

Relationship between Stress Intensity and Mental Health of Junior Middle School Students

Yue Song^{*}

Harbin Songlei Middle School, No.779 Wanggang Street, Harbin, China

songyuezb@163.com

^{*}corresponding author

Keywords: Junior middle school students; Stress; Mental health

Abstract: In this study, 344 junior high school students were surveyed on their daily life events and mental health. It was found that among all kinds of stressful life events, life environment had the most negative impact on their psychology. Negative events had a stronger impact on women than men. There are significant grade differences in the mental health of junior middle school students. From the first grade to the third grade, there is an upward trend. The gender differences are mainly reflected in the interpersonal relationship sensitivity, depression, anxiety and fear symptoms of the second grade girls are significantly higher than that of the same grade boys. There was a significant positive correlation between the stress intensity of daily life events and the score of SCL - 90, and the relationship between life events and study stress and mental health was the most close. This study believes that psychological education for junior middle school students should be carried out in view of specific problems, and girls should be given more care.

1. Introduction

Stressful life events refer to the sharp events that an individual experiences in life that result in a strong psychological response. They are very easy to form negative psychological stress reactions and can cause great damage to the mind. Over the years, the relationship between stressful life events and psychosomatic diseases has become an important part of medical psychology research, and some research results have been obtained. But most of the studies focused on a sample of adults. Due to the limitations of various conditions, there are few studies on the young people in the formative stage. In recent years, the implementation of quality-oriented education policy and the rise of school psychological counseling have caused people to pay attention to the comprehensive development of adolescents, and their mental health has attracted more and more attention. This study takes this as an opportunity to explore the common stressful life events in the daily life of adolescent students, and to find out the relationship between them and mental health.

2. Research Programmes

2.1. Study samples

In this study, cluster stratified sampling method was used to select 344 junior middle school students as study samples. Among them, 171 males and 173 females; 131 students in grade one, 125 students in grade two and 88 students in grade three; The age distribution of the sample students was 11 to 16 years old.

2.2. Questionnaire Survey

2.2.1. Questionnaire of junior middle school students' daily life events

The questionnaire includes 34 events that junior middle school students often encounter in daily study and life that cause psychological stress of adolescents, and all the subjects are divided into four subscales: classmate relationship, living environment, learning pressure and teacher-student

relationship. All the questions were rated at 5 points, and the individual chose any one of "no effect, mild, moderate, large and great" according to his psychological experience of the event. The questionnaire was designed by selecting representative items after conducting an open questionnaire on middle school students. Before the formal test, the reliability and validity were tested through the prediction. Cronbach $\alpha = 0.9396$ was tested. Through the questioning of students, parents and teachers, it was found that the questionnaire basically covered the problems faced by individuals at this stage and had a good content validity.

2.2.2. SCL-90 scale

The scale includes nine symptom factors: somatization (F1), obsessive-compulsive symptoms (F2), interpersonal sensitivity (F3), depression (F4), anxiety (F5), hostility (F6), fear (F7), paranoia (F8), and psychosis (F9). There are 90 items in the scale, with 5 points for each item, and the symptoms are rated as 1, 2, 3, 4 and 5 points respectively from none to severe. The higher the score, the more pronounced the symptoms. This scale is considered to be a good measure of mental health by Chinese grandparents.

2.3. Implementation process

Take the class as the unit to fill in the questionnaire. Use the unified instruction to carry on the collective test. The collected data were statistically analyzed using SPSS6.0 for windows.

3. Analysis of Statistical Results

3.1. Stress Intensity Analysis of Junior Middle School Students' Daily Life Events

3.1.1. Grade difference and gender difference test of stress intensity of daily life events of junior middle school students

Table 1 Grade and gender differences in stress intensity of daily life events

	grade									gender				
	all		grade one		grade two		grade three		F	boy		girl		T
	M	SD	M	SD	M	SD	M	SD		M	SD	M	SD	
Student relations	3.12	0.93	3.06	0.84	3.06	0.98	3.31	0.96	2.46	2.91	0.92	3.33	0.90	-4.26**
Living environment	3.22	0.87	3.13	0.90	3.26	0.88	3.22	0.78	0.73	3.08	0.90	3.31	0.81	-2.51*
Academic pressure	3.15	0.80	3.12	0.77	3.22	0.77	3.11	0.81	0.71	3.04	0.74	3.26	0.80	-2.68**
Relationship between teachers and students	2.43	0.80	2.32	0.75	2.44	0.77	2.60	0.89	2.91	2.26	0.70	2.60	0.86	-4.11**

* $P < .05$ ** $P < .01$ *** $P < .001$

Table 1 shows that there is no significant difference in the psychological stress intensity of the four life events in grade, but there is a significant difference in gender. The stress intensity of life events of girls is significantly higher than that of boys.

3.1.2. Gender difference analysis of stress intensity of daily life events among junior middle school students in different grades

The gender difference between grades was further tested for various life events, and it was found that the difference mainly existed in grades one and two. In the first grade, there were significant gender differences in all kinds of events except learning events. In the second grade, except for no significant difference in stress intensity of life factors, there were significant gender differences in

the other three factors. In the third grade, there was no significant difference between the subscales.

Table 2 Comparison of gender differences in daily life events in different grades

		Student relations			Living environment			Academic pressure			Relationship between teachers and students		
		grade one	grade two	grade three	grade one	grade two	grade three	grade one	grade two	grade three	grade one	grade two	grade three
Boy	M	2.76	2.82	3.26	2.92	3.18	3.15	2.98	3.03	3.12	2.15	2.20	2.48
	SD	0.81	0.93	0.96	0.96	0.88	0.87	0.70	0.69	0.86	0.70	0.59	0.82
Girl	M	3.31	3.34	3.36	3.36	3.35	3.29	3.24	3.43	3.10	2.46	2.72	2.71
	SD	0.82	0.97	0.97	0.97	0.88	0.69	0.80	0.80	0.77	0.76	0.86	0.95
T		-3.81***	-3.03**	-0.48	-2.42*	-1.07	-0.83	-1.94	-2.98*	0.11	-2.39*	-3.96***	-1.20

3.1.3. Analysis of events with high stress intensity in junior middle school students' daily life

According to the analysis of each item, the problems that junior middle school students are confused about are various problems in their family, study pressure and relationship with classmates. From a single item, the main sources of students' stress are: the decline in academic performance, the pressure of going to school, the contradiction between parents, the big changes in the family, the parents' divorce, the indifference between classmates and the rupture of friendship, which is consistent with the research results in China.

3.2. Mental health status analysis of junior middle school students

3.2.1. Grade and gender difference test of each factor and total score of junior middle school students' mental health

Table 3 Comparison of grade and gender differences in mental health factors and total scores

	grade							gender				
	grade one		grade two		grade three		F	boy		girl		T
	M	SD	M	SD	M	SD		M	SD	M	SD	
somatization	1.31	0.37	1.55	0.47	1.68	1.13	8.53***	1.51	0.86	1.48	0.48	0.45
Forced symptoms	1.80	0.49	2.06	0.52	2.10	0.60	11.14**	1.96	0.51	1.99	0.58	-0.65
sensitive	1.76	0.56	2.09	0.69	2.11	0.70	11.36**	1.89	0.59	2.05	0.73	-2.21*
depression	1.61	0.55	1.87	0.66	1.95	0.73	8.85**	1.67	0.52	1.91	0.74	-3.50**
anxiety	1.57	0.50	1.87	0.66	1.86	0.67	9.43**	1.56	0.55	1.82	0.68	-2.01*
hostile	1.61	0.64	1.94	0.73	2.01	0.81	10.53**	1.80	0.65	1.87	0.82	-0.86
terrorist	1.55	0.58	1.72	0.68	1.67	0.59	2.54	1.55	0.56	1.73	0.67	-2.72**
paranoid	1.60	0.49	1.98	0.71	2.02	0.68	16.54**	1.84	0.64	1.84	0.67	0.00
mental illness	1.51	0.48	1.67	0.46	1.69	0.49	5.07**	1.58	0.45	1.64	0.51	0.51

Table 3 shows that, except for terror, the other mental health factors and the total score have very significant grade differences. The mental health score and the seven mental health factors except anxiety and fear increased from grade one to grade three. There were significant gender differences in interpersonal sensitivity, anxiety, depression and fear. In addition to somatization, the symptom factor score of female students was higher than that of male students. Compared with the national norm, the mental health of the middle school students obtained by this test was significantly worse.

3.3. The Relationship between Stress Intensity of Daily Life Events and Mental Health of Junior Middle School Students

3.3.1. Correlation analysis between stress intensity of daily life events and various factors of mental health

The study showed that all the symptom factors in SCL - 90 were positively correlated with the stress intensity of the four life events ($P < .001$). In comparison, living environment was the most closely related to mental health factors, and the correlation between living environment and compulsive symptoms, interpersonal sensitivity, depression and paranoia was 0.47, 0.49, 0.47 and 0.44, respectively ($P = .000$), followed by study pressure, followed by classmate relationship and teacher-student relationship.

3.3.2. Regression analysis of life events encountered by junior high school students

Table 4 Regression analysis of mental health scores on each life event subscale

	B	SE	BETA	T	P
living environment	23.21	3.03	0.404	7.67	0.000
academic pressure	9.41	3.12	0.159	3.02	0.0027

By using stepwise to conduct multiple linear regression of four life events with the dependent variable of mental health score, it was found that the life environment and learning pressure in four stressful life events entered into the regression equation, and were most closely related to mental health.

4. Research Conclusions

4.1. Stress Intensity of Daily Life Events of Junior Middle School Students

According to this study, the top 10 life events that were rated as the most influential were parents' divorce, major changes in the family, declining grades, conflicts between parents, betrayal by good friends, parents' indifference to themselves, being despised by others, cold relationship between classmates, pressure of going to school and illness in the family. It can be seen that some emergencies in the family environment have an important impact on individuals, and the study pressure and classmate relationship also occupy a large proportion. This result brings to our attention the wide and diverse range of stressors experienced by individuals in middle school. They not only pay attention to their own problems, but also turn their attention to the factors surrounding them and clearly experience the impact of these factors on themselves. Once the intensity of these events exceeds the coping limit of the individual, it will naturally lead to the stress-induced psychosomatic response, with adverse consequences. Among the four types of life events, there is a significant gender difference in psychological stress, and the stress intensity of female students to life events is significantly higher than that of male students. Specifically, gender differences in stress intensity of life events occurred in first and second grade. Gender differences in students of grade one relationship, living environment and the relationship between teachers and students, which suggests that the process of transition from junior high school, girls are obviously not adapt, this does not adapt to involve all aspects of the study and life, lies in how to life in a new environment, establish interpersonal relationship with classmates and teachers. By the second grade, the focus of adaptation problems shifted to learning problems, and girls' anxiety and worry about learning were significantly more than boys'.

4.2. Mental Health Status of Junior Middle School Students

In this test scores compared with normative score and found the samples of each factor score were higher than norm score, mental health concern, in terms of specific points, in addition to the terror, the rest of the symptoms factor and total score significant grade differences of mental health,

somatization, force symptom, interpersonal sensitivity, depression, paranoid and psychotic six psychological symptoms factor from grade one to grade three is on the rise, the results show that the psychological problems of junior high school students gradually increased with grade. During the period of sharp increase in mental health scores from grade 1 to grade 2, the main psychological problems in middle school were interpersonal sensitivity, compulsive symptoms, hostility and paranoia, which were consistent with previous research reports. The scores of psychological symptoms of junior middle school girls were generally higher than that of boys, and there were significant gender differences in the scores of interpersonal sensitivity, depression, anxiety and fear, and the gender differences were mainly manifested in the scores of anxiety, fear, interpersonal sensitivity and depression of girls in the second grade, which were significantly higher than those of boys in the same grade.

4.3. Relationship between Stress Intensity of Daily Life Events and Mental Health of Junior Middle School Students

On the whole, there is a significant positive correlation between the stress intensity of daily life events and the score of SCL-90, indicating that stressful life events can affect the physical and mental health of individuals. All kinds of negative life events have negative effects on individual's mental health, but the most important ones are those in family and school. And people generally believe that the students the most anxious is runs counter to the view of learning, it from a point of view that is in puberty young students experience is rich and varied life, psychological feelings is also complicated and changeable, parents and school educators should realize this and to understand and make allowance for middle school students, from various angles, make them happened to reduce as much as possible, so as to smoothly through the trouble of adolescence.

This study also found that female students had more problems than male students, and the problems of female students and male students at different ages were different, because students of different genders had different physiological and psychological characteristics. On the one hand, girls are more sensitive and have deeper inner experience than boys, so they are more likely to have inner psychological conflicts. On the other hand, compared with boys, girls have a stronger desire to express their own emotions and are good at expressing their inner experience externally. Third, the girl's development is earlier than the boy's, this stage is in the female development period, the girl's problem appears naturally more. Based on the above three points, it is very necessary to show more love and care for girls in junior middle school.

5. Advice

Through the above research and analysis we can see that their teenage years, with the increase of social communication and social stress accumulation effect, adverse reactions are more likely to appear psychological adaptation, individual needs on the psychological and behavior to try to adjust and adapt to, this is mainly rely on the junior high school students own the ability to cope with, that we say normally self-adaptation ability, based on their environmental factors of awareness and perception of their own state, choose the appropriate method to solve problem. But at the same time also should see as an individual is not yet mature, their physical development, cognitive, and emotional adjustment ability is at the developing stage, an urgent need to guide and help from the outside world, school, family and society should pay close attention to at this stage the individual psychological problems and negative factors in the environment, timely for inspiration and help, so that the students can get assistance and support, reduce the negative factors on the individual's negative influence, and at the same time make students gradually master the feasibility problem solving skills, do self adjustment. More importantly, this study found that there are differences between male and female students in many projects, female students have more problems than male students, and students in different grades have different problems, which requires educators and parents to see the complexity and particularity of individual psychological problems in junior middle school, and provide targeted guidance and help.

References

- [1] Anne Duffy, Kate E A Saunders, Gin S Malhi, Scott Patten, Andrea Cipriani, Stephen H McNevin, Ellie MacDonald, John Geddes. Mental health care for university students: a way forward?[J]. The Lancet Psychiatry, 2019, 6(11).
- [2] Yasuhiro Kotera, Elaine Conway, William Gordon. Ethical Judgement in UK Business Students: Relationship with Motivation, Self-Compassion and Mental Health[J]. International Journal of Mental Health and Addiction, 2019, 17(5).
- [3] Schönfeld Pia, Brailovskaia Julia, Zhang Xiao Chi, Margraf Jürgen. Self-Efficacy as a Mechanism Linking Daily Stress to Mental Health in Students: A Three-Wave Cross-Lagged Study.[J]. Psychological reports, 2019, 122(6).
- [4] Pyle Logan M, Laghari Fahad J, Kinem Daniel J. Concomitant transient global amnesia and takotsubo cardiomyopathy following a stressful event.[J]. Clinical autonomic research: official journal of the Clinical Autonomic Research Society, 2018, 28(6).
- [5] Pedrelli Paola, Nyer Maren, Holt Daphne, Bakow Brianna R, Fava Maurizio, Baer Lee, Cassiello Clair, Mulligan Maura, Cusin Cristina, Farabaugh Amy. Correlates of irritability in college students with depressive symptoms.[J]. The Journal of nervous and mental disease, 2013, 201(11).
- [6] Carey Mary G, Qualls Brandon W, Burgoyne Colleen. Patients' Perception of Stressful Events in the Intensive Care Unit After Cardiac Surgery.[J]. American journal of critical care : an official publication, American Association of Critical-Care Nurses, 2019, 28(2).
- [7] Shuyang Sun. Analysis on the Effect of Psychological Guidance for Problem College Student[P]. Proceedings of the International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSES 2018), 2018.
- [8] Hongying Qiu. Research on the ideological and political education of college students based on "humanistic care" and "psychological counseling"[P]. Proceedings of the 2017 2nd International Conference on Education, Sports, Arts and Management Engineering (ICESAME 2017), 2017.