

# **The Relationship between Perceived Social Support and Adolescent Psychological Adaptation: the Multiple Mediating Effects of Belief in a Just World and Personal Control**

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To explore the mechanism of perceived social support on the psychological adaptation of adolescents, this study investigated 895 adolescents from six middle schools (junior high and senior high) in the northwest region of China using the Perceived Social Support Scale, Psychological Adaptation Questionnaire, Just World Belief Scale, and Personal Control Scale. The results showed that perceived social support was significantly positively correlated with psychological adaptation ( $r = 0.529$ ,  $P < 0.001$ ), just world belief ( $r = 0.393$ ,  $P < 0.001$ ), and personal control ( $r = 0.387$ ,  $P < 0.001$ ). Regression analysis indicated that perceived social support could significantly positively predict psychological adaptation ( $\beta = 0.529$ ,  $t = 18.217$ ,  $P < 0.001$ ), just world belief significantly positively affected psychological adaptation ( $\beta = 0.184$ ,  $t = 5.948$ ,  $P < 0.001$ ), and personal control significantly positively affected psychological adaptation ( $\beta = 0.067$ ,  $t = 2.127$ ,  $P = 0.034$ ). The results of the structural equation model showed that just world belief and personal control played a multiple mediating role between perceived social support and psychological adaptation ( $\chi^2 = 138.743$ ,  $df = 38$ ,  $\chi^2/df = 3.651$ ,  $GFI = 0.973$ ,  $AGFI = 0.953$ ,  $CFI = 0.977$ ,  $IFI = 0.977$ ,  $NFI = 0.969$ ,  $TLI = 0.967$ ,  $RMSEA = 0.054$ ). That is, perceived social support can not only directly influence the psychological adaptation of adolescents but also indirectly affect it through the simple multiple mediating effects of just world belief and personal control, as well as through the chain mediating effects of just world belief and personal control.

**Keywords:** Perceived Social Support; Psychological Adaptation; Just World Belief; Personal Control

With the rapid development of the social and economic environment, psychological adaptation has gradually become a hot topic in education and research (Birman, D., Simon, C. D., & Chan, W. Y., 2014; Sadewo, G. R. P., Kashima, E. S., & Gallagher, C., Kashima, Y., 2020). Psychological adaptation is an evolution of the term "adaptation" which originated from biology. At the psychological level, it refers to the process, ability or result of the psychological state changing with the environment to reach a new balance. Currently, there is no unified definition of the concept of psychological adaptation, and there are mainly three categories: "result theory", "ability theory", and "process theory". The "result theory" holds that psychological adaptation is a balanced result after dynamic changes, considering it as a state where the psychology of the corresponding subject reaches equilibrium with the objective world when the objective environment or the individual's physical and mental state changes. It can be specifically manifested as internalized problem behaviors and externalized problem behaviors (Arslan, G. 2019). The "ability theory" holds that psychological adaptation is the ability of an individual to

form a psychological-behavioral pattern to adapt to the social environment, which is a manifestation of the individual's quality in survival and development and is an individual trait. The "process theory" holds that psychological adaptation is a dynamic adjustment process, emphasizing that when individuals are exposed to external changes or stressors, they adjust themselves to balance the differences between their inner and outer worlds, thereby making their psychology and behavior more in line with environmental changes and achieving a new equilibrium( Lehti, J. 2016; Xiuhui, Z., Bao, Z., & Zhijia, W., 2022). In this study, at the operational level, psychological adaptation is evaluated by indicators such as mental health (loneliness, depression, anxiety, etc.), subjective well-being (life satisfaction, emotional experience), and self-esteem( Fan X H. 2012). Research and cultivation of psychological adaptation in adolescents are of great significance for enhancing their mental health and academic development, and ultimately improving the quality of talent cultivation.

The ecosystem theory posits that individuals do not exist in a vacuum, and their psychological states are to some extent products of their environment, which encompasses both the natural and social environment. Originally, an ecosystem refers to the unified whole of living organisms and their environment within a certain space in nature, as well as the dynamic balance between the two over a certain period of time. Borrowing this concept, Bronfenbrenner proposed the "ecosystem theory" of social environment's influence on individual psychological development( Brofenbrenner, U., & Morris, P. A. 2007). This theory suggests that social influences can be summarized as nested systems expanding outward from the individual. The core of this system is the individual, including their physiological and psychological characteristics; immediately surrounding the individual are those social factors that have the most direct impact on them, such as family, friends, and school, known as the microsystem; enclosing the microsystem is the interaction among the factors within it, which Bronfenbrenner refers to as the mesosystem; Beyond the microsystem are those factors that directly affect important others within the microsystem, such as parents' work conditions, which constitute the exosystem. Beyond the exosystem is the macrosystem, which includes values, attitudes, customs, and laws within a specific culture. Finally, the chronosystem, which consists of social changes and their impact on factors within other systems, lies at the outermost layer of the entire model. Based on the ecological systems theory, researchers believe that perceived social support, belief in a just world, and sense of personal control are closely related to the psychological adaptation of adolescents.

Research has found that perceived social support is closely related to psychological adaptation( Shukla V M, Dhananjaya S., 2019). Perceived social support is one of the two aspects of social support. The concept of social support was proposed in the 1960s and plays an important role in promoting mental health and reducing psychosomatic diseases ( Cohen, S., & Wills, T. A.,1985), and is one of the important mediating factors between psychological stress and physical and mental health. Sarason believes that social support is the external support and assistance that people receive when they encounter difficulties. Litwin and Landau et al. (2000) believe that social support is the help and support that individuals receive from various interpersonal relationships in daily life( Litwin, H., & Landau, R., 2000). Social support mainly refers to the spiritual and material assistance and support given to individuals by people from all aspects of family and society (including family, relatives, friends, colleagues, and partners), as well as by

political parties, trade unions, and other organizations, reflecting the quality and closeness of an individual's connection with society. Researchers usually divide social support into two broad categories: one mainly consists of objective, practical, or visible support, including direct material assistance and social networks; Another type is the subjective experience of support, that is, perceived social support (perceived social support is a concept proposed by some scholars in the study of the structure of social support, which is relative to actual social support). It refers to the emotional experience or satisfaction that an individual feels respected, supported, and understood in society. It is a kind of subjective emotional experience of support closely related to the individual's subjective feelings( Wang Y F.,2004). Perceived social support is an evaluation and self-perception of various kinds of support and help that an individual may obtain and has already obtained from the outside when encountering difficulties( Barrera, M., 1986; Dunkelschetter, C., & Bennett, T. L., 1990). Perceived social support is an individual's subjective judgment of various social resource support and help obtained, and it has an important promoting function on the physical and mental health of the individual( Gregory D. Zimet, Nancy W. & Dahlem, Sara G., 1991). Research has found that the perceived social support by individuals has a significant impact on psychological adaptation, mainly manifested in that perceived social support helps to enhance an individual's self-esteem and happiness, and reduces negative psychological reactions such as anxiety, depression, and loneliness( Lu Siqi., 2018; Zhang Z T, Wang J Q, & Liu F., 2012).

However, few studies have directly investigated the relationship between perceptive social support and psychological adaptation. Based on the existing studies, it can be inferred that perceptive social support can positively predict psychological adaptation (hypothesis H1).

Understanding social support and psychological adaptation (self-esteem, subjective well-being, mental health) between other indirect mechanism of action. Liu Li, Bi Xiaohui and Wang Meifang et al. (2015) found that social support not only directly affects subjective well-being, but also indirectly affects subjective well-being through the partially mediating role of belief in a just world, that is, belief in a just world plays a partially mediating role between college students' social support and subjective well-being( Liu Li, Bi Xiaohui, & Wang Meifang., 2015). According to Guo Ying, Zhang Mengrou (2016) et al., belief in a just world plays a partially mediating role between prisoners' social support and social adaptation( Guo Ying & Zhang Mengrou., 2016). Compared with individuals with low belief in a just world, individuals with high belief in a just world are better able to cope with stressful stimuli and show fewer symptoms of depression and anxiety, that is, belief in a just world helps maintain individuals' mental health( Dzuka, J., & Dalbert, C., 2010). Studies have also shown that people with high just world beliefs are better able to deal with negative life events, experience less negative emotions, report more positive emotions, and have higher life satisfaction( Dalbert, C., 2002; Zhang Li, & Shen Jiliang., 2011). Zhou Chunyan and Guo Yongyu (2013) found that belief in a just world played a partial mediating role in the relationship between family social class and various indicators of mental health( Zhou Chunyan, & Guo Yongyu., 2013). Therefore, when people perceive social support and have an impact on their psychological adaptation, they may also indirectly affect psychological adaptation through the mediating role of belief in a just world. In other words, the research hypothesis H2 is that belief in a just world plays a mediating role between college students' understanding of social support and psychological adaptation. personal control refers to an individual's sense of being able

to determine his or her own destiny and believing that future events will be in his or her control( Ruggiero, K. M., & Taylor, D. M., 1997). When individuals feel that they have lost control of the surrounding environment, they will have a variety of feelings of helplessness ( Carlson, S. M., & Moses, L. J., 2010), which will lead to a series of psychological adaptation problems. Liu Xia (2008) 's research on Chinese migrant children shows that individual discrimination experience and perceived group discrimination indirectly affect individual and collective happiness through personal sense of control, and personal sense of control plays a relatively important mediating role between individual perception of discrimination and individual happiness( Liu X., 2013). Tan Qianbao (2018) showed that there was a significant negative correlation between perceived discrimination and subjective well-being, and belief in a just world played a complete mediating role in group discrimination and a partial mediating role in individual discrimination( Tan Qianbao, Xiao Qianyi & Chang Zhibin., 2018). Based on the above analysis, hypothesis H3 is proposed: personal control plays a mediating role between understanding social support and psychological adaptation; Hypothesis H4: Belief in a just world and sense of personal control play multiple mediating roles between understanding social support and psychological adaptation.

Teenagers understanding social support effect on their psychological adaptation of relationship is the main purpose of this study. In this study, 1000 adolescents were randomly sampled by questionnaire to explore the problems in the above hypothesis.

### 1.1 1 object and method of the research

object using stratified cluster sampling method, selecting six middle school (junior high and high school) in the northwest region of teenagers as the research object, layered with grade, class, for sampling unit, with the method of field measured back the questionnaire on the spot, out 1000 questionnaires, 895 valid questionnaires taken back, The recovery efficiency is 89.50%. Among them, 353 were male, 528 were female, and 14 did not report their gender; 92 students in the first grade, 103 in the second grade, 31 in the third grade, 249 in the first grade, 224 in the second grade, 193 in the third grade, and 3 did not report their grade. Aged between 12 and 21 years, 16 did not report their age, with a mean age of  $16.54 \pm 1.71$ .

Study sample is through the use of G.P power - 3.1.9.2 software calculation of ( Faul, F. , Erdfelder, E. , & Lang, A. G., 2007). Power = 0.95, Effect size = 0.20,  $\alpha(\text{err prob}) = 0.05$  were used to determine that at least 262 adolescents should be included in the sample.

### 1.2 research tools

1.2.1 understand social support scale (Perceived social support scale, PSSS) using Jiang Gan gold preparing revised Zimet understanding social support scale of( Wang X, Wang X L, Ma H., 1999). The scale contained 12 self-rated items, each using a seven-point Likert scale ranging from strongly disagree to strongly agree with 1 to 7. The scale includes three dimensions: family support, friend support and other support, and the scores of each dimension and perceived social support are accumulated by each item. The internal consistency coefficient  $\alpha$  of the scale in this test is 0.93, which indicates good reliability and can be analyzed in the next step.

1.2.2 Psychological Adjustment Questionnaire The psychological adjustment in this study is a compound variable, and the average score of the five scales of self-esteem, subjective well-being (life satisfaction, positive/negative emotion), depression (reverse), social anxiety (reverse) and loneliness (reverse) is the measurement index of psychological adjustment( Chen,S.X.,Benet Martínez,V., & Wu,W.C., 2013; Yang Xiaoli, Yan Hongli, & Liu Li., 2015). (1) Self-esteem scale: Adopt the self-esteem scale prepared by Rosenberg( Wang X, Wang X L, Ma H., 1999). (2) Subjective well-being questionnaire: Life satisfaction Scale and positive and negative emotion scale were used to measure the cognitive and emotional components of subjective well-being( Diener, E., Emmons, R. A., & Larsen, R. J.,1985; Qiu L, Zheng X, & Wang Y., 2008). (3) Depression scale: The central depression scale developed by Radloff ( Wang X, Wang X L, Ma H., 1999) was used to evaluate the frequency of current (within the last week) depressive symptoms of the subjects. (4) Social anxiety: The social anxiety scale compiled by Greca (1988) and revised by Ma Hong (1993) was adopted( Wang X, Wang X L, Ma H., 1999). (5) Loneliness questionnaire: The adolescent loneliness questionnaire revised by Zou Hong (2003) was adopted( Zou H., 2003). These 5 scales (questionnaires) contain 84 items in total, and the internal consistency coefficient of psychological adaptation in this test is 0.923 after the negative factors are scored in reverse.

1.2.3 Belief in a Just World Scale (BJWS) adopts the Just World Scale developed by Dalbert(1999) and revised by Su Zhiqiang and Zhang Dajun et al. (2012)( Su Zhiqiang, Zhang Dajun, & Wang Xinqiang., 2012). It includes two dimensions: general just world belief and individual just world belief, the former containing 6 items, the latter containing 7 items, a total of 13 items. The scale adopts a 6-point scoring method, from 1 to 6, respectively, indicating "completely inconsistent to completely consistent". The scores of each item are added and averaged. The higher the score, the stronger the individual's belief in a just world. The internal consistency coefficient of this scale was 0.871.

1.2.4 personal control scale using Levenson in 1981 compiled by the internality, powerful others and chance scale of sexual subscales( Wang X, Wang X L, Ma H., 1999). The subscale contains 8 entries, rated on a 6-point scale. All entries are written in the first person and are rated from 1 (strongly disagree) to 6 (strongly agree). The internal consistency coefficient of this scale was 0.711.

1.3 data processing using correlation analysis and regression analysis of SPSS19.0; Amos21.0 was used to test the structural equation model fitting of the data, and the SPSS plug-in PROCESS was used to test the mediating effect of non-parametric percentile bootstrap method with deviation correction.

## 2 results

### 2.1 common method bias testing

Data for this study adopts the measurement of the same kind of method to survey the same research object, there may be a common method biases. Therefore, the Harmand single-factor test method is adopted to include all variables in factor analysis. The test results show that the unrotated results produce 18 factors with feature roots greater than 1, explaining 53.55% of the

variance, of which the first factor explains 17.74% of the variance, far below the threshold of 40%, indicating that the common method bias in this study has a small impact.

## 2.2 teenagers psychological adapt to the differences of demographic variables

2.2.1 sex differences in mental adaptation using independent sample t-test, of adolescent psychological adaptation and the analysis of each factor on the gender difference, the result found (see table 1) : There was no significant difference in psychological adaptation level between male and female adolescents, but there were significant differences in negative emotion ( $t=-3.027$ ,  $P<0.01$ ), subjective well-being ( $t=2.370$ ,  $P<0.05$ ) and social anxiety ( $t=-3.227$ ,  $P<0.01$ ). Among them, the negative emotion and social anxiety of male adolescents are significantly lower than that of female adolescents, but the subjective well-being is significantly higher than that of female adolescents. Specific results are shown in Table 1:

Table 1 Gender differences in adolescent psychological adjustment and its factors (N=881)

	gender	N	M	SD	t	Sig. (双侧)
自尊	男	353	2.007	0.406	-0.908	0.364
	女	528	2.034	0.447		
积极情感	男	353	3.238	0.744	1.642	0.101
	女	528	3.152	0.78		
消极情感	男	353	2.325	0.644	-3.027**	0.003
	女	528	2.468	0.711		
生活满意度	男	353	3.93	1.188	0.374	0.709
	女	528	3.898	1.297		
主观幸福感	男	353	0.027	0.671	2.370*	0.018
	女	528	-0.09	0.748		
孤独感	男	353	2.142	0.659	0.764	0.445
	女	528	2.106	0.698		
抑郁	男	353	1.834	0.469	-0.33	0.742
	女	528	1.845	0.478		
社交焦虑	男	353	0.753	0.409	-3.227**	0.001
	女	528	0.847	0.433		
心理适应	男	353	0.011	0.467	1.91	0.057
	女	528	-0.058	0.549		

2.2.2 grade difference of psychological adaptation using single factor analysis of variance, the adolescent psychological adaptation and the analysis of each factor on the grade differences, the results showed that: the psychological adaptation of significant grade differences ( $F = 2.453$ ,  $P = 0.032$ ), after inspection (LSD) found: The psychological adaptation of the second grade students was significantly higher than that of the three grades in high school, but the difference between the first and third grades was not significant. Among them, the psychological adjustment of self-esteem ( $F=6.370$ ,  $P<0.001$ ), subjective well-being ( $F=5.994$ ,  $P<0.001$ ) and depression

( $F=2.690$ ,  $P=0.020$ ) were significantly different in grades. Specific results are shown in table 2, table 3 and table 4: after inspection (LSD) showed that junior middle school student of grade three highest self-esteem, significantly higher than the first, 2, senior, senior grade; The first grade had the lowest self-esteem, significantly lower than the other five grades.

表 2 青少年自尊的年级差异 ( $N=892$ )

	年级	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
自尊	初一	92	1.855	0.441	6.370***	0
	初二	103	1.999	0.353		
	初三	31	2.255	0.383		
	高一	249	2.016	0.439		
	高二	224	2.1	0.439		
	高三	193	1.997	0.428		

表 3 青少年主观幸福感的年级差异 ( $N=892$ )

	<i>N</i>	积极情感		消极情感		生活满意度		主观幸福感 ( <i>Z</i> )	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
初一	92	3.38	0.769	2.472	0.658	4.546	1.373	0.180	0.763
初二	103	3.37	0.641	2.322	0.590	4.344	1.054	0.197	0.572
初三	31	2.975	0.677	2.513	0.547	3.645	1.238	-0.258	0.731
高一	249	3.184	0.767	2.391	0.698	3.854	1.252	-0.05	0.717
高二	224	3.073	0.730	2.369	0.728	3.610	1.198	-0.153	0.719
高三	193	3.177	0.847	2.485	0.719	3.860	1.207	-0.096	0.734
<i>F</i>		3.882**		1.271		10.765***		5.994***	
<i>P</i>		0.002		0.274		0.000		0.000	

表 4 青少年心理健康 (社交焦虑、孤独感、抑郁) 的年级差异 ( $N=892$ )

	<i>N</i>	社交焦虑		孤独感		抑郁	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
初一	92	0.897	0.428	1.977	0.631	1.706	0.49
初二	103	0.789	0.352	2.025	0.605	1.768	0.407
初三	31	0.839	0.443	2.12	0.643	1.942	0.465
高一	249	0.808	0.428	2.192	0.702	1.866	0.477
高二	224	0.806	0.435	2.162	0.722	1.858	0.494
高三	193	0.773	0.434	2.121	0.672	1.876	0.461
<i>F</i>		1.149		1.935		2.690*	
<i>P</i>		0.332		0.086		0.020	

As shown in the table above, adolescents' subjective well-being has significant differences in grades ( $F=5.994$ ,  $P<0.001$ ), among which, the factors of positive emotion ( $F=3.882$ ,  $P<0.01$ ) and

life satisfaction ( $F=10.765$ ,  $P<0.001$ ) have significant differences in grades. There was no significant difference in grade level of negative emotion ( $P>0.05$ ). Further post-mortem test (LSD) found that the positive emotion factor was the highest in grade one, significantly higher than that in grade three, grade one, grade two and grade three, and the lowest in grade three, significantly lower than that in grade one and grade two. The life satisfaction factor was the highest in Grade one, significantly higher than that in grade three, grade one, grade two and grade three, and the lowest in grade two, significantly lower than that in grade one, grade two, grade One and grade three. The subjective well-being in Grade 2 was the highest, significantly higher than that in Grade 3, Grade 1, Grade 2 and Grade 3, and the lowest in Grade 3, significantly lower than that in Grade 1 and Grade 2.

As shown in Table 5, there were significant grade differences in depression levels among adolescents ( $F=2.690$ ,  $P=0.020$ ). Further post-mortem examination (LSD) showed that the depression level in junior three was the highest and significantly higher than that in junior one, while the depression level in junior one was the lowest and significantly lower than that in junior three, senior one, senior two and senior three.

表 5 青少年心理适应的年级差异 ( $N=892$ )

	年级	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
心理适应	初一	92	0.046	0.531	2.453*	0.032
	初二	103	0.111	0.413		
	初三	31	-0.084	0.587		
	高一	249	-0.055	0.525		
	高二	224	-0.064	0.528		
	高三	193	-0.061	0.521		

3. Psychological adapt to the differences in family home using single factor analysis of variance, the adolescent mental adaptation and the differences of each factor in the family home is analyzed, the results found (see chart 6), adolescent psychological adaptation of family home no significant difference ( $P > 0.05$ ). However, the subjective well-being factor has significant difference in family location ( $F=4.095$ ,  $P=0.017$ ). Post hoc test (LSD) shows that the subjective well-being of adolescents from cities is significantly higher than that from towns and rural areas.

表 6 青少年心理适应在家庭所在地上的差异 ( $N=881$ )

	家庭所在地	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
自尊	城市	256	1.992	0.465	0.937	0.392
	乡镇	204	2.035	0.435		
	农村	421	2.037	0.412		
主观幸福感	城市	256	0.066	0.8	4.095*	0.017
	乡镇	204	-0.105	0.753		
	农村	421	-0.075	0.651		
心理健康	城市	256	0.03	0.848	1.084	0.339



	乡镇	204	-0.059	0.786		
	农村	421	-0.055	0.755		
心理适应	城市	256	0.032	0.552	2.58	0.076
	乡镇	204	-0.064	0.538		
	农村	421	-0.049	0.486		

4. Whether psychological adaptation in the one-child differences using independent sample t-test, of adolescent psychological adaptation and the differences of each factor in whether the one-child were analyzed, and the results found (see table 7) : Adolescent psychological adaptation ( $t=3.156$ ,  $P<0.01$ ), self-esteem ( $t=-2.462$ ,  $P=0.014$ ), positive emotion ( $t=3.256$ ,  $P<0.01$ ), negative emotion ( $t=-2.649$ ,  $P<0.01$ ), subjective well-being ( $t=3.458$ ,  $P<0.01$ ), social anxiety ( $t=-3.163$ ,  $P<0.01$ ), loneliness ( $t=-2.557$ ,  $P=0.011$ ) and other factors had significant differences in whether they were only children.

表 7 青少年心理适应在是否独生子女上的差异 ( $N=879$ )

	是否独生	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i> (双侧)
自尊	是	129	1.935	0.456	-2.462*	0.014
	否	750	2.036	0.427		
积极情感	是	129	3.387	0.852	3.256**	0.001
	否	750	3.15	0.746		
消极情感	是	129	2.256	0.666	-2.649**	0.008
	否	750	2.429	0.691		
生活满意度	是	129	4.061	1.233	1.484	0.138
	否	750	3.883	1.259		
主观幸福感	是	129	0.162	0.732	3.458**	0.001
	否	750	-0.076	0.719		
社交焦虑	是	129	0.698	0.389	-3.163**	0.002
	否	750	0.826	0.43		
孤独感	是	129	1.984	0.633	-2.557*	0.011
	否	750	2.15	0.69		
抑郁	是	129	1.808	0.498	-0.843	0.399
	否	750	1.847	0.473		
心理适应	是	129	0.102	0.49	3.156**	0.002
	否	750	-0.053	0.523		

2.2 correlation analysis using the Person product-moment correlation method for teenagers understanding social support, psychological adaptation, just world belief and personal control for correlation analysis. The results showed that perceived social support was significantly positively correlated with psychological adaptation ( $r=0.529$ ,  $P<0.001$ ), belief in a just world ( $r=0.393$ ,  $P<0.001$ ), and sense of personal control ( $r=0.387$ ,  $P<0.001$ ). The specific results are shown in Table 8:

表 8 领悟社会支持、心理适应、公正世界信念和个人控制感的相关矩阵

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. 领悟社会支持	1													
2. 家庭支持	.872***	1												
3. 朋友支持	.894***	.638***	1											
4. 其他支持	.919***	.709***	.756***	1										
5. 自尊	-.325***	-.266***	-.288***	-.319***	1									
6. 主观幸福感	.494***	.387***	.477***	.461***	-.471***	1								
7. 社交焦虑	-.190***	-.124***	-.215***	-.169***	.323***	-.366***	1							
8. 孤独感	-.496***	-.362***	-.496***	-.470***	.382***	-.518***	.409***	1						
9. 抑郁	-.504***	-.414***	-.473***	-.465***	.396***	-.553***	.360***	.533***	1					
10. 心理适应	.529***	.402***	.527***	.488***	-.299***	.858***	-.613***	-.733***	-.737***	1				
11. 一般公正世界信念	.354***	.312***	.327***	.312***	-.252***	.322***	-.078*	-.238***	-.298***	.289***	1			
12. 个人公正世界信念	.386***	.332***	.356***	.347***	-.301***	.419***	-.186***	-.289***	-.346***	.391***	.781***	1		
13. 公正世界信念	.393***	.342***	.362***	.349***	-.293***	.394***	-.141***	-.280***	-.342***	.362***	.941***	.946***	1	
14. 个人控制感	.387***	.364***	.331***	.343***	-.331***	.382***	-.131***	-.216***	-.260***	.302***	.342***	.343***	.363***	1

2.3 multiple mediation role analysis using zhong-lin wen and Ye Baojuan inspection intermediary effect of procedural steps( Wen Z L & Ye B J., 2014), the inspection before you will be all variables are converted into standard Z scores. First, we took perceptive social support, belief in a just world and sense of personal control as predictive variables, and psychological adaptation as dependent variables to examine the predictive effects of perceptive social support, belief in a just world and sense of personal control on psychological adaptation, controlling for the influence of additional variables such as gender and age. The results showed that (Table 9) : Understanding that social support can significantly positively predict adolescents' psychological adaptation ( $\beta = 0.529$ ,  $t = 18.217$ ,  $P < 0.001$ ), and belief in a just world has a significant positive impact on psychological adaptation ( $\beta = 0.184$ ,  $t = 5.948$ ,  $P < 0.001$ ). Personal sense of control significantly positively affected psychological adaptation ( $\beta = 0.067$ ,  $t = 2.127$ ,  $P = 0.034$ ). Let's say H1 is proven. Specific results are shown in table 9: second, in order to realize social support, just world belief as prediction variables, personal control as the dependent variable, inspection understanding social support, just world belief of personal control.

表 9 以心理适应为结果变量的回归方程

变量	第一步		第二步		第三步		第四步	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
性别	-0.056	-1.648	-0.079	-2.745**	-0.082	-2.906**	-0.079	-2.786**
年龄	-0.092	-2.709**	-0.021	-0.737	-0.001	-0.044	-0.001	-0.02
领悟社会支持			0.529	18.217***	0.46	11.954***	0.441	13.789***
公正世界信念					0.184	5.948***	0.167	5.277***
个人控制感							0.067	2.127*

$R^2$	0.012	0.287	0.315	0.318
调整的 $R^2$	0.01	0.284	0.312	0.314
$F$	5.189**	115.402***	98.848***	80.307***

表 10 以个人控制感为结果变量的回归方程

变量	第一步		第二步		第三步	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
性别	-0.031	-0.902	-0.047	-1.498	-0.051	-1.673
年龄	-0.087	-2.558*	-0.037	-1.157	-0.01	-0.327
领悟社会支持			0.376	11.584***	0.285	8.563***
公正世界信念					0.242	7.243***
$R^2$	0.009		0.148		0.197	
调整的 $R^2$	0.006		0.145		0.193	
$F$	3.763*		49.750***		52.563***	

It was found (Table 10) that perceived social support was a significant positive predictor of perceived control ( $\beta=0.376$ ,  $t=11.584$ ,  $P<0.001$ ). So far, perceptive social support not only directly affects psychological adjustment, but also indirectly affects psychological adjustment through personal control, indicating that personal control plays a partial mediating role between perceptive social support and adolescents' psychological adjustment. Let's say H3 is proven. Belief in a just world significantly positively predicted the sense of personal control ( $\beta=0.242$ ,  $t=7.243$ ,  $P<0.001$ ), so it was found that belief in a just world not only directly affected psychological adaptation, but also indirectly affected psychological adaptation through affecting the sense of personal control, suggesting that the sense of personal control partially mediated the relationship between belief in a just world and psychological adaptation. Specific results are combined with Table 9 and Table 10:

Finally, taking perceptive social support as the predictor and belief in a just world as the dependent variable, we test the predictive effect of perceptive social support on belief in a just world. It was found (see Table 11) that perceived social support could significantly positively predict belief in a just world ( $\beta=0.376$ ,  $t=11.975$ ,  $P<0.001$ ). Combined with Table 9, it is not difficult to find that when belief in a just world and perceptive social support are entered into the regression equation together, the predictive effect of perceptive social support on psychological adjustment is still significant, indicating that belief in a just world plays a partial mediating role between adolescents' perceptive social support and psychological adjustment. Let's say H2 proves it. In combination with Table 10, it is found that perceived social support not only directly affects personal sense of control, but also indirectly affects personal sense of control through belief in a just world, indicating that belief in a just world plays a partially mediating role between perceived social support and personal sense of control.

表 11 以公正世界信念为结果变量的回归方程

变量	第一步	第二步
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	$\beta$	$t$	$\beta$	$t$
性别	0.033	0.984	0.016	0.529
年龄	-0.16	-24.755***	-0.11	-3.495***
领悟社会支持			0.376	11.975***
$R^2$	0.026		0.165	
调整的 $R^2$	0.024		0.162	
$F$	11.638***		56.840***	

Based on the analysis of Table 9, Table 10, Table 11 and above, it is found that: On the one hand, belief in a just world and sense of personal control play a partial mediating role and exist simultaneously between perceived social support and psychological adaptation, indicating that belief in a just world and sense of personal control play a simple and multiple mediating role between perceived social support and psychological adaptation; On the other hand, belief in a just world partially mediates the perception of social support and the sense of personal control, and the sense of personal control in turn partially mediates the belief in a just world and the sense of personal control between the perception of social support and psychological adaptation. In reasoning suggests, understanding social support can direct impact adolescents' psychological adaptation, and can simply just world belief and personal sense of control by multiple mediation effect indirectly influence adolescent mental adaptation, you can just world belief and personal control chain of intermediary role will affect adolescent psychological adaptation. The specific results are shown in Table 9, Table 10 and Table 11:

In order to further verify the existence of the above multi-mediating effects, a multi-mediating model was established between belief in a just world and sense of personal control in understanding social support and adolescents' psychological adaptation. Amos was used to test the fitting of structural equation model. The results showed that: Overall model fit  $\chi^2=138.743$ , model degrees of freedom  $df=38$ ,  $\chi^2/df=3.651$ , GFI=0.973, AGFI=0.953, CFI=0.977, IFI=0.977, NFI=0.969, TLI=0.967, RMSEA=0.054, model degrees of freedom  $DF=38$ , GFI=0.973, AGFI=0.953, CFI=0.977, TLI=0.967, RMSEA=0.054 All of them meet the model adaptation criteria, indicating that the causal model diagram can be accepted (Qiu Haozheng, Lin Bifang,2009). All path coefficients are significant, indicating that the above demonstration results are reasonable and reliable, and the results of this model support the conclusion of multiple mediations obtained by the above sequential regression coefficient test. The structural equation model of multiple mediations is shown in Figure 1:

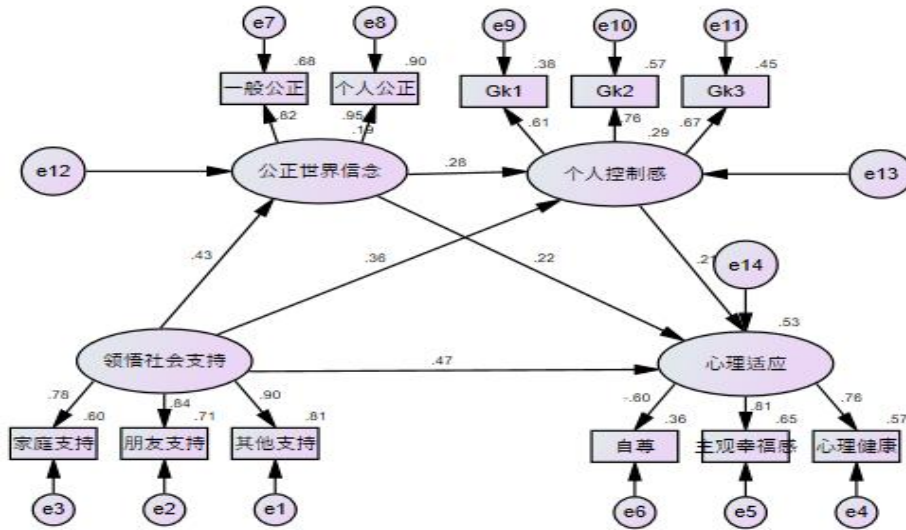


图 1 公正世界信念和个人控制感的多重中介的结构方程模型

2.4 the mediation effect of significance test using Hayes put forward by the mediation effect of the regression analysis program (Hayes, A. F. , & Ph, D., 2012). A bias corrected percentile bootstrap CI method was used to test the significance of the mediation effect. The sample was repeated 5000 times and the 95% confidence interval was calculated.

表 12 中介效应的路径分析及效应量

效应	路径关系	95%置信区间	效应值	效果量
直接效应	领悟社会支持→心理适应	[0.1939, 0.2580]	0.226	82.42%
间接效应	领悟社会支持→公正世界信念→心理适应	[0.0184, 0.0499]	0.0333	12.14%
	领悟社会支持→个人控制感→心理适应	[0.0016, 0.0226]	0.0111	4.05%
	领悟社会支持→公正世界信念→个人控制感→心理适应	[0.0008, 0.0081]	0.0038	1.39%
总间接效应			0.0482	17.58%
总效应			0.2742	100%

The results show that (Table 12) there are four pathways for the influence of perceived social support on adolescents' psychological adaptation: Perceptive social support directly affects psychological adaptation, with confidence interval [0.1939,0.2580], and the direct effect accounts for 82.42% of the total effect; The indirect influence path had the mediating effect of belief in a just world, "understanding social support → belief in a just world → psychological adaptation", with confidence interval [0.0184, 0.0499], and the mediating effect accounted for 12.14% of the total effect. The mediating effect of personal control was "perception of social support → sense of personal control → psychological adaptation", the confidence interval was [0.0016,0.0226], and the mediating effect accounted for 4.05% of the total effect. The chain mediating effect of belief in a just world and sense of personal control is "perceived social support → belief in a just world → sense of personal control → psychological adaptation", with confidence intervals of [0.0008,0.0081], and the chain mediating effect accounts for 1.39% of the total effect, and the

confidence intervals do not contain 0, indicating that the chain mediating effect of belief in a just world and sense of personal control is significant. Specific see table 12: comprehensive demonstration analysis shows that a variety of methods mentioned above just world belief and personal sense of control in the understanding of social support and multiple intermediary role between adolescent mental adaptation. It is understood that the influence of social support on adolescents' psychological adaptation is influenced by the multiple mediating effects of belief in a just world and sense of personal control. Study hypothesis H4 proved.

### 3 discuss

#### 3.1 understanding social support, psychological adaptation, just world belief and the relationship between the individual sense of control

The study found that understanding social support was significantly positively correlated with psychological adaptation, belief in a just world, and feelings of personal control. Regression analysis showed that understanding social support can significantly positively predict adolescents' psychological adaptation, belief in a just world has a significant positive impact on psychological adaptation, and sense of personal control has a significant positive impact on psychological adaptation. This result is basically consistent with the results of relevant studies( Wang Z, Sun Y X, & Qin B L., 2017). Wang Zhe et al. (2017) found that social support can alleviate depressive symptoms in lung cancer patients by improving their psychological adaptation level. A large number of studies have shown that personal just world belief plays an important role in maintaining subjective well-being. The higher the personal just world belief, the higher the life satisfaction, the more positive emotions and the less negative emotions( Correia, I., Batista, M. T., & Lima, M. L., 2009; Fatima, I., & Suhail, K.,2010). In the context of Chinese collectivist culture, especially belief in a just world has a significant positive predictive effect on life satisfaction( Jiang J, Wang R, & Zhang W., 2013; Zhang Li, & Shen Jiliang., 2011). Therefore, belief in a just world can positively predict the level of psychological adaptation.

3.2 multiple mediation role analysis showed that understanding social support can direct impact adolescents' psychological adaptation, and can simply just world belief and personal sense of control by multiple mediation effect indirectly influence adolescent mental adaptation, you can just world belief and personal control chain of intermediary role, in turn, affect adolescent psychological adaptation, That is, belief in a just world and sense of personal control play multiple mediating roles between understanding social support and psychological adaptation.

Teste and Perrin (2013) research suggests that the individual's personal just world belief level is higher, the sense of control is higher, it plays an important role in the individual to adapt to the environment, and generally just world belief related to cold attitude towards disadvantaged people( Testé, B., & Perrin, S., 2013). Otto, Boos, & Hoyer et al. (2006) found that individuals with stronger belief in a just world would feel less negative emotions. This study confirms the conclusion of Western countries: personal belief in a just world has the function of regulating and promoting mental health( Otto, K., Boos, A., & Dalbert, C., 2006). A survey conducted by Chinese researchers on people affected by the Wenchuan earthquake shows that belief in a just world helps

to enhance individual psychological resilience and help people better cope with difficult situations( Wu, M. S., Yan, X., & Zhou, C., 2011; Wu Shengtao, Wang Li, & Zhou Mingjie, 2009).

Just world belief has the function that promote mental health, there are two main hypothesis, namely personal resources, personal resource) hypothesis and psychological buffer (psychological buffer) hypothesis. Among them, the hypothetical theory of personal resource mainly regards belief in a just world as an individual resource, and believes that belief in a just world acts as a personal tendency, and the stronger the personal resources of an individual, the better they can cope with the problems encountered in life. In this study, belief in a just world is comprehended

#### 4 Research conclusion

Understanding social support and psychological adaptation, just world belief and personal control have a significant positive correlation. Moreover, understanding social support can significantly positively predict adolescents' psychological adaptation, belief in a just world has a significant positive impact on psychological adaptation, and sense of personal control has a significant positive impact on psychological adaptation.

Understanding social support can direct impact adolescents' psychological adaptation, and can simply just world belief and personal sense of control by multiple mediation effect indirectly influence adolescent mental adaptation, you can just world belief and personal control chain of intermediary role, in turn, affect adolescent psychological adaptation, That is, belief in a just world and sense of personal control play multiple mediating roles between understanding social support and psychological adaptation.

#### 5 Insufficient research and prospect research

##### 5.1 Shortage of research

The research method of single first this research mainly adopts questionnaire survey method, cross-sectional study, the lack of longitudinal developmental research. Secondly, there is no in-depth interview analysis on the research content to enrich the research, so the results and conclusions of the research are too quantitative and lack of humanistic richness and diversity.

2. The research conclusion promotion need to be careful only for young people in the present study, the junior high school is grade three and grade three of high school students, aged between 12 and 21 years old, the average age was  $16.54 \pm 1.71$ . Due to the influence of some demographic variable characteristics of the research object, the promotion of the research conclusion should be cautious and limited to the group that meets the research object. Other groups, such as children, infants, adults and the elderly, may not be appropriate.

##### 5.2 The prospect of research

1. The diversity of research methods. The current research is mainly about the psychological adaptation using self-report questionnaire, a self-reported questionnaire and vulnerable to external factors such as social desirability, the experimenter effect, the influence of measurement may be the result of the cognitive processing after reaction. However, at present, there are few comparative studies by other methods such as experimental method, so the diversification of methods is also the direction worth exploring in this field. 2. The research direction of

diversification. Attaches great importance to the line of empirical research at the same time more important basic theory research. At present, the concept of psychological adaptation is not unified, and there are many theoretical debates. On the one hand, we carry out a lot of empirical research; On the other hand, we should pay more attention to the basic theoretical research of localization. After all, China's basic national conditions and culture are different from those of western countries, so it is of great significance to carry out the research of basic theories.

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