

The Characteristics of Adult Attachment among Medical Undergraduates

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Abstract

Objective To explore the characteristics of adult attachment among medical undergraduates. **Methods** Eight hundred and fifty-five medical undergraduates were collected from 7 universities in Guangdong Province, China by stratified random sampling method. They were investigated with Experiences in Close Relationships Inventory (ECR) and a self-complied general information questionnaire for undergraduates. **Results** (1) The scores of attachment anxiety and attachment avoidance were (3.89 ± 0.74) and (3.77 ± 0.55) , respectively. (2) The distribution of attachment styles of this group was as follows: security type accounted for 30.53%, infatuation type accounted for 12.63%, apathy type accounted for 15.09%, and Phobic type accounted for 41.75%. (3) There were statistically significant differences in the scores of attachment anxiety and attachment avoidance between male and female students ($t = -12.291, 16.615$; both $P < .001$), and the gender differences in the distribution of attachment types among medical students were also statistically significant ($\chi^2 = 282.230, P < .001$). (4) There was no significant difference in the scores of attachment anxiety and attachment avoidance between grades ($F = .213, .665$; both $P < .001$), and there was no significant difference in the distribution of attachment types between grades ($\chi^2 = 17.794, P = .122$). **Conclusion** The adult attachment of medical undergraduates needs to be improved, and social and cultural factors may be important influencing factors of adult attachment of medical students.

Key Words: Medical Undergraduates, Adult Attachment, Questionnaire

1. Introduction

Adult attachment is a stable psychological tendency that urges an individual to approach the specific objects he (or she) believes can provide him (or her) with physiological satisfaction and psychological security and establish a strong, lasting and close emotional connection with them [1], which is manifested in attachment avoidance and attachment anxiety [2]. Adult attachment is an unconscious memory and internalized psychological representation of individuals' relationship with their parents in childhood. The core psychological mechanism of adult attachment is the internal working mode, which is established on the basis of mother-infant attachment and runs throughout life [3].

Adult attachment has a profound impact on individuals' cognition [4], emotion regulation [5], interpersonal relationship [4], and

mental health [6]. Security attachments show a more adaptive and healthy pattern in the above aspects [6].

Because of the importance of adult attachment to individual development, it is of great significance to understand the characteristics and development laws of adult attachment. College undergraduates are in the initial stage of adulthood, and their adult attachment is forming. Due to the stability of the internal working model, adult attachment at this stage will have a significant impact on the development of their later attachment. We also indirectly trace their early attachment experience by the adult attachment style of college students.

Based on the above analysis, this study intends to explore the formation and characteristics of adult attachment by taking medical undergraduates in Guangdong Province as an example (in order to

better eliminate the influence of interference factors such as region, discipline, specialty, and education background).

2. Objects and Methods

2.1. Objects

Stratified random was adopted to collect medical undergraduates from 7 colleges in Guangdong Province, ie Guangdong Medical University, Southern Medical University, Guangzhou University of Traditional Chinese Medicine, Guangdong Pharmaceutical University, Shantou University, Guangzhou Medical University, and School of Medicine, Sun Yat-sen University. A total of 900 questionnaires were distributed, and 855 valid questionnaires were recovered, with an effective rate of 95.0%. Among them, there were 447 boys and 408 girls; 160 from Guangdong Medical University, 171 from Southern Medical University, 144 from Guangzhou University of Traditional Chinese Medicine, 94 from Guangdong Pharmaceutical University, 77 from Shantou University, 124 from Guangzhou Medical University, and 85 from School of Medicine, Sun Yat-sen University. 222 freshmen, 188 sophomores, 161 juniors, 146 seniors, and 138 seniors.

2.2. Tools

2.2.1. Experiences in Close Relationships Inventory, ECR

It is compiled by Brennan et al. (1998) [7] and revised by Li Tonggui (2006)[8] into Chinese version. There are 36 questions, divided into two dimensions of attachment anxiety and attachment avoidance. Likert 7-point scoring method is used to score from 1 to 7 points corresponding to "completely disagree" to "completely agree". The higher the score, the more obvious the tendency of the item or dimension. Both the two dimensions can be divided into high and low levels by four points, thus forming four types of attachment styles, namely, secure (low anxiety and low avoidance), infatuated (high anxiety and low avoidance), apathy (low anxiety and high avoidance) and phobic (high anxiety and high avoidance). In this study, the Cronbach's α coefficients of total scale, attachment anxiety, and attachment avoidance are 0.822, 0.721, and 0.687, respectively.

2.2.2. Self-complied personal general information questionnaire

Including 3 aspects of gender, grade, age.

2.3. Collection and Arrangement of data

Before the investigation, the researchers who participated in the survey were trained uniformly, and the investigation process and evaluation standard were unified. The consistency test ($\kappa = 0.81 \sim 0.90$) met the test requirements. By means of online survey, the investigator will issue a questionnaire, which will be filled in by the selected medical undergraduates themselves. The

questionnaires with scores of more than 50% of the items missing were eliminated. The missing values of the valid questionnaires were estimated and filled with the average. Two researchers independently input the same data using Epidata3.0 software and conduct a unified logic check to ensure the accuracy of the data.

2.4. Statistical analysis

SPSS20.0 is used for statistical analysis. Descriptive statistics are used to calculate the mean score and standard deviation, Measurement data is treated with the t-test or one-way analysis of variance (ANOVA), and enumeration data is treated with the chi-square test.

3. Results

3.1. General status of adult attachment of medical students

3.1.1. ECR scores of medical students

It can be seen from Table 1 that the score of attachment anxiety of this group is lower than the cut-off point [14-15] ($t = -2.372$, $P = .018$), which belongs to a low score; attachment avoidance is higher than the cut-off point [14-15] ($t = 4.767$, $P < .001$), which is a high score.

Table 1 Descriptive Statistics of Medical Students' Scores on ECR (n=855)

Dimension	N	M	SD	MIN	MAX
Attachment anxiety	855	3.94	.69	1.83	5.56
Attachment avoidance	855	4.08	.51	2.11	5.11

3.1.2. The distribution of adult attachment styles among medical students

The attachment styles of this group are distributed as follows: 261 people are security, accounting for 30.53%; 108 people are infatuated, accounting for 12.63%; 129 people are apathy, accounting for 15.09%; 357 people are phobic, accounting for 41.75%.

3.2. Gender differences in adult attachment of medical students

3.2.1. Differences in ECR scores between boys and girls

It can be seen from Table 2 that the scores of attachment anxiety and attachment avoidance of boys are lower than the cut-off point, while the scores of attachment anxiety and attachment avoidance of girls are higher than the cut-off point. There are statistically significant differences in the scores of attachment anxiety and attachment avoidance between boys and girls ($t = -12.291$, 16.615 ; both $P < .001$).

Table 2 Comparison of ECR Scores between Boys and Girls

Dimension	Boys (n=474)	Girls (n=381)	t	P
Attachment anxiety	3.70±0.67	4.24±0.61	-12.291	<.001
Attachment avoidance	3.86±0.48	4.36±0.40	-16.615	<.001

3.2.2. Differences in the distribution of attachment type between boys and girls

Table 3 shows that among the four types of attachment, boys have the highest percentage of security (49.4%) and the lowest percentage of infatuated (15.8%); The percentage of security is the lowest among girls (7.1%), and the percentage of phobic is the highest (71.7%). There are statistically significant differences in attachment types between boys and girls ($\chi^2=282.230, P<.001$).

Table 3 Differences in Type Distribution of Adult Attachment between Boys and Girls

	Secure	Infatuated	Apathy	Phobic	χ^2	P
Male	234	75	81	84	282.230	<.001
Female	27	33	48	273		

3.3. Grade differences of adult attachment among medical students

3.3.1. Differences in ECR scores among 5 grades

It can be seen from Table 4 that the scores of attachment anxiety in 5 grades are lower than the cut-off point, while the scores of attachment avoidance are higher than the cut-off point. There is no statistically significant difference in the scores of attachment anxiety and attachment avoidance among 5 grades ($F=.213, .665$; both $P>.05$).

Table 4 Comparison of ECR Scores among 5 Grades

	Freshman (n=222)	Sophomore (n=188)	Junior (n=161)	Senior (n=146)	Fifth-year students (n=138)	F	P
Attachment anxiety	3.96±.71	3.95±.71	3.94±.67	3.89±.69	3.93±.68	.213	.930
Attachment avoidance	4.12±.45	4.10±.47	4.08±.52	4.06±.61	4.04±.51	.665	.617

3.3.2. Differences in distribution of attachment types among 5 grades

Table 5 shows that the percentage of phobic attachment is the highest in all the 5 grades, and there is no statistically significant difference in the distribution of adult attachment types among 5 grades ($\chi^2=17.794, P=.122$).

Table 5 Differences in the Distribution of Adult Attachment Types among 5 Grades

	secure	Infatuated	Apathy	Phobic	χ^2	P
Freshman	63	28	34	97	17.794	.122
Sophomore	54	23	27	84		
Junior	43	30	31	57		
Senior	52	11	23	60		
Fifth-year students	49	16	14	59		

4. Discussion

The scores of attachment anxiety and attachment avoidance of this group were (3.94 ± 0.69) and (4.08 ± 0.51), respectively. The results of attachment anxiety were consistent with those of Yang Qing, and attachment avoidance was significantly higher than that of Yang Qing [9]; At the same time, the scores of attachment anxiety and attachment avoidance were significantly higher than those of Zhang Hongmei [10], Zhao Siping [11], Pei Zhizhen [12], Ji Tingting [13], Li Xiaolong [14] and Gu Simeng [15]. It is suggested that the level of attachment anxiety and attachment avoidance of Chinese college students (including medical students) has been increasing year by year in the past 10 years, and the rate of the increasing in the score of attachment avoidance is significantly higher than that of attachment anxiety and has exceeded the cut-off point in the past 3 years.

The distribution of attachment styles of this group was statistically significant different from those of Zhang Hongmei [10], Zhao Siping [11], Pei Zhizhen [12], Wang Xiaoguang [16], Su Yuanyuan [17], Zhang Jianhua [18] and Li Xu [19]. It suggests that

the distribution of attachment styles is in change with times and cultures. Specifically, in the past 10 years, the proportion of security attachments among college students (including medical students) in China has been less than 50% every year, and the percentage is decreasing year by year, while the proportion of unsafe attachments is increasing year by year. Similar development trends can also be seen in the United States in the past 23 years (1988~2011) [20].

The development trend of the scores of the dimensions and attachment types reflects that influenced by the social and cultural factors, college students show a contradictory mentality in adult attachment: on the one hand, due to the needs of personal development, they are increasingly eager to develop contacts, find more attachment objects, establish and strengthen their attachment system, and are afraid of being rejected and abandoned by others; but they are also more and more afraid of intimacy and uncomfortable with the intimacy and dependence of others. It may be related to the increasingly complex interpersonal relationship in

today's society, and the frequent incidents of bullying and fraud, which make people vulnerable but difficult to prevent.

The scores of attachment anxiety and attachment avoidance of boys are lower than the cut-off point, while those of girls are higher than the cut-off point; There are statistically significant differences in the distribution of the four types of attachment between boys and girls: most boys (49.4%) are security attachments, and most girls (92.9%) are insecurity attachments. The results of this study are inconsistent with those of Zhang Hongmei and Yan Gui [21], which may be caused by different ages and sampling populations. It is suggested that female medical students are more likely to have problems with adult attachment than male medical students.

This study finds that there is no statistically significant difference in the scores of attachment anxiety and attachment avoidance among 5 grades, and there is no statistically significant difference in the distribution of attachment styles among students of all the 5 grades, which is inconsistent with previous studies [22], possibly due to different ages and sampling groups. It is suggested that the adult attachment of medical students at the undergraduate stage (18-24 years old) tends to be stable. In other words, the undergraduate stage (18-24 years old) is not a critical period for medical students' adults attachment. As for the adult attachment mode of medical students, which has been determined before the age of 18, or gradually formed after the age of 24, it needs to be confirmed by follow-up research of large samples.

To sum up, the characteristics of adult attachment of medical students are as follows: insecurity attachment is the main feature, and the percentage of insecurity attachment among female students is much higher than that of male students. There is no significant grade difference in the dimension level and type distribution of adult attachment. This development feature reflects and continues the development trend of adult attachment among domestic college students in the past 10 years, and also reflects the current social and cultural characteristics.

References

1. Berman WH, Sperling MB. The structure and function of adult attachment [A]. In: MB Sperling, Berman WH (Eds.), Attachment in Adults: Clinical and Developmental Perspectives. New York and London: Guilford Press, 1994:3-28.
2. Bowlby J. Attachment and loss[M]. London: The Hogarth Press, 1982: 15-37.
3. Bowlby J. Attachment and loss: Vol. 1. Attachment[M]. New York: Basic Books. 1969.
4. Feeney BC. The dependency paradox in close relationships: Accepting dependence promotes Independence [J]. Journal of Personality and Social Psychology, 2007, 92, 268-285.
5. Liu Ying, Zhai Jing, Chen Xu. Cognitive neural characteristics of emotion regulation strategies of people with different attachment styles [J]. Chinese Journal of Psychological Science, 2016, 39(1): 109-115.
6. Guo Meiyong, Zhang Ping, Zhang Yuying. Psychological quality and sleep quality of college students with different attachment types [J]. Chinese Journal of Health Psychology, 2014, 22(4): 586-588.
7. Brennan K A, Clark C L, Shaver P R. Self-report measurement of adult attachment: An integrative overview. In Simpson J A, Rholes W S eds. Attachment theory and close relationships. New York: The Guilford Press, 1998.
8. Li Tonggui, Kato Hesheng Measurement of Adult Attachment: The Closeness Experience Scale (ECR), Chinese version [J]. Chinese Journal of Psychology, 2006, 38(3): 399-406.
9. Yang Qing, Yang Bo, Qiu Huihui, He Juanjuan. The relationship between adult attachment types and emotion regulation strategies of college students [J]. Health Education in China, 2016, 32(3): 230-232.
10. Zhang Hongmei, Liang Wei, Zhu Jinfu. An analysis of the relationship between attachment patterns, coping styles, depression, and anxiety in medical college students [J]. Journal of Xixiang Medical College, 2012, 29(7): 496-498.
11. Zhao Siping. The influence of adult attachment and interpersonal sensitivity on interpersonal distress of medical students [J]. Journal of Social Sciences of Shanxi University, 2015, 27(12): 60-62.
12. Pei Zhizhen, Zhang Lingcong. A study on the relationship between adult attachment and interpersonal relationship among medical students [J]. Health Vocational Education, 2016, 34(17): 99-101.
13. Ji Tingting, Wang Jiaqi. The influence of college students' attachment on self-disclosure [J]. Literature Education, 2013, (6): 32-33.
14. Bruce Lee, Lu Ning. The mediating role of Shenzhen college students' alexithymia in Internet addiction and adult attachment [J]. School health in China 2014, 35(5): 760-762.
15. Gu Simeng, Guo Benyu, Du Wendong, Wang Fushun. The relationship between college students' depression and adult attachment: the mediating effect of self-esteem [J]. Special Education in China, 2015, (9): 64-70.
16. Wang XG, Wang Y. Study on the relationship between attachment types and loneliness of ethnic college students [J]. Journal of Yangzhou Institute of Education, 2012, 30(2): 48-51.
17. Su Yuanyuan. To improve the interpersonal trust of post-90s college students from the perspective of adult attachment [J]. The Front, 2013, (22):183-184.
18. Zhang Jianhua, Gui Lihui, Guo Bingjie, Yang Shichang. The moderating effect of attachment on college students' subjective well-being and cell phone dependence [J]. School Health in China, 2015, 36(10): 1557-1559.
19. Li Xu, Zheng Xue, Wu Hao. The influence of adult attachment on college students' anxiety level: the moderating effect of objective social support [J]. Chinese Journal of Health Psychology, 2016, 24(9): 1374-1376.

20. Konrath SH, Chopik WJ, Hsing CK, et al. Changes in adult attachment styles in American college students over time a meta-analysis [J]. *Pers Soc Psychol Rev*, 2014, 18(4): 326 - 348.
21. Yan Gui, Zhang Minqiang. A study on the characteristics of adult attachment of college students [J]. *Journal of Ningxia University (Humanities and Social Sciences Edition)*, 2012, 34(1): 185-188.
22. Fang Lei, Tang Qingtao. A study on the characteristics of adult attachment of college students [J]. *Journal of Chongqing Second Normal University*, 2014, 27(3): 67-73.