

# Relation Between the Perceived Parenting Style and Grit of Adolescents Aged 15-20

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**Abstract** – The paper presents an analysis of the relation between the perceived parental style and the grit of adolescents. The theoretical background includes the ideas about the interconnection between the parenting and the grit. Research data were collected from 738 adolescents aged 15-20 in the Slovak Republic attending general secondary schools and specialized secondary schools (ISCED 3). Their average age was 17.19 year (SD = 1.36). We used two assessment methods: The Grit Scale and Parenting Style Inventory II. The linear regression modelling showed that the most significant predictors of the grit, passion and perseverance are male sex responsiveness and autonomy granting of the parents. The results are important in the psychological and educational praxis in the relation to the future carrier selections and personal beliefs about ability to reach the self-defined goals.

**Keywords** – Responsiveness, autonomy granting, demandingness, passion, perseverance, grit, adolescence.

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## 1. Introduction

The basic thesis of modern education, both school and parental, is that the interest of the educated one should primarily guide its process. This means that the content of education should be driven by what the child/adolescent wants to learn. The prerequisite for the fulfillment of this thesis is the identification of the strengths of the child/adolescent [1]. They can only be recognized in the activity and the process of acquiring mastery [2] in it. The question is whether it is more beneficial for education in this sense to learn the universality (versality [3]) or to focus on a very specific area (grit [4]). Probably, from the point of view of applicability on the labour market and from the point of view of mental well-being, the strategy of developing multiple interests will be more advantageous. However, their specific quality depends on how long and how intensively a person devotes himself to them and thus, whether he has sufficient grit in developing them.

Duckworth *et al.* [4] characterize grit as a variable that combines enthusiasm, effort, interest, and the ability to work hard with a focus on a long-term goal. It is also associated with overcoming adverse circumstances and coping with stress.

According to researches [4], [5] it is close to the factor of conscientiousness from the Big Five concept, which can be characterized as self-regulation of impulses to plan and follow goals or tasks. Other studies [6], [7] suggest that grit overlaps with self-efficacy and motivation, respectively engagement.

No concept operationalizes passion and perseverance as variables that create grit and lead to achieving long-term goals [8], [5]. We could perceive passion as an emotional source of motivation that activates a person in wanting to do something. Perseverance is rather a rational source of motivation that forces a person to stay active even when faced with problems and the original enthusiasm has faded.

Several studies identify grit as a personality trait determined by heredity [5] [9]. Others point to the possibility of developing it [10], [4]. It is largely related to the setting of the educational environment [11], growth mindset [12] or parental behavior [13].

Grit also predicts school success of adolescents [14] [15]. It is related to positive self-concept [16] and its cyclical nature. It means that if an individual feels good in an activity and achieve good results, he/she want to stay in it and focus on fine-tuning the details, which leads him/her to mastery and to feel good. We were interested in how grit is formed and how its level is related to parenting style which can be defined by many ways.

Lewin [17] describes following management styles in small social groups: autocratic, liberal and integrative, respectively democratic. His classification of management styles was later extrapolated into the concept of parenting styles.

In the classification of parenting styles, Baumrind [18] defined the boundaries between authoritative and authoritarian parenting styles and also draws attention to the distinction between permissive and neglectful forms within the liberal style. Although both forms are characterized by a lack of control, the difference is in the emotional relation to the child. She considers that the authoritative parental style has a positive effect on the formation of the child's personality, associated with the experience of positive emotions in family relationships and clearly defined boundaries [18].

Darling and Toyokawa [19] offer a different perspective on parental behavior, which takes into account the support and demandingness of parents in parental behavior. They distinguish wise parenting (a combination of high support and high demands), indifferent parenting (low support, low demands), benevolent parenting (high support, low demands) and authoritarian parenting (low support, high demands). This approach implies that wise parenting is the optimal parenting style.

Steinberg [20] states in his research findings that supportive and demanding parenting leads to long-term benefits for their children which we could describe as higher autonomy, higher performance, less psychological disorders, less risk behavior. It is possible that the psychological needs defined by Langmeier and Matějček [21] enter this relationship in a significant way as mediating variables. In developing grit, children and adolescents may have an advantage if they have enough adequate stimuli of adequate quality, have a fulfilling relationship with their parents, their parents have provided them with enough meaningful information about the functioning of the world and its rules, they know their family history, they know how to determine different aspects of their identity (real self, desired

self, unwanted self, etc.) and can work with goals and their changes over time.

The aim of this study is to explore the mentioned relationship between parental behavior (according to Darling, Toyokawa [19]) and grit (according to Duckworth *et al.* [4]) of adolescents.

## 2. Method

We used two assessment methods: The Grit Scale and Parenting Style Inventory II.

The Grit Scale was created and popularized by Duckworth. Now there exist several versions of the scale. We used 10-items version which consists of two subscales: passion and perseverance [4]. The participants evaluate the items through 5-point Likert scale from strong agreement to strong disagreement. Example of the passion item: "My interests change from year to year." Example of the perseverance item: "I finish what I begin." Internal consistency identified in the original study was 0.85. We measured the values of internal consistency from 0.697 to 0.784.

Parenting Style Inventory II (PSI-II) was created by Darling, and Toyokawa [19]. It is 15-items scale for mother and father which are evaluated through 5-point Likert scale from strong agreement to strong disagreement. PSI-II consists of three subscales: responsiveness, autonomy granting, and demandingness. Example of the responsiveness item: "My mother does not really like me to tell her my troubles.". Example of the autonomy granting item: "My mother gives me a lot of freedom." Example of the demandingness item: "If I do not behave myself, my mother will punish me." Internal consistency identified in the original study was 0.72 - 0.75. We measured the values of internal consistency from 0.546 to 0.816. The subscale demandingness did not have adequate values: 0.546, resp. 0.607 (Table 1). Therefore, we decided not to work with it in the analyses.

Questionnaires were administered in the online form.

Table 1. Values of Cronbach  $\alpha$  of research scales

	Cronbach
passion	0.697
perseverance	0.784
grit	0.764
responsiveness_mother	0.755
responsiveness_father	0.816
autonomy_granting_mother	0.707
autonomy_granting_father	0.716
demandingness_mother	0.546
demandingness_father	0.607

The research involved 738 adolescents aged 15-20 (M = 17.19; SD = 1.36) from the Slovak Republic: 292 males and 446 females (Table 1). Out of the total amount, 443 adolescents attended a general secondary school and 295 attended a specialized secondary school (both type of schools belong to ISCED 3 - higher secondary education) (Table 2). The distribution of the research sample according to age was as follows: N<sub>15</sub> = 89 (12.1 %), N<sub>16</sub> = 149 (20.2 %), N<sub>17</sub> = 199 (27.0 %), N<sub>18</sub> = 177 (24.0 %), N<sub>19</sub> = 84 (11.4 %), N<sub>20</sub> = 40 (5.4 %).

The count of the research sample responds to the confidence level 99% and the accuracy level 5% [22].

The descriptive characteristics of the variables of the whole research sample and the indexes of normality testing are provided in Table 2. In the table there are also the values normality testing by using Shapiro-Wilk test. All values showed the normal distribution of the data. We used the parametric tests in the statistical analysis.

Table 2. Descriptives of research variables and normality testing

	PA	PE	G	Rm	Rf	AGm	AGf
N	738	738	738	738	738	738	738
M	14.41	17.29	31.	18.06	16.36	17.44	17.43
SEM	0.15	0.15	0.2	0.15	0.17	0.14	0.15
SD	3.95	4.09	6.4	4.17	4.71	3.89	4.03
Kurt	-0.27	-0.55	-	-0.24	-0.50	0.13	0.01
Skw	0.18	-0.18	0.1	-0.46	-0.25	-0.56	-0.43
S-W	0.989	0.983	0.9	0.972	0.981	0.972	0.979
p	<	<	0.0	<	<	<	<

Legend: PA = passion, PE = perseverance, G = grit, Rm = responsiveness\_mother, Rf = responsiveness\_father, AGm = autonomy granting\_mother, AGf = autonomy granting\_father, S-W = Shapiro-Wilk test

Table 4. Descriptives of grit scale and subscales according to levels of responsiveness and autonomy granting of parents

level	Rm			Rf			AGm			AGf			
	PA	PE	G	PA	PE	G	PA	PE	G	PA	PE	G	
low	N	107	107	107	126	126	126	119	119	119	117	117	117
	M	13.20	14.98	28.18	13.45	16.37	29.83	13.61	15.89	29.50	13.74	15.93	29.68
	SEM	0.41	0.39	0.65	0.37	0.39	0.59	0.37	0.39	0.58	0.37	0.39	0.59
	SD	4.23	4.08	6.75	4.20	4.41	6.64	4.03	4.21	6.35	4.01	4.23	6.35
average	N	524	524	524	503	503	503	510	510	510	501	501	501
	M	14.39	17.19	31.58	14.44	17.07	31.50	14.40	17.12	31.52	14.32	17.20	31.52
	SEM	0.16	0.17	0.26	0.17	0.18	0.27	0.17	0.17	0.27	0.17	0.18	0.27
	SD	3.65	3.87	5.89	3.70	3.93	6.16	3.76	3.92	6.05	3.76	3.95	6.10
high	N	107	107	107	109	109	109	109	109	109	120	120	120
	M	15.72	20.09	35.81	15.38	19.41	34.79	15.33	19.63	34.96	15.40	19.02	34.42
	SEM	0.45	0.34	0.66	0.43	0.36	0.65	0.44	0.37	0.71	0.41	0.36	0.67
	SD	4.68	3.51	6.82	4.53	3.76	6.77	4.55	3.83	7.38	4.50	3.97	7.33
F(2)	11.229	47.641	41.434	7.078	19.524	18.695	5.490	27.045	22.033	5.616	18.052	17.110	
p	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.004	<0.001	<0.001	0.004	<0.001	<0.001	
Cohen's d	0.638	1.274	1.176	0.489	0.743	0.764	0.435	0.914	0.841	0.420	0.756	0.730	

Legend: PA = passion, PE = perseverance, G = grit, Rm = responsiveness\_mother, Rf = responsiveness\_father, AGm = autonomy granting\_mother, AGf = autonomy granting\_father, S-W = Shapiro-Wilk test

### 3. Results

For testing of hypothesis about the relation between the perceived parental style and grit of the adolescents we used t-test for two independent samples, ANOVA-test and linear regression in SPSS 25.0 programme (Table 3).

Table 3. Descriptives of grit scale and subscales according to sex

sex		passion	perseveranc	grit
males	N	292	292	292
	M	15.09	17.25	32.34
	SEM	0.22	0.24	0.36
	SD	3.72	4.06	6.17
females	N	446	446	446
	M	13.96	17.33	31.28
	SEM	0.19	0.19	0.32
	SD	4.04	4.12	6.67
t (736)		3.830	-0.255	2.156
p		<0.001	0.799	0.031
Cohen's d		1.422	0.087	0.541

The testing of the differences between males and females in the variables of the grit showed the significant differences in passion (t(736) = 3.830, p < 0.001) and grit (t(736) = 2.156, p = 0.031). The effect size was tested by Cohen's d. The large, resp. intermediate effect was discovered yet the difference in the variable perseverance was not discovered.

Before testing the differences in the grit scales in the relation to responsiveness and autonomy granting of the parents, we divided the research sample data into three groups: low level, average level and high level of each variable according to values of the average mean and standard deviation. The pattern was following:  $AM \pm SD$ . The values under  $AM - SD$  were labelled as low level, the values between  $AM - SD$  and  $AM + SD$  were labelled average level and the values over  $AM + SD$  were labelled high level. The values of average mean and standard deviation of each variable were following: responsiveness of mother  $AM = 18.06$ ,  $SD = 4.17$ ; responsiveness of father  $AM = 16.36$ ,  $SD = 4.71$ ; autonomy granting of mother  $AM = 17.44$ ,  $SD = 3.89$ ; autonomy granting of father  $AM = 17.43$ ,  $SD = 4.03$ . We identified the significant differences among these groups in the grit scales at the significance level of 0.001.

The values of ANOVA test varied from 5.490 to 47.641. The effect size was tested by Cohen's d. We acquired the values from 0.420 to 1.274. The values under 0.5 were measured in the variable passion in the relation to responsiveness of the father and autonomy granting of both parents. It is small effect. In the other variables we can interpret the values of Cohen's d as intermediate, resp. large effect. The average values of the grit variables were always the highest in the group of high level of responsiveness, resp. autonomy granting (Table 4).

We also tested the differences in the grit scales in the relation to age. We did not find out any differences. We excluded the variable age from further analysis.

Linear regression modelling showed the different predictors of grit, passion and perseverance as dependent variable of each model (Table 5).

Table 5. Linear regression models of the relation between variables of parenting styles and grit

dependent variable = grit					
F(5) = 23.067					
p < 0.001					
R <sup>2</sup> = 0.136					
predictors	B	$\beta$	t	p	
sex	-0.983	-0.074	-2.122	0.034	
responsiveness_mother	0.360	0.231	5.425	< 0.001	
responsiveness_father	0.178	0.129	3.145	0.002	
autonomy_granting_mother	0.141	0.085	1.960	0.050	
autonomy_granting_father	0.032	0.020	0.483	0.629	

dependent variable = passion					
F(5) = 8.743					
p < 0.001					
R <sup>2</sup> = 0.056					
predictors	B	$\beta$	t	p	
sex	-1.078	-0.133	-3.655	< 0.001	
responsiveness_mother	0.092	0.097	2.184	0.029	
responsiveness_father	0.113	0.134	3.127	0.002	
autonomy_granting_mother	0.039	0.038	0.848	0.397	
autonomy_granting_father	-0.042	-0.043	-0.978	0.328	

dependent variable = perseverance					
F(5) = 28.179					
p < 0.001					
R <sup>2</sup> = 0.161					
predictors	B	$\beta$	t	p	
sex	0.095	0.011	0.330	0.741	
responsiveness_mother	0.267	0.273	6.496	< 0.001	
responsiveness_father	0.065	0.075	1.858	0.064	
autonomy_granting_mother	0.102	0.097	2.286	0.023	
autonomy_granting_father	0.074	0.073	1.780	0.076	

The previous analysis showed that the sex and the parental responsiveness and autonomy granting were meaningful predictors of grit and its subscales. Therefore, we defined them as predictors of linear models. The models were significant in all three cases, although they explained maximum 16 % of the variance (Table 5). F-values were significant at the level  $\alpha < 0.001$ .

The significant predictors of grit are male sex ( $t = -2.122$ ,  $p = 0.034$ ), high responsiveness of mother ( $t = 5.425$ ,  $p < 0.001$ ) and father ( $t = 3.145$ ,  $p = 0.002$ )

and high autonomy granting of mother ( $t = 1.960$ ,  $p = 0.050$ ).

The significant predictors of passion are male sex ( $t = -3.655$ ,  $p < 0.001$ ), high responsiveness of mother ( $t = 2.184$ ,  $p = 0.029$ ) and father ( $t = 3.127$ ,  $p = 0.002$ ).

The significant predictors of perseverance are high responsiveness of mother ( $t = 6.496$ ,  $p < 0.001$ ) and high autonomy granting of father ( $t = 2.286$ ,  $p = 0.023$ ).

#### 4. Discussion

The aim of the study was to explore the relationship between parental behavior presented by responsiveness and autonomy granting and grit in adolescence. The results support the assumption that the grit of older adolescents is significantly higher if their parents are responsive and support their autonomy. We analyzed the relationships between parenting behavior, grit, and gender. Boys in older adolescence show a higher level of grit filled by strong passion.

Our finding may be related to the fact that boys are more oriented towards performance-related interests in their socialization. If they are passionate about an activity, they are motivated to implement it and want to win, it will be reflected in their grit in this area. Thus, motivation and passion appear to be important variables for the development of boys' grit.

The results of an analysis lead us to the formulation of findings about predictors of grit. As a significant predictor of grit, we identified parental responsiveness (grit and passion), or mothers (perseverance) and autonomy granting (from the mother in the case of grit, from the father in the case of perseverance). Male gender is also a predictor of grit, which is probably related to social expectations.

Other researchers identified the results in accordance with our outputs. Levy and Steele [23] found that a strong predictor of grit (including both of its components) is a low level of parental anxious and avoidant behavior as basic parameters of attachment style.

Fernández-Martín *et al.* [24] found that grit was positively related to parental warmth and autonomy support. Conversely, grit is weakened by high levels of parental control.

Du *et al.* [25] confirmed a positive relationship between parental autonomy support and grit. As a mediating variable, they identified the fulfillment of basic psychological needs defined according to the self-determination theory: autonomy, competence, relatedness.

Lan, Ma, and Radin [26] found a persistent relationship between autonomy support and grit in adulthood, even in communities with problematic socio-economic backgrounds.

Vazsonyi *et al.* [27] confirmed a significant overlap between the concept of grit and self-control mentioned in introduction.

Grit development or grit as a personality trait of children is closely related to the grit of parents [24], [4]. The grit of parents who are responsive and support adolescent autonomy, and apply appropriate psychological control is associated with higher grit in their child.

We can explain this by the fact that such parental behavior increases the child/adolescent's motivation to imitate and internalize the parent's example. This is how his parents prepare him/her to handle situations in which he must show perseverance and face life's challenges.

What is the importance of developing grit in adolescence? Adolescence is a challenging period from the point of view of managing several developmental tasks. Grit can help an adolescent be resilient to stress and successful in accomplishing tasks. In addition to parental behavior characterized by accepting and supporting autonomy, we can also develop grit in the school environment. Several studies show that grit predicts better educational outcomes [4], [11], lifelong learning [4] or job performance [28].

Park *et al.* [12] confirmed the relationship between grit and adolescent growth mindset and their coexistence. Adolescents who believed that their intellectual abilities were flexible subsequently worked persistently and passionately toward challenging goals. The reverse was also true to an even greater extent; higher measured grit predicted subsequent increases in growth mindset scores. Students with a growth mindset tend to choose challenging tasks that help them learn, rather than easier options that aim to make a minimum of mistakes [29], [30]. In the case of failure, students with a growth mindset tend to attribute their failure to a lack of effort or ineffective learning strategies, while those with a fixed mindset are more likely to blame themselves for a lack of ability [31], [32], [33].

#### 5. Conclusions

In general we can conclude that the parents' responsiveness and support of their adolescent's autonomy are significant predictors of grit. Boys are educated to have more grit (mainly passion) than girls.

In relation to parenting, this means that if we expect an adolescent to be gritted, passionate, and persistent, we should be available to him/her when he/she needs us. When the individual solves problems he/she has no experience with or is not sure of the possible reaction of the members of the social group to which he/she belongs, we should be the ones who will perceive him/her and give him/her the options how to solve the problem.

On the other hand, too much parental love and a hyperprotective approach are harmful to the adolescent.

Such an approach does not allow the adolescent to gain new experiences, find out what he enjoys and what his/her strengths are, and acquire an adequate frustration tolerance that will enable him/her to cope with everyday difficulties. Therefore, it is necessary that we support the adolescent's autonomy, his/her independent decision-making, but also the acceptance of the consequences of his/her own decisions.

Simply, what we try to achieve as the parents is a balance between a sense of security (represented by responsiveness) and the need for adolescent's curiosity manifested by independent activity out of the parental control (represented by autonomy support).

These recommendations can also be successfully extrapolated to the school's educational environment. If we accept that the teachers substitute to a certain extent the attachment of the close persons, mother and father, and take into account that the adolescent spends a third of the day at the school, the responsiveness and support of the autonomy from the side of the educating adults are important for his/her personal success mediated by grit.

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