



# AN INVESTIGATION ON DEVELOPMENTAL CHARACTERISTICS OF PSYCHOLOGICAL ADAPTABILITY AMONG UNDERGRADUATES IN CHINA

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## ABSTRACT

To investigate adaptability among undergraduates, 6238 college students were received Adolescents' Adaptability Scale (AAS) assessment. The results indicated: (1) There was no significant difference between boys and girls. (2) The level of singletons' adaptability was higher than that of non-singleton. (3) There were significant differences in family sources, which showed the trend of big city>midsize city> small town>countryside. (4) Differences of adaptability existed apparently among students learning different majors. The order was as follows: physical art>science>liberal arts. (5) Differences of adaptability existed conspicuously among students of different grades. The developmental tendency was as follows: sophomores >juniors>freshmen>seniors.

**Key words:** undergraduates, adaptability, developmental characteristics

## 1 Introduction

Contemporary undergraduates are the pillars of the new century, the adaptability of the development level is not only related to the improvement of their psychological quality, and relationship to the national future development. Therefore, it is advantageous to strengthen the pertinence and effectiveness of psychological quality education and promote the healthy development of College Students' mental health. Especially in the emphasis on the quality of education today, the study of the adaptability of contemporary college students has important practical significance.

Currently, academic adaptability launched a certain theoretical and empirical research, but has not yet formed special field, mainly exist in the following aspects: (1) the narrow scope of study, fan out from point to area. Study on the adaptability of Freshmen in universities and colleges in the whole course of study. (2) the research content is scattered. Most of the studies have not carried out a systematic study of the adaptive development of college students. In view of this, in the scientific understanding of the concept of adaptive [1], carefully compiled with good reliability and validity of the college students' Adaptability Scale Based on [2], this study attempts to investigate the adaptability of college students in gender, one-child, family sources, professional and grade five social demographic information on the differences, and to explore the adaptability of college students and their characteristics, in order to provide a basis for college students' adaptability and comprehensive quality improvement.

## 2 Method

### 2.1 Participants

The research object of this study is 6238 undergraduates in Chongqing Municipality, Sichuan Province, Guizhou Province, and so forth. Among them, 1912 freshman, 1386 sophomore, 1896 junior, and 1144 senior, respectively. The only one child and the not one child were 2408 and 3830, respectively. Students from rural sources were 1220, students from small towns were 1868, and students from big cities were 1178 (the non-social demographic data were excluded from the actual statistical data).

### 2.2 Measures

The survey material was the Questionnaire of Adaptability of Adolescents (QAA) [2], according to the research results of this topic, the undergraduates are divided into six dimensions: physiological adaptation, emotional adaptation, interpersonal adaptation, learning adaptation, social adaptation and life adaptation. Exploratory factor analysis showed that the 6 factors explain the adaptation of college students. The reliability coefficient of the total scale was 0.827, and the internal consistency reliability of each factor was between 0.526 and 0.722, which showed that the scale had good reliability. Through

a number of research groups of experts on the scale of the problem and the factor of the fitting of the situation, it has good content validity. The scale of the scale was also obtained by the correlation analysis of the structure validity [2].

### 2.3 Procedures

The investigator conducted the measurement program of each survey, the unified instruction language, the class as the unit to carry on the group survey. Windows XP Spss16.0 was used to analyze the data.

## 3 Results

### 3.1 Gender differences in the adaptability of undergraduates

The gender differences of the students' Adaptability of the college students were investigated by T test. From table 1, there were no significant differences between male students and female students, but the scores of male students were significantly higher than those of girls in the physiological adaptation, learning adaptability and social adaptability. On the interpersonal adaptability factor, the score of the female students is higher than that of the male students.

**Table 1. Gender differences analysis of adaptability among undergraduates**

Variables	Male M (SD)	Female M (SD)	T value
PA	3.09 (0.63)	2.97 (0.59)	7.58**
EA	3.04 (0.49)	3.03 (0.46)	0.98
RA	9.12 (1.77)	9.51 (1.67)	-9.06**
LA	9.71 (1.77)	9.54 (1.67)	4.14**
SA	7.04 (1.33)	6.87 (1.25)	5.27**
LA	6.44 (1.41)	6.44 (1.36)	0.17
Total	6.41 (0.86)	6.39 (0.81)	0.73

**Note:** PA=Physiological adaptability; Emotional Adaptability=EA; Relational Adaptability=RA; Learning Adaptability=LA; Social Adaptability=SA; Life Adaptability=LA. "\*\*=P<0.05; "\*\*\*=P<0.01

### 3.2 The only one child differences in adaptability of undergraduates

Using independent sample T test to investigate the differences of the only child of the adaptive factors of College students. From table 2, there is a significant difference in the overall adaptability, the adaptive level of only child is significantly higher than that of non only child, mainly in the physiological adaptability, emotional adaptability, interpersonal adaptability and social adaptability dimension. The non only child in learning adaptability is significantly higher than that of the only child. The only child in the dimension of life adaptability is not significant.

**Table 2 Only one child differences in adaptability of undergraduates**

Variables	Only One Child M (SD)	Not Only One Child M (SD)	T value
PA	3.12 (0.59)	2.96 (0.61)	9.86**
EA	3.05 (0.48)	3.02 (0.47)	2.47*
RA	9.53 (1.72)	9.20 (1.72)	7.33**
LA	9.49 (1.77)	9.71 (1.69)	-5.18**
SA	7.02 (1.28)	6.90 (1.29)	3.44**
LA	6.43 (1.40)	6.45 (1.37)	-0.36
Total	6.44 (0.84)	6.38 (0.83)	2.95**

**Note:** PA=Physiological adaptability; Emotional Adaptability=EA; Relational Adaptability=RA; Learning Adaptability=LA; Social Adaptability=SA; Life Adaptability=LA. \*\*=P<0.05;\*\*\*=P<0.01

**3.3 Source differences in adaptability of undergraduates**

A single factor analysis of variance was used to investigate the difference of the family source of adaptive factors among college students, and the differences of the four sources were compared with that of LSD. From table 3, we can see that there are significant differences between the four families in the whole, the performance of the big cities, small cities and small towns. In addition to the emotional adaptive dimension and the dimension of the living adaptive dimension of the source of the family, the rest of the adaptive dimension of the family source differences are extremely significant.

**Table 3. Source differences in adaptability of undergraduates**

Variables	Big Ccity(a) M (SD)	Medium City(b) M (SD)	Small Town(c) M (SD)	Rural Area (d) M (SD)	F value (df=3)	Post Hoc
PA	3.11 (0.61)	3.05 (0.60)	3.00 (0.61)	2.97 (0.61)	14.48**	a>c**,a>d**,b>d**
EA	3.05 (0.49)	3.02 (0.47)	3.03 (0.48)	3.04 (0.46)	1.36	
RA	9.58 (1.77)	9.46 (1.69)	9.33 (1.75)	9.09 (1.68)	25.16**	a>c**,a>d**,b>d**,c>d**
LA	9.56 (1.79)	9.56 (1.71)	9.62 (1.71)	9.73 (1.78)	3.87**	b<d*
SA	7.09 (1.30)	6.97 (1.30)	6.93 (1.25)	6.87 (1.28)	25.06**	a>c*,a>d**
LA	6.47 (1.44)	6.48 (1.38)	6.39 (1.40)	6.43 (1.33)	1.27	
Total	6.48 (0.84)	6.42 (0.82)	6.38 (0.84)	6.35 (0.82)	6.02**	a>d**

**Note:** PA=Physiological adaptability; Emotional Adaptability=EA; Relational Adaptability=RA; Learning Adaptability=LA; Social Adaptability=SA; Life Adaptability=LA. \*\*=P<0.05;\*\*\*=P<0.01

**3.4 Major differences in adaptability of undergraduates**

A single factor analysis of variance was used to investigate the differences among the major types of College Students' adaptability, and to compare the differences between the three types of LSD. Table three shows that there are significant differences between the major types of the overall adaptability and the main dimensions. The differences between the 4 major types are shown by the change of body art and science. The changes of the factors of all factors are basically the same.

**Table 4. Major differences in adaptability of undergraduates**

Variables	Arts(a) M (SD)	Science(b) M (SD)	Music(c) M (SD)	F value (df=3)	Post Hoc
PA	3.00 (0.61)	3.04 (0.58)	3.16 (0.58)	28.09**	a<b**,a<c**,b<c**
EA	3.01 (0.48)	3.06 (0.46)	3.06 (0.45)	5.92**	a<b**,a<c*
RA	9.23 (1.71)	9.27 (1.73)	9.55 (1.61)	14.11**	a<c**
LA	9.50 (1.71)	9.72 (1.69)	9.50 (1.72)	10.47**	a<b**,b>c**
SA	6.88 (1.25)	6.92 (1.27)	7.09 (1.23)	10.42**	a<c**,b<c**
LA	6.33 (1.36)	6.42 (1.39)	6.55 (1.38)	9.27**	a<b*,a<c**,b<c*
Total	6.33 (0.82)	6.41 (0.84)	6.48 (0.79)	14.98**	a<b**,a<c**,b<c*

**Note:** PA=Physiological adaptability; Emotional Adaptability=EA; Relational Adaptability=RA; Learning Adaptability=LA; Social Adaptability=SA; Life Adaptability=LA. \*\*=P<0.05;\*\*\*=P<0.01

**3.5. Grade differences in adaptability of undergraduates**

A single factor analysis of variance was used to investigate the differences of the students' Adaptability of the factors, and the difference between the four grades was analyzed by LSD. From table 5 shows that on the whole, the adaptability of college students exists significant differences in grade, >>> the four trends, multiple comparison indicated that the A and two have significant differences, and, have significant difference. Is the total score of the adaptability, second and third grade students, the general adaptability level was significantly higher than that of grade 1 and 4, presented the inverted "U" - shaped curve, in addition to the grade difference of dimensions of emotional adaptation, interpersonal adaptation dimension and the learning adaptability dimension is not obvious, the grade differences of physiological adaptation dimension, social adaptability dimensions and the dimensions of fit are very significant.

**Table 5. Grade differences in adaptability of undergraduates**

Variables	Freshman(1) M (SD)	Sophomore(2) M (SD)	Junior(3) M (SD)	Senior(4) M (SD)	F value (df=3)	Post Hoc
PA	2.98 (0.60)	3.07 (0.63)	3.04 (0.59)	3.06 (0.59)	5.82**	1<2*,1<3**
EA	3.06 (0.46)	3.05 (0.48)	3.02 (0.46)	2.97 (0.43)	3.00	
RA	9.33 (1.72)	9.53 (1.71)	9.35 (1.66)	9.31 (1.48)	1.56	
LA	9.63 (1.69)	9.84 (1.74)	9.72 (1.67)	9.35 (1.68)	3.34	
SA	7.00 (1.27)	7.10 (1.35)	6.89 (1.25)	6.62 (1.20)	6.67**	1>3**,1>4**,2>3**,2>4**,3>4*
LA	6.41 (1.36)	6.71 (1.35)	6.47 (1.38)	6.32 (1.24)	5.62**	1<2**,2>3**,2>4**
Total	6.40 (0.82)	6.55 (0.82)	6.42 (0.81)	6.27 (0.65)	4.80**	1<2**,2>3**,2>4**

**Note:** PA=Physiological adaptability; Emotional Adaptability=EA; Relational Adaptability=RA; Learning Adaptability=LA; Social Adaptability=SA; Life Adaptability=LA. \*\*=P<0.05;\*\*\*=P<0.01

#### 4 Discussion

##### 4.1 gender differences in the adaptability of college students

The research shows that there is no significant difference between male and female college students, but the score of boys is significantly higher than that of female students in the physiological adaptability, learning adaptability and social adaptability factors. On the interpersonal adaptability factor, the score of the female students is higher than that of the male students. This is consistent with some of the results of the domestic research. Such as Zhao Fu Cai research found that girls than boys have adaptation problems, but there was no significant difference in [3]; Ma Ying and Mu Kui research show that the adaptive ability of male and female students, the level does not exist gender difference [4 - 5]; studies have shown that ting Yong Feng, learning adaptability of boys was significantly better in girls [6]; Li Zhi's research shows, girls than boys interpersonal adaptability strong, significant difference [7]. But the results of this study are in discrepancy with the relevant conclusions. Such as Yangqing according to the result of the study, students fitness levels exist significant gender differences, boys scored higher than girls [8]; Chen Lemna minor study found that in a woman's life adaptation ability is stronger than boys [9]. Therefore, this controversial issue is worthy of our in-depth study.

There are two main reasons for the difference between the two sexes: one is the maturity of the students' body and mind. College students with physical maturity and psychological development, have the ability of independent learning, life and communication, in the process of socialization, male and female students in the adaptation process of self-confidence and success to get positive reinforcement, although the two in some adaptive quality of the points, such as boys in the physiological adaptability, learning adaptability and life adaptability, and girls in interpersonal adaptability than boys, but can smoothly adapt to college life. Two is the University's education atmosphere. The education mode of higher education and its environment atmosphere respect the gender equality of education, and lead to the formation and development of male and female students' adaptability. This shows that the results of our study on the adaptability of gender differences are in line with the actual situation of contemporary college students.

##### 4.2. The only one child differences in the adaptability of college students

This study shows that the only child and non only child in the overall adaptability and physiological adaptability, emotional adaptability, learning adaptability, interpersonal adaptability and social adaptability, there are significant differences. As far as the overall adaptation, the only child is significantly higher than the non - only child. From the point of view of the different dimensions, the only child in the physiological adaptability, emotional adaptability, interpersonal adaptability and social adaptability are also different degrees than the non only child, and the non only child in learning adaptability dimension is significantly higher than the only child. The results of this study are consistent with the results of Su Songxing, [10], and some of the relevant research and access 12] - [11. However, we should clearly recognize that the social background of the only child in China and its unique cultural traditions and value orientation, and the western society has a huge difference, the results of the study of western scholars can not directly apply to the only child in China, and therefore can not be used as a basis for the study of the negative. In addition, the development characteristics of this study make us think deeply. For example, we believe that only children have superior conditions, they are in the cognitive and emotional development than the non only children in the advantages of the personality development, there are many problems in the development of college life, but the study did not confirm this conclusion. We believe that this is mainly because the only child from the big cities, and the adaptability of the big city students more easily than the rural students, which has been proved by the study of the different sources of adaptability in the front. With the passage of time, the only child of the college life gradually adapt to the situation, this situation may be changed.

##### 4.2 Family source differences in the adaptability of college students

There are significant differences in family origin in the aspects of the overall adaptability and its physiological adaptability, interpersonal adaptability, learning adaptability and social adaptability. At present, the research on the mental health of college students shows that

the rural students are not as good as the source of the city from the whole level of [12]. In view of the close relationship between adaptation and mental health, this conclusion is consistent with the results of the study on the differences of family origin of College Students' adaptability. The reason may be that the development of College Students' adaptability is influenced by the environment of the past. Because the rural students in the school education environment, or social and cultural environment and family education environment, in some extent, not as urban students. Urban students have more knowledge than the rural students, and have good economic conditions, communication means, and more emotional communication with their families. Therefore, the overall urban and rural differences in the adaptability can be understood completely. In addition, negative self enhancement is also an important reason that causes the rural sources are significantly lower than the urban sources. Rural students into talents of the University, see people around is very good, excellent, easy to form the psychological inferiority, difficult to self reinforcing positive, on their actual ability to estimate low, which is extremely unfavorable to the adaptability of the healthy development of the also give evidence to improve students' adaptability, especially it is imperative to strengthen the training of rural students adaptability quality and coping strategies.

##### 4.4 Major differences in the adaptability of college students

This study found that there is a significant difference between the students' adaptability to the major types, and the students' adaptability is the best. This is consistent with the results of Zhao Fucai's research [3]. The possible reason is that, on the one hand, from the perspective of employment, it is the expectation of College Students' expectation of professional development project to the daily psychological and behavioral state, and ultimately affect the adaptability level. Reality shows that the body art (such as music, art, sports, etc.) and the arts and Sciences, compared with a wider employment space, and science class (such as mathematics, geography, chemistry, etc.) is better than the liberal arts. On the other hand, from the nature of the discipline, the liberal arts majors are more emphasis on the study of theoretical knowledge, while the body art is more focused on social practice, while the science majors in the two. Therefore, in the adaptation, the liberal arts college students than in science students, science students than the body art students.

##### 4.5 Grade differences in the adaptability of college students

This study shows that there are significant differences in the overall adaptability of different grades of college students in the dimensions of their physical adaptation, social adaptation and life adaptability. The results of this study are not consistent with the results of Ma Ying, Tao sand and Stewart (1986) [4][14][15]. In particular, the differences of college students adaptability are mainly manifested in two aspects: (1) the results of the overall adaptive development, the performance of the big three > two > big > four of the change trend, showing a "U" type. Investigate its reason, it may be a specific period of College Students' growth experience and living environment has a great impact on their adaptability. The first semester of college students enrolled in the first term is a special stage of the convergence of high school and University, they have a new living environment and learning tasks have a process of adaptation, the environment, development goals, social status and role expectations and so on. Therefore, we should take active and effective measures to improve the adaptability of students. The students have been familiar with the environment, which is in the best condition. The four students have a great impact on the job market and social environment. The three students have a great impact on the market and social environment. Therefore, the employment pressure has become more and more obvious". (2) in the dimension of emotional adaptation, interpersonal adaptation and learning adaptability, there is no obvious grade difference, which indicates that the adaptability of the level has entered a relatively stable period. Grade difference was significant in physiological adaptation, social adaptability and life adaptability. The reason is that college students are in the peak period of physiological changes and the development of self consciousness [17]. The adaptability of freshman's new life and learning environment and the big four of the employment pressure and the career choice will be temporarily adapted to the relative difficulty. This shows that the adaptability of college students in different grades is more likely to be influenced by life experiences and social environment, which can provide a theoretical basis for us to carry out the adaptive training of college students.

## 5 Conclusion

5.1 male and female were not significantly different in the total level of adaptation, but the boys' score was significantly higher than that of girls in the physiological adaptability, learning adaptability and life adaptability factors. On the interpersonal adaptability factor, the score of the female students is higher than that of the male students;

5.2 only child and non only child college students have significant differences in their overall adaptability, emotional adaptability, interpersonal adaptability and social adaptability. In the learning adaptability, the non only child is significantly higher than the only child.

5.3 college students from different families have significant differences in the overall adaptability, interpersonal adaptability, learning adaptability and social adaptability.

5.4 college students of different majors in the overall adaptability and their main dimensions, there are significant differences. Body art is significantly higher than in the science, liberal arts majors, liberal arts majors.

5.5 students in different grades have significant differences in their overall adaptability and their physiological adaptability, social adaptability and life adaptability. Grade two or three was significantly higher than one, grade four, grade four, grade four, grade four was significantly lower than other grades, there was a "U" type curve, which is a turning point for the development of college students adaptability.

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## REFERENCES

- [1] Zhang, D.J., & Zhang, Q. (2007). Developmental characteristics of adaptability among college students in China[J]. *Journal of Southwest University (Social sciences edition)*, 33, 124-128.
- [2] Zhang, D.J., & Jiang, Q. (2006). Adolescent Adaptability Scale making[J]. *Psychological and Behavioral Research*, 4, 81-84.
- [3] Zhao, F.C. (1999). A study on the problems of psychological adjustment among freshmen[J]. *Journal of Health Psychology*, 7, 397-399.
- [4] Fent, T. Y., & Li, H. (2002). .A preliminary study on learning adjustment among contemporary college students[J]. *Psychological Exploration*, 22, 44-48.
- [5] Tao, S.(2002). On adjustment problems when entry into colleges from life-span perspective[J]. *Journal of Beijing Normal University (Social sciences edition)*, 22, 81-87.
- [6] Qi, L. G. (2005). .Analysis on psychological adjustment among freshmen[J]. *Journal of Northeast Normal University (Social sciences edition)*,3, 157-161.
- [7] Huang, X. T., & Zheng, Y. (1999). Psychological traits and education among contemporary college students in china[M]. Shanghai: Shanghai Education Publishing House: 22-24.
- [8] Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment[J]. *Child Development*, 66,710-722
- [9] Denise, F. P. (1980). The only child grows up: a look at some characteristics of adult only children. *Family Relation*[M], 29.
- [10] Blake, J. (1981). The only child in America: prejudice versus performance[J]. *Population and Development Review*, 7, 22-29.
- [11] Stewart, A. J., etal. Longitudinal studies of psychological consequences of life changes in children and adults[J]. *Journal of Personality and Social Psychology*, 1986(1).

- [12] Blake, J. The only child in America: prejudice versus performance[J]. *Population and Development Review*, 1981,7 (1).