

Effects of Parenting Style on Adolescent Depression and Optimism

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Keywords: parenting style, Adolescent, Depression, optimism

Abstract: The purpose of this study was to understand the effects of parenting styles on adolescents' depression level and optimism level. The study used the Parenting Style Scale (PSS) of the Iowa Youth and Families Project, the short version of the Children's Depression Inventory (CDI) self-rating scale, and the self-administered character questionnaire to survey 476 junior high school students to measure parenting style, depression level, and optimism level, respectively. The results showed that there were significant gender differences in the negative parenting styles, with boys scoring significantly higher than girls; there were significant urban-rural and only or non-only child differences in the positive parenting styles, with rural students scoring significantly lower than urban students, and only children scoring significantly higher than non-only children; there were significant correlations between each dimension of parenting style, adolescents' depression level and optimism level; positive parenting style negatively predicted adolescents' depression level, and positively predicted adolescents' optimism level; negative parenting style positively predicted adolescents' depression level, and negatively predicted adolescents' optimism level.

1. Introduction

Middle school students are in their adolescence (11~18 years old), also known as the emotional storm period, which is a very special period in the process of life development. The unbalanced physical and mental development exposes junior high school students to various psychological crises and prone to more serious psychological deviations, among which depression is one of the most common and seriously affected psychological disturbances^[1]. Depression seriously affects the healthy physical and mental development of junior high school students, which may hinder normal learning and life in minor cases and may even trigger suicidal behavior in more serious cases^[2,3]. The occurrence, development and recover of depression are closely related to psychosocial factors, especially family factors^[4]. With the rise of positive psychology, researchers pay more and more attention to positive psychological states and characteristics of individuals, in which optimism is an important concept^[5]. As a positive personality, optimism helps to enhance well-being, regulate emotions, and has a positive impact on adolescents' mental health^[6-8]. Studies have shown that family factors are one of the most important factors affecting adolescent optimism^[9-11]. Parenting style refers to the relatively stable behavioral patterns exhibited by parents in their child rearing and education activities, which influence the psychological state of their children throughout the life cycle^[12,13]. Positive parenting styles promote the development of adolescents' mental health, while negative and inappropriate parenting styles impair it^[14-17]. The purpose of this study was to examine the effects of parenting styles on adolescents' levels of depression and optimism, and to provide a theoretical basis for promoting adolescents' mental and physical health.

2. Method

2.1. Participant

In this study, we used convenience sampling method, selecting students of 7th, 8th and 9th grade in a middle school in Shandong Province as the research subjects. The paper questionnaires were filled out collectively by the class, with the main testers reading the instructional phrases and the

students filling out the questionnaires uniformly. After collecting and collating, a total of 476 valid questionnaires were finally obtained. The average age of the subjects was 14.17 ± 0.97 years old. Among them, 228 were male (47.90%), 245 were female (51.47%), and 3 were not reported (0.63%); 160 were from rural areas (33.61%) and 316 were from urban areas (66.39%); 216 were only children (45.38%) and 260 were non-only children (54.62%).

2.2. Measures

2.2.1. General Information Questionnaire

This questionnaire is used to collect demographic information of the subjects, mainly including basic information such as gender, age, family location, and whether they are only-child.

2.2.2. Parenting Style Scale

We used the Parenting Style Scale (PSS) from the Iowa Youth and Families Project^[18,19]. The scale consisted of 32 questions divided into 6 dimensions, with 3 dimensions of warmth (e.g., express warmth and support to you, 7 items), democracy (e.g., treat you as equal, 6 items), and inductive-reasoning (e.g., discipline you with reasoning, explaining and talking, 6 items) as positive parenting styles, and 3 dimensions of harshness (e.g., hit you, spank you, 3 items), hostility (e.g., yell you, insult you, be angry with you, 6 items), and inconsistency (e.g., give up ask you to do something, punish you depending on mood, 4items) as negative parenting styles. The scale was scored on a five-point Likert scale (from 1 - not at all to 5 - fully). Higher scores on the 3 dimensions of positive parenting style represented more positive parenting behaviors, while higher scores on the 3 dimensions of negative parenting style represented more negative parenting behaviors.

2.2.3. Depression Scale

We used the short version of the Children's Depression Inventory (CDI), a self-rating scale developed by American psychologist Kovacs and revised by domestic scholars Yu Dawei and Li Xu^[20]. The scale consisted of 10 items for children aged 7 to 17 years old and is scored on a 3-point scale: 1 (occasionally), 2 (often), and 3 (always). Higher total scores represented higher levels of depression.

2.2.4. Optimism Scale

We used a self-administered character questionnaire, with three items on the optimism dimension, using a five-point Likert scale (from 1 - not at all to 5 - fully). The higher the total score, the higher the level of optimism.

2.3. Data Analysis

Statistical analyses, including independent sample t-test, correlation analysis, and regression analysis, were performed using SPSS (version 26.0).

3. Results

3.1. Differences in Parenting Style, Depression Level, and Optimism Level among Adolescents in Different Subgroups

3.1.1. Gender Differences in Parenting Style, Depression Level, and Optimism Level among Adolescents

Independent sample t-tests were used to examine gender differences in parenting style, depression level, and optimism level among adolescents. The results are shown in Table 1. Among the 3 dimensions of positive parenting style, gender differences were not significant for warmth ($t = -0.85, p > 0.05$) and inductive-reasoning ($t = -0.63, p > 0.05$), while it was significant for democracy ($t = -2.61, p < 0.01$); among the 3 dimensions of negative parenting style, gender differences were significant for harshness ($t = 3.39, p < 0.01$), hostility ($t = 2.09, p < 0.05$), and inconsistency ($t =$

3.26, $p < 0.01$); gender differences in adolescents' depression level ($t = -1.26, p > 0.05$) and optimism level ($t = -1.60, p > 0.05$) were not significant. As shown in Figure 1, a specific comparison of scores on the variables with significant differences shows that boys scored significantly lower on the democracy dimension of positive parenting style girls, and boys scored significantly higher on all 3 dimensions of negative parenting style than girls, which indicates that the parenting style conducted on boys is significantly more negative than that conducted on girls.

Table 1 Gender differences in study variables.

		Boys (n=228)	Girls (n=245)	<i>t</i>	<i>p</i>
Positive Parenting styles	Warmth	3.58 ± 0.83	3.65 ± 0.94	-0.85	0.39
	Democracy	3.46 ± 1.06	3.71 ± 1.02	-2.61	0.009**
	Inductive-reasoning	3.84 ± 0.88	3.90 ± 0.93	-0.63	0.53
Negative Parenting styles	Harshness	1.87 ± 0.78	1.63 ± 0.79	3.39	0.001**
	Hostility	2.41 ± 0.99	2.21 ± 1.01	2.09	0.04*
	Inconsistency	1.94 ± 0.92	1.67 ± 0.84	3.26	0.001**
Depression		1.41 ± 0.32	1.45 ± 0.34	-1.26	0.21
Optimism		3.41 ± 0.49	3.48 ± 0.50	-1.6	0.11

Note. * $p < .05$; ** $p < .01$. The same below.

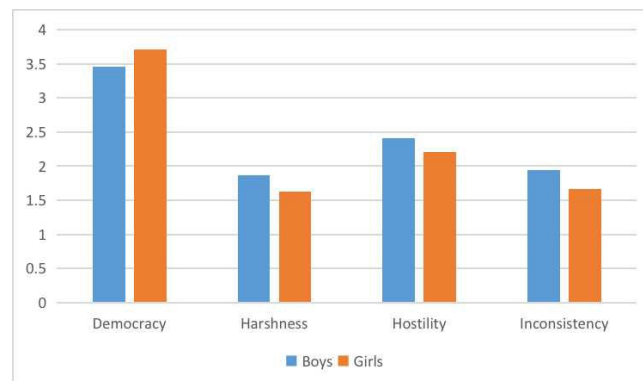


Figure 1 Variables with significant gender differences.

3.1.2. Urban-rural Differences in Parenting Style, Depression Level, and Optimism Level among Adolescents

Table 2 Urban-rural differences in study variables.

		Rural students (n=160)	Urban students (n=316)	<i>t</i>	<i>p</i>
Positive Parenting styles	Warmth	3.40 ± 0.88	3.72 ± 0.87	-3.84	0.000**
	Democracy	3.40 ± 1.01	3.69 ± 1.06	-2.91	0.004**
	Inductive-reasoning	3.71 ± 0.88	3.95 ± 0.91	-2.81	0.005**
Negative Parenting styles	Harshness	1.85 ± 0.75	1.70 ± 0.82	2.02	0.04*
	Hostility	2.24 ± 0.96	2.34 ± 1.02	-1.07	0.29
	Inconsistency	1.85 ± 0.79	1.78 ± 0.94	0.86	0.39
Depression		1.42 ± 0.33	1.44 ± 0.34	-0.49	0.62
Optimism		3.39 ± 0.46	3.47 ± 0.51	-1.77	0.08

Independent sample t-tests were used to examine urban-rural differences in parenting style, depression level, and optimism level among adolescents. The results are shown in Table 2. Among the 3 dimensions of positive parenting style, urban-rural differences were significant for warmth ($t = -3.84, p < 0.01$), democracy ($t = -2.91, p < 0.01$), and inductive-reasoning ($t = -2.81, p < 0.01$); among the 3 dimensions of negative parenting style, urban-rural differences were not significant for hostility ($t = -1.07, p > 0.05$) and inconsistency ($t = 0.86, p > 0.05$), while it was significant for

harshness ($t = 2.02, p < 0.05$); urban-rural differences in adolescents' depression level ($t = -0.49, p > 0.05$) and optimism level ($t = -1.77, p > 0.05$) were not significant. As shown in Figure 2, a specific comparison of scores on the variables with significant differences shows that urban students scored significantly higher on all 3 dimensions of positive parenting style than rural students, and urban students scored significantly lower on the harshness dimension of negative parenting style than rural students, which indicates that the parenting style conducted on urban students is significantly more positive compared with that conducted on rural student.

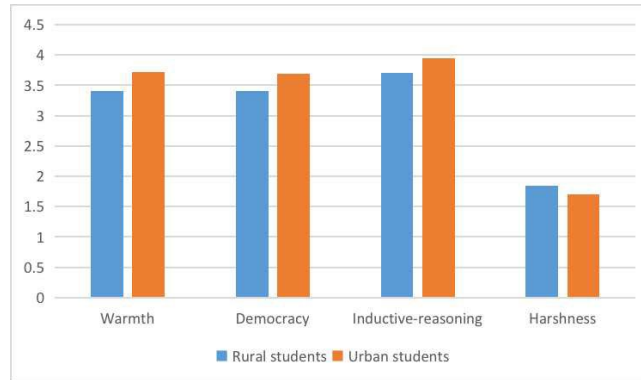


Figure 2 Variables with significant urban-rural differences.

3.1.3. Only or Non-only Child Differences in Parenting Style, Depression Level, and Optimism Level among Adolescents

Independent sample t-tests were used to examine only or non-only child differences in parenting style, depression level, and optimism level among adolescents. The results are shown in Table 3. Among the 3 dimensions of positive parenting style, only or non-only child differences were significant for warmth ($t = 4.02, p < 0.01$), democracy ($t = 2.48, p < 0.05$), and inductive-reasoning ($t = 2.49, p < 0.05$); among the 3 dimensions of negative parenting style, only or non-only child differences were not significant for harshness ($t = -0.21, p > 0.05$), hostility ($t = 1.72, p > 0.05$), and inconsistency ($t = 0.26, p > 0.05$); only or non-only child differences was not significant in adolescents' depression level ($t = 0.45, p > 0.05$) and was significant in adolescents' optimism level ($t = 2.16, p < 0.05$). As shown in Figure 3, a specific comparison of scores on the variables with significant differences shows that only children scored significantly higher on all 3 dimensions of positive parenting style and optimism level than non-only children, which indicates that the parenting style conducted on only children is significantly more positive compared with that conducted on non-only children, and only children are significantly more optimistic compared to non-only children.

Table 3 Only or non-only child differences in study variables.

		Only children (n=216)	Non-only children (n=260)	<i>t</i>	<i>p</i>
Positive Parenting styles	Warmth	3.79 ± 0.87	3.47 ± 0.88	4.02	0.000**
	Democracy	3.72 ± 1.04	3.48 ± 1.05	2.48	0.01*
	Inductive-reasoning	3.98 ± 0.89	3.78 ± 0.91	2.49	0.01*
Negative Parenting styles	Harshness	1.74 ± 0.80	1.76 ± 0.80	-0.21	0.84
	Hostility	2.40 ± 0.99	2.24 ± 1.00	1.72	0.09
	Inconsistency	1.81 ± 0.94	1.79 ± 0.85	0.26	0.79
Depression		1.44 ± 0.33	1.43 ± 0.34	0.45	0.65
Optimism		3.50 ± 0.53	3.40 ± 0.46	2.16	0.03*

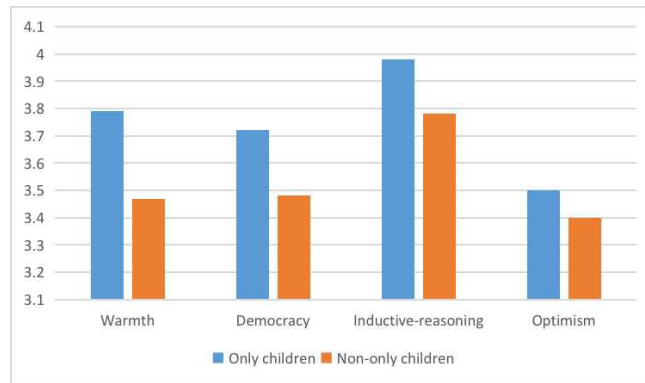


Figure 3 Variables with significant only or non-only child differences.

3.2. Effects of Parenting Style on Adolescents' Depression Level and Optimism Level

3.2.1. Correlation Analysis

Pearson correlation was used to examine the correlations among parenting styles and adolescents' depression and optimism levels. The results are summarized in Table 4. There were significant positive correlations among the 3 dimensions of positive parenting style ($p < 0.01$), significant positive correlations among the 3 dimensions of negative parenting style ($p < 0.01$), and significant negative correlations among each dimension of positive parenting style and each dimension of negative parenting style, respectively ($p < 0.01$); the 3 dimensions of positive parenting style were negatively correlated with adolescent depression ($p < 0.01$) and positively correlated with adolescent optimism ($p < 0.01$); the 3 dimensions of negative parenting style were positively correlated with adolescent depression ($p < 0.01$) and negatively correlated with adolescent optimism ($p < 0.01$); adolescent depression was negatively correlated with optimism ($p < 0.01$). This indicates that the more positive parenting style is, the lower adolescents' depression level and higher optimism level is; the more negative parenting style is, the higher adolescents' depression level and lower optimism level is.

Table 4 Pearson correlations of study variables.

		1	2	3	4
Positive Parenting styles	1. Warmth	-			
	2. Democracy	0.77**	-		
	Inductive-reasoning	0.76**	0.74**	-	
Negative Parenting styles	4. Harshness	-0.36**	-0.41**	-0.36**	-
	5. Hostility	-0.43**	-0.53**	-0.43**	0.64**
	6. Inconsistency	-0.40**	-0.51**	-0.40**	0.66**
	7. Depression	-0.30**	-0.33**	-0.27**	0.26**
	8. Optimism	0.31**	0.38**	0.30**	-0.20**

		5	6	7	8
Positive Parenting styles	1. Warmth				
	2. Democracy				
	Inductive-reasoning				
Negative Parenting styles	4. Harshness				
	5. Hostility	-			
	6. Inconsistency	0.68**	-		
	7. Depression	0.37**	0.31**	-	
	8. Optimism	-0.22**	-0.21**	-0.41**	-

3.2.2. Regression Analysis

To examine the predictive effect of parenting style on adolescent depression, we used regression analysis. On the basis of controlling for gender, urban-rural, and only or non-only child factors, a

linear regression analysis was conducted, with adolescents' depression level as the dependent variable, the 3 dimensions of positive parenting style and the 3 dimensions of negative parenting style as independent variables. As shown in Table 5, positive parenting style negatively predicted adolescent depression, and negative parenting style positively predicted adolescent depression.

Table 5 Linear regression analysis of parenting styles on adolescent depression.

		<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>
Positive Parenting styles	Warmth	-0.12	0.02	-0.32	-6.98	0.000**	0.1	12.68
	Democracy	-0.11	0.01	-0.35	-7.96	0.000**	0.12	16.36
	Inductive-reasoning	-0.1	0.02	-0.27	-6.05	0.000**	0.08	9.63
Negative Parenting styles	Harshness	0.11	0.02	0.27	5.97	0.000**	0.07	9.38
	Hostility	0.13	0.01	0.38	8.81	0.000**	0.15	19.91
	Inconsistency	0.12	0.02	0.32	7.31	0.000**	0.11	13.87

To examine the predictive effect of parenting style on adolescent optimism, we used regression analysis. On the basis of controlling for gender, urban-rural, and only or non-only child factors, a linear regression analysis was conducted, with adolescents' optimism level as the dependent variable, the 3 dimensions of positive parenting style and the 3 dimensions of negative parenting style as independent variables. As shown in Table 6, positive parenting style positively predicted adolescent optimism, and negative parenting style negatively predicted adolescent optimism.

Table 6 Linear regression analysis of parenting styles on adolescent optimism.

		<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>
Positive Parenting styles	Warmth	0.17	0.03	0.3	6.62	0.000**	0.1	13.43
	Democracy	0.17	0.02	0.36	8.22	0.000**	0.14	19.47
	Inductive-reasoning	0.16	0.03	0.29	6.4	0.000**	0.1	12.7
Negative Parenting styles	Harshness	-0.12	0.03	-0.19	-4.03	0.000**	0.05	6.4
	Hostility	-0.11	0.02	-0.22	-4.96	0.000**	0.07	8.53
	Inconsistency	-0.11	0.03	-0.19	-4.22	0.000**	0.06	6.79

4. Discussion

This study found that there were significant gender differences in all 3 dimensions of negative parenting style, with boys scoring significantly higher than girls, indicating that parenting style towards boys is more negative compared with that towards girls; there were significant urban-rural and only or non-only child differences in all 3 dimensions of positive parenting style, with rural students scoring significantly lower than urban students, and only children scoring significantly higher than non-only children, indicating that parenting style towards urban students is more positive than that towards rural students, and parenting style towards only children is more positive than that towards non-only children. All six dimensions of parenting style were significantly correlated with adolescents' depression and optimism levels. Positive parenting style negatively predicted adolescents' depression level and positively predicted optimism level; negative parenting style positively predicted adolescents' depression level and negatively predicted optimism level. These results indicate that the more positive parenting style is, the lower adolescents' depression level and higher optimism level will be; the more negative parenting style is, the higher adolescents' depression level and lower optimism level will be.

Adolescents often have inexplicable tension and anxiety facing heavy academic pressure, the pressure to seek group identity, and the huge physiological transformation of adolescence. It is time when children are in great need of their parents to understand and care about their troubles and to give them proper guidance. Numerous psychological studies have shown that parenting styles have an important influence on adolescent depression, good parenting styles effectively reducing the likelihood of adolescent depression, while negative parenting styles increasing it^[21-25]. At the same

time, an optimistic psychological state can also have a positive impact on adolescent depression^[26,27]. In conclusion, parents should pay more attention to the psychological condition of adolescents, improve their parenting style, and treat their children in a more positive way so as to guide the psychological state of adolescents toward a healthier direction.

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