have happened if we had examined age differences in another area of talent remains an open question. In any case, more attention should be given to such differences in future research. For now, the result can be interpreted with the likelihood that young people whose mothers were more demanding during high school enroll in the Music Department of the Faculty of Arts. However, talent development in the field of music requires a lot of practice, unlike some other fields. It is often demonstrated that the strong influence of family interests, along with the demand for constant practice, is particularly operative when it comes to musical talent (Feldman & Piirto, 2002).

Compared to some other groups, this same group of mothers was evaluated as more rejecting and more neglectful, which may indicate different subgroups among them, or the inconsistency in the parenting procedures and styles of mothers of the musically talented students as characteristics of this subgroup. In addition, it is well-known that artists often come from broken family systems due to the loss of one parent, divorce, or some other reason, and that such a situation has an "orphan effect" (Simonton, 1988) and (along with parental warmth and facing misfortune through art) encourages talent development.

Among fathers, according to assessments of students, the fathers of students talented in the field of informatics stood out as somewhat more warm-restrictive (patriarchal) in their parenting style. This result can be interpreted with the probability that sitting at the computer all day long, when young people are concerned, can cause uneasiness for parents who fear the harmful effects of the screen and the content it displays, and then also cause frequent criticism.

Further analysis also demonstrated that there is a significant difference in the assessments of fathers' warm-restrictive (patriarchal) style between secondary music school students and grammar school students from specialized classes for physics and mathematics. Bearing in mind the analysis of the warm-restrictive (patriarchal) style of mothers, it was concluded that parents of children talented in the field of music nurture a warm-restrictive style more than parents of children talented in the field of physics and mathematics (according to assessments of students), which we again interpreted with the existence of the need for constant practice and increased parental control in conjunction with parental warmth. The findings are consistent with research in which, as observed by Bloom (Bloom, 1985), it is found that parents of musically talented children have the most directive approach compared to parents of children talented in some other areas.

Finally, the correlations between parents' education level and children's talent were analyzed. It has been found that the mothers of talented students have a higher degree of education than their fathers. The results align with numerous other

researches and theories suggesting that the mother's education correlates much more with the child's level of giftedness than with the father's education (Pekić, 2016; Tekin & Taşğin, 2009). Hence, the highest possible education level is essentialfor women/mothers. Ambitious mothers significantly influence gifted children, not only because they set high expectations for them but also because they strongly believe in their children's success and thus encourage their self-confidence and motivation for further talent development. However, the low education level of musicians' mothers in our research was not expected based on some previous studies that showed that a high socioeconomic and educational status characterizes the families of music students, and hence by a high-quality musical stimulation (Bogunović, 2004; Štula, 2007, according to Letić & Lungulov, 2016).

Mothers of talented young mathematicians have a significantly higher level of education than mothers of talented young artists. This result can be related to mothers' attitudes towards mathematics, which can greatly affect their children's achievements. If mothers express a lack of proficiency in mathematics, their children may perceive mathematics as a field unsuitable for them (Eccles & Harold, 1992), and the reverse is probably also true. It is also well-known that academically talented youth tend to have highly educated fathers and mothers who are also highly educated but do not work full-time outside the home (Feldman & Piirto, 2002). As talent in the field of mathematics develops more in a formal, school-based manner, it is not surprising that the parents of mathematicians have a higher level of education than other parents. The correlation between parents' education and academic success, particularly talent development, is clearly linked to intellectual stimulation and the cultural and pedagogical level. In conclusion, to effectively nurture talents and ensure timely recognition and development of giftedness, we, as a society, should elevate educational standards and increase awareness of the importance of education for future parents.

Conclusion

Shortly, research has shown that the authoritative style is the dominant parenting style of talented students' mothers and fathers, according to assessments of students. Also, this style is not dominant among all groups of parents of talented students in various analyzed fields (mothers of musically talented students and fathers of students talented in computer science have a slightly more prominent warm-restrictive, i.e., patriarchal style). In addition, there is a correlation between parents' education and the area of talent of students – mothers of talented students have a higher level of education than their fathers, which indicates the importance of the education level of mothers for the development of talent in gifted children. The research undoubtedly highlighted the importance of parental warmth as a dimension of parenting style.The results have not been interpreted in the sense of causality, but only of mutual connection between the parenting style and the presence of talent in the students.

We could discuss much more about the results we found out. We assumed that the fathers of students talented in the field of informatics are more patriarchal because they fear the harmful effects of the screen. Also, this result can be interpreted with the probability that young people who are extremely agile with computers, which is very socially supported nowadays, are faced with the challenge of balancing between enjoying a high reputation in the society of peers and experts in the IT sector, and on the other hand – misunderstanding by their parents (in this case fathers) who do not allow enough autonomy and respect to the extent that young computer scientists expect. However, these are only assumptions, and they could be hypotheses in future research involving talented young computer scientists and their parents.

The low education level of musicians' mothers in our research was not expected, but these results can explain the parenting style of mothers from this sample to some extent. Namely, the mothers of music students are predominantly warm-restrictive, according to assessments of students, and it is known that less educated parents prefer conformity and obedience to autonomy, which explains the assessments of parenting style of music students' mothers.

The research also had some other implications. Namely, a relatively even distribution of warm parenting styles indicates an interrelation of these parenting styles. It imposes the question of parental consistency, which further implies the need for the pedagogical education of parents. There is much literature on this issue, but the implementation has not yet occurred, even though parenting in the 21st century is becoming increasingly complex, and each subsequent generation differs in its approach to parenting compared to the previous one. When the child is identified as gifted and exceptionally talented, it is already too late to start strengthening the parents' pedagogical competence. This should be taken into consideration even before marriage because it is known that marital satisfaction is the pathway to competent

parenting.Furthermore, both before marriage and during maternity, women should be encouraged to have even higher education, considering the important principle of circular causation, where positive changes in one element of the family system are the cause of positive changes in another (Nikolić, 2023), in this case, the educational level of mothers at children's talent.

Reaching the talented is not easy; therefore, some of the limitations of the research are primarily a small, insufficiently representative sample in terms of numbers, but also in terms of geography because the research was conducted only in the area of the city of Nis, thus includespupils and students mainly from the southeast of Serbia. Therefore, the results must be generalized and considered cautiously and only with the results of other research on this topic. In addition, we interpreted the results in terms of a possible two-way relationship, which means that appropriate parental influences represent antecedents of talent development but also that the awareness of child's giftedness contributes to the creation of a specific educational climate and draws parents towards taking certain actions and methods of education.

References

Bégin, J. & Gagné, F. (1995). Predictors of a General Attitude toward Gifted Education. *Journal for the Education of the Gifted,* 18(1), 74–86. https://doi.org/10.1177/016235329401800106

Bloom, B. S. (1985). *Developing talent in young people.* Ballantine Books.

Chan, D. W. (2008). Giftedness of Chinese students in Hong Kong: perspectives from different conceptions of intelligence. *Gifted Child Quarterly*, 52(1), 40–54. https://doi.org/10.1177/0016986207311058

Chiu, M.-S. (2021). An ecological approach to adolescent mathematics ability development: differences in demographics, parenting, mathematics teaching, and student behaviors and emotions. *Educational Studies*, 47(2), 155–178. https://doi.org/10.1080/03055698.2019.1672522

Dehyadegary, E., Yaacob, S. N., Juhari, R. B. & Mansor, A. T. (2012). Relationship between parenting style and academic achievement among Iranian adolescents in Sirjan. *Asian Social Science*, 8(1), 156–160. http://dx.doi.org/10.5539/ass.v8n1p156

Eccles, J. S. & Harold, R. D. (1992). Gender differences in educational and occupational patterns among the gifted. In N. Colangelo, S. G. Assouline & D. A. L. Ambroson (eds.): *Talent development: Proceedings from the Henry B. and Jocelyn Wallace National Research Symposium on Talent Development* (pp. 2–30). Trillium. Retrieved August 25, 2023 from http://education-webfiles.s3-website-us-west-2.amazonaws.com/arp/garp/articles/eccles92i.pdf

Feldman, D. H. & Piirto, J. (2002). Parenting Talented Children. In M. Bornstein (eds.): *Handbook of Parenting*, Vol. 5, 2nd ed. (pp. 195–220). Psychology Press. Retrieved March 30, 2024 from https://janepiirto.com/?page_id=2540

Freeman, J. (2000). Families: the essential context for gifts and talents. In K. A. Heller, F. J. Mönks, R. J. Sternberg & R. Subotnik (eds.): *International handbook of giftedness and talent* (pp. 573–587). Pergamon Press. Retrieved August 25, 2023 from https://joanfreeman.com/pdf/free_familiesincontext.pdf

Genc, L. (1988). Dimenzije vaspitanja i razvoj ličnosti: teorija i istraživanja. *Psihologija*, 21(4), 121–132.

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early development via maternal speech. *Child Development*, 74(5), 1368–1378. https://doi.org/10.1111/1467-8624.00612

Kaya, F., Stough, L. M. & Juntune, J. (2016). The effect of poverty on the verbal scores of gifted students. *Educational Studies*, 42(1), 85–97. https://doi.org/10.1080/03055698.2016.1148585

Kostić, S. M., Minić, J. Lj. & Rovčanin, E. E. (2020). Vaspitni stilovi roditelja kao prediktori dimenzija samoefikasnosti učenika osnovne muzičke škole. *Zbornik radova Filozofskog fakulteta u Prištini*, 50(2), 315–333. https://doi.org/10.5937/ZRFFP50-23619

Letić, M. M. & Lungulov, S. B. (2016). Socio-demografski činioci uspešnosti darovitih učenika. *Godišnjak Filozofskog fakulteta u Novom Sadu*, 41(2), 215–232. https://doi.org/10.19090/gff.2016.2.215-232

Matejević, M. (2007). *Vrednosne orijentacije i vaspitni stil roditelja.* Niš: Filozofski fakultet.

Matejević, M. & Todorović, J. (2012). *Funkcionalnost porodičnih odnosa i kompetentno roditeljstvo*. Niš: Filozofski fakultet.

Miller, A. (1981). *Drama of the gifted child.* New York: Doubleday.

Morawska, A. & Sanders, M. R. (2008). Parenting gifted and talented children: what are the key child behaviour and parenting issues? *Australian and New Zealand Journal of Psychiatry*, 42(9), 819–827. https://doi.org/10.1080/00048670802277271

Morin, A. J. S., Rodriguez, D., Fallu, J.-S., Maïano, C. & Janosz, M. (2012). Academic Achievement and Smoking Initiation in Adolescence: A General Growth Mixture Analysis. *Addiction*, 107(4), 819–828. https://doi.org/10.1111/j.1360-0443.2011.03725.x

Nikolić, N. (2023). Funkcionalnost porodičnih dimenzija i roditeljstva iz ugla sistemske teorije o porodici. *Zbornik radova Pedagoškog fakulteta u Užicu*, 26(25), 59–76.

Paser, V., Vujasin, B. & Božin, A. (2008). Darovitost u sistemu vrednosti porodice. U G. Gojkov (ur.): *Porodica kao faktor podsticanja darovitosti*, 14. Okrugli sto (str. 492–501). Vršac: Visoka škola strukovnih studija za obrazovanje vaspitača „Mihailo Pavlov". Retrieved August 25, 2023 from https://www.uskolavrsac.edu.rs/Dokumenta/Zbornik%20R%2014.pdf

Pekić, J. M. (2012). Vaspitni postupci roditelja kao činioci aktualizacije darovitosti. *Godišnjak Filozofskog fakulteta u Novom Sadu*, 37(1), 201–213. Retrieved August 23, 2023 from https://godisnjak.ff.uns.ac.rs/index.php/gff/article/view/195

Pekić, J. (2016). Relacije akademske darovitosti sa gimnazijskim usmerenjem učenika i nivoom obrazovanja roditelja. *Godišnjak Filozofskog fakulteta u Novom Sadu,* 41(2), 367–395. Retrieved August 25, 2023 from https://godisnjak.ff.uns.ac.rs/index.php/gff/article/view/1889

Piirto, J. (1998). *Understanding those who create* (2nd ed.). Scottdale, AZ: Gifted Psychology Press.

Rudasill, K. M., Adelson, J. L., Callahan, C. M., Houlihan, D. V. & Keizer, B. M. (2013). Gifted Students' Perceptions of Parenting Styles: Associations with Cognitive Ability, Sex, Race, and Age. *Gifted Child Quarterly,* 57(1), 15–24.

Simonton, D. K. (1988). *Scientific genius*. Harvard University Press.

Tekin, M. & Taşğin, Ö. (2009). Analysis of the creativity level of the gifted students. *Procedia Social and Behavioral Sciences,* 1(1), 1088–1092. https://doi.org/10.1016/j.sbspro.2009.01.196

Van Tassel-Baska, J. & Olszewski-Kubilus, P. (eds.) (1989). *Patterns of influence on gifted learners: The home, the self, and the school*. New York: Teachers College Press.

МАРИНА Д. МАТЕЈЕВИЋ

Универзитет у Нишу – Филозофски факултет

МАРИЈА Д. ЂОРЂЕВИЋ

Универзитет у Нишу – Филозофски факултет

ВАСПИТНИ СТИЛ И ОБРАЗОВНИ НИВО РОДИТЕЉА ТАЛЕНТОВАНИХ УЧЕНИКА

РЕЗИМЕ

Истраживање је имало за циљ да утврди васпитни циљ и ниво образовања родитеља талентованих ученика. Субјекти истраживања су били ученици средњих уметничких школа и студенти факултета уметности, као и они из специјалних одељења гимназија за надарене за математику, физику и информатику. Утврђено је да је ауторитативни стил најзаступљенији, али је значајно присутан и топло-рестриктивни и пермисиван, што указује на топло-усмеравајуће родитељство. Према проценама испитаника, мајке музички талентованих ученика и очеви ученика талентованих за информатику имају нешто очигледнији топло-рестриктивни стил у односу на друге групе. Коначно, мајке талентованих ученика имају виши ниво образовања од њихових очева. Ови резултати указују на значај образовања мајки за развој талента. Релативно равномерна дистрибуција топлих стилова родитељства указује на значај емоционалног односа родитеља и топлог прихватајућег васпитања за развој креативности, али намеће и питање родитељске доследности, што даље имплицира потребу за педагошким образовањем родитеља.

Кључне речи: *даровитост*, *степен образовања*, *стилови родитељства*, *таленат*, *талентовани ученици*.