

# Development of Psychological Problem Counseling Way Questionnaire for College Students

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**Abstract:** Mental health has a huge impact on the physical and mental development of teenagers. Nowadays, society and schools pay more and more attention to the physical and mental health of teenagers. At the same time, more and more attention has been paid to the guidance of teenager' sports and mental health. College students are a very large group of teenagers. Taking China as an example, according to the seventh national census bulletin, college students account for about 15.4% of the total population. Therefore, the mental health of college students is a topic worthy of study. We aim to investigate and to validate the psychological problem counseling way questionnaire for college students. Based on 400 colleges by open questionnaire, preliminary questionnaire is obtained first, and formal questionnaire of psychological problem counseling way is constructed. We conducted exploratory factor analysis and variance analysis on the observed data, and adopted the maximum variance rotation method to analyze our results. Three factors are extracted by exploratory factor analysis in our questionnaire for college students: psychological accommodation, self-defense, external counseling (53 items). Our psychological problem counseling way questionnaire for college students has reached the psychometric standard.

**Keywords:** College Students; Psychological Problem; Channeling Approach; Questionnaire Development; Counseling Way

## 1. Introduction

The development of a coping is a cognitively based behavioral measure that people take to deal with various life problems[1]. Coping is a cognitively based behavioral measure that people make when dealing with various life challenges. When there is mental or physical

tension and discomfort due to those problems, people adopt certain behaviors to solve or reduce the discomfort, and such behaviors are also called coping styles. Coping style can be described as a mediating factor[2], on the one hand, it is influenced by many factors such as gender, ethnicity, personality and so on, and on the other hand, it has a great influence on people's mental health[3-5].

Different age groups have different sources of psychological problems, Liu et al.[6] studied a questionnaire about middle school students' learning emotions. College students are a group with uniqueness, and they are also a high incidence group that is most likely to have emotional conflicts and behavioral problems in their psychology. Therefore, the mental health education of college students is a subject of great concern to colleges and universities and even to the society. Xie et al.[2] analyzed the study of school, gender and anxiety level differences in college students' coping styles. Liu et al.[6] gave an empirical study on the characteristics of stress and coping styles of college students. Zhang et al.[7] studied the college students' stress and coping styles. Zhang et al.[8] searched the characteristics of college students' psychological stress coping styles. Wei et al.[9] gave a quiz study on the coping activities of college students. Xu et al.[10] analyzed the research study of college students' positive and negative academic emotions. In stressful situations, Chinese college students used "facing problems and actively coping with them" and "seeking social support" more frequently. In fact, the frequency of "avoiding" and "letting things happen" is slightly lower than that of the other methods. For more results, one can refer to these papers[11-16].

## 2. Subjects and Research Methods

### 2.1 Project Preparation

In order to understand the ways in which

university students manage their psychological problems, a project was developed based on the self-assessment scale (COPE[17-18]), together with the Simple Coping Style Scale (SCSQ) and the CSQ scale. Moreover, combining with the existing studies, we prepared an open-ended questionnaire. The questionnaire was divided into three dimensions of psychological regulation, self-defense and external guidance, with a total of 55 items. Psychological regulation involves adjusting cognition and summarizing experience, and contains 4 items; self-defense involves proactive coping, optimistic interpretation, fantasy avoidance, shirking denial, restraint and acceptance of reality, and contains 35 items. External guidance involves distraction, seeking help from others, emotional catharsis, and alcohol dependence, with a total of 16 items. For example, the four items in the psychological adjustment dimension are as follows: (1) learning from failure, (2) changing immediate thoughts and rediscovering what is important in life, (3) learning from one's own or others' experiences to cope with difficulties, (4) changing some of one's original thoughts or some of one's own problems. Preliminary analysis of the revised entries was done through a small pretest. Finally, the prediction questionnaire was formalized.

## 2.2 Questionnaire Prediction

In order to test the reasonableness of the questionnaire, we first carry out the questionnaire prediction. The pretest subjects come from different majors in our university, a total of 100 students were taken as subjects, and 81 valid questionnaires were recovered. Among them, 22 were from senior, 22 from junior, 19 from sophomore, and 18 from freshman. After modification and deletion, 2 items in external sparing were eliminated and 53 items were retained.

## 2.3 Formal Administration of the Questionnaire

The formally questionnaire contained a 400 college students of different grades in colleges and universities across the country, and 273 valid questionnaires were recovered. The distribution of survey respondents involves a total of 12 provinces across the country, including Chongqing, Ningxia, Henan and Shanghai, and seven major categories of specialties, such as literature, history and

philosophy, science and technology, teacher training, art, economics, management and law. The statistical information on the classification of the source of survey respondents is shown in Table 1.

**Table 1. Classified Statistics of Survey Respondents' Sources and Results of Questionnaire Distribution**

Considering the impact of the epidemic, this survey took the form of online distribution of questionnaires, using a unified written guide for assessment. The number of distributed questionnaires reached 400, and the number of recovered questionnaires was 320, of which 273 were valid.	
Gender	Male: 22% Female: 78%
Ethnicity	Han: 52% Minority: 48%
Grade Level	Freshman: 9.5% Sophomore: 43.6% Junior: 10.6% Senior: 36.3
Urban and Rural Student Population	Urban: 34% Rural: 66
Only child or not	Yes: 18% No: 82
Self-assessed personality	More introverted: 55.7% More extroverted: 15.8% Equal: 28.5%

## 3. Survey Results and Analysis of College Students' Psychological Problems Relief Methods

### 3.1 Analysis of the structural Validity of the Questionnaire

This study conducted exploratory factor analysis (EFA) on the observed data, adopted the maximum variance rotation method, and by rotating and analyzing the factors, the following conclusions were drawn: (1) Taking the eigenvalue of the factors before rotation as the criterion, a total of 12 factors were finally obtained (proactive coping, optimistic interpretation, adjusting cognition, summarizing experience, diverting attention, seeking help from others, emotional catharsis, fantasy avoidance, alcohol attachment, shirking denial, restraint tolerance, and accepting reality); (2) KMO value of 0.867; (3) Bartlett's sphericity corresponding to a p-value of less than 0.001, (4) Cumulative variance contribution ratio: e.g., Factor 1 (52.06%), Factor 2 (88.68%), Factor 10 (94.34%), Factor 11 (86.23%), Factor 12 (88.11%), etc., are all above 50%, indicating that all these 12 factors derived from the analysis are able to extract the information content of the

question items to a large extent. To summarize, the design of the question items of this questionnaire has a good level of validity.

The KMO Value is 0.867; The Bart's Spherical Value is 1020.627; The P-value is 0. Combined with the existing related literature, it was further classified into 3 dimensions, i.e., psychological regulation, self-defense, and external diversion.

### 3.2 Questionnaire Structure Reliability Analysis

Firstly, all the questionnaire data were analyzed using the reliability pretest. In the formally questionnaire, the two indexes of corrected item total correlation (CITC) and the coefficient of item has been deleted, because these items did not meet the reliability standard, and further consider whether to do the deletion process. The results (as shown in Table 2) indicate that: the coefficients of CITC are all greater than 0.3, so the items involved meet the confidence prediction criteria and are not deleted. Meanwhile, the coefficient values of the deleted items are lower than the overall coefficient (0.949), which meets the criterion of credibility and test, so it also indicates that the questions involved should not be deleted.

**Table 2. Presentation of Some Results of the Pretest Analysis of Credibility**

Item	Corrected item total correlation	$\alpha$ Coefficient of item deleted	$\alpha$ Coefficient
1	0.726	0.854	0.949
2	0.840	0.895	
3	0.682	0.800	
4	0.587	0.742	
.....	.....	.....	
52	0.839	0.887	
53	0.816	0.764	

Secondly, a formal test of the credibility of this questionnaire was done, i.e., Cronbach's reliability coefficient was used to measure the level of credibility quality of the data in this questionnaire. The results (shown in Table 3) indicate that: (1) the Cronbach's coefficient value (0.777) for dimension A1 is between 0.7~0.8, which means that all the questions included in this dimension have good reliability for the corresponding response results; (2) the Cronbach's coefficient value (0.928) for dimension A2 is greater than the highest standard of reliability 0.8, which means that all the questions included in this dimension have very high reliability for the corresponding

response results; (3) the Cronbach's coefficient value of A3 dimension (0.858) is greater than the highest standard of 0.8, which indicates that all the questions contained in this dimension have high credibility in terms of the corresponding response results.

**Table 3. Results of the Analysis of the Formal Test of Trustworthiness**

Dimension (name)	Number of items	$\alpha$ Coefficient
Dimension A1 (psychological adjustment)	4	0.777
Dimension A2 (self-defense)	35	0.928
Dimension A3 (external diversion)	14	0.858

To summarize, this questionnaire on the way of coping with psychological problems of college students possesses good credibility, and the data collected from the responses have a high degree of authenticity and reliability.

### 3.3 Analysis of Differences in the Questionnaire

#### 3.3.1 Difference analysis of different groups

On the Dimension A1 (psychological regulation) : freshmen and juniors used cognitive adjustment more often than sophomores and seniors, and juniors used it significantly more often than the other three grades; freshmen and juniors used the strategy of summarizing experience more often than sophomores and seniors.

On the Dimension A2 (self-defense): freshmen used shirking and denial the most and also the most of the four grades, and they used restraint and patience the least; sophomores tended to fantasize about avoidance in particular, and were very unlikely to adopt optimistic explanations, which in fact were less likely to be used in all grades; juniors tended to use optimistic explanations less frequently than sophomores and seniors on the fantasizing, shirking, denial, restraint and patience, and acceptance of experiences strategies; freshmen and juniors tended to use denial, restraint and patience, and acceptance of reality with equal frequency, and also the most frequent use of these four coping strategies among the four grades; juniors were more inclined to adopt fantasy avoidance.

On the Dimension A3 (external diversion): freshmen used diversion most frequently and were less likely to seek help from others; sophomores had equal means for diversion and

alcohol dependence, and were the most frequent users of the external diversion dimension, while the least frequent user was emotional catharsis, which was the least frequent of the four grades; the frequency of use of emotional catharsis was much higher for juniors than for the other three grades; for seniors, the least preferred coping strategy was seeking help from others, while having equal and higher mean values for distraction and alcohol dependence.

### 3.3.2 Ethnic differences were analyzed

On the Dimension A1 (psychological regulation) : whether adjusting recognition or summarizing experience, the mean values of Han Chinese students were higher than those of ethnic minority students.

On the Dimension A2 (self-defense): Han Chinese students adopted the three coping strategies of proactive coping, fantasy avoidance, and acceptance of reality much more frequently than did ethnic minority students, while the other three, did not reflect a large difference.

On the Dimension A3 (external diversion) : the greatest difference between Han Chinese and ethnic minority students was distraction, and the most frequent coping strategy adopted by all students was emotional catharsis, while the least frequent was alcohol dependence.

### 3.3.3 Gender difference analysis

From the perspective of the three dimensions, in the Dimension A1 (psychological regulation): all female students' usage rates were higher than those of male students.

On Dimension A2 (self-defense): male students' frequency of using the three coping strategies of proactive coping, optimistic explanation and acceptance of reality was much higher than that of the other three factors, and the one that was used the most frequently was optimistic explanation, and its average value was much higher than that of the mean values of female students.

On the Dimension A3 (external diversion), both male and female students tended to choose diversion, and those who chose alcohol attachment were the least.

### 3.3.4 Analysis of differences between urban and rural student populations

On the Dimension A1 (psychological regulation), the use of the mechanism for this dimension was significantly higher for students from urban areas than for those from rural areas.

On the Dimension A2 (self-defense), except for the coping strategy of fantasy avoidance, the

mean values of college students from urban areas were higher than those of college students from rural areas. The frequency of the two coping strategies, denial and proactive coping, was significantly higher than that of the other four coping strategies for the urban students, while the frequency of fantasy avoidance was much higher than that of the other five coping strategies for the rural students. The least frequent coping strategy adopted by all students when facing psychological problems was accepting reality.

On Dimension A3 (external guidance): the frequency of using these four coping strategies was higher for urban students than for rural students; the highest frequency used by all students was emotional catharsis, and the lowest frequency used was alcohol dependence.

### 3.3.5 Analysis of differences in whether or not they were only children

On Dimension A1 (psychological regulation): regardless of whether or not they were only children, college students in this trait category were more likely to use the strategy of summarizing experiences. On this dimension, all non-only children had a higher usage rate than only children in dealing with psychological problems.

On Dimension A2 (self-defense): excluding shirking denial, non-only children had a lower frequency of adopting the other five strategies than only children. The most frequent coping strategy used by all college students was restraint and patience. The least frequent coping strategy used by only children was shirking denial, whereas for non-only children it was optimistic explanations.

On Dimension A3 (external guidance): excluding alcohol attachment, only children were more likely than non-only children to adopt the other three coping strategies. The highest coping strategy adopted by all college students in this dimension was emotional catharsis, and the lowest was seeking help from others.

### 3.3.6 Comparative analysis of differences in majors

This paper compares the difference analysis of five majors: literature or philosophy history, science and engineering, medical science, teacher training, and economics and management.

On the Dimension A1 (psychological regulation): college students of science and engineering, medical science and teacher training are all more

inclined to adjust their cognition, while college students of literature or philosophy history, economics and management, science and engineering are more inclined to summarize their experiences.

On the Dimension A2 (self-defense): college students of these five categories of majors have a relatively high frequency of using the two major coping strategies of optimistic explanation and fantasy avoidance.

On the Dimension A3 (external channeling), college students in literature or philosophy history, science and engineering majors were more inclined to divert their attention, while college students in medicine and teacher training majors had a relatively higher probability of adopting the two coping strategies of seeking help from others and emotional catharsis, and college students in economics and management, science and engineering majors had the lowest probability of using these two coping strategies. Alcohol dependence was the least frequent coping strategy for college students majoring in science and engineering, medicine, and teacher training.

### 3.3.7 Comparative analysis of personality differences

From the perspective of the three dimensions, on the Dimension A1 (psychological regulation): college students of all three personalities were more inclined to summarize their experiences.

On Dimension A2 (self-defense), introverted college students are more inclined to shrug off denial and accept reality, while extroverted and extraverted college students are more inclined to shrug off denial and restrain patience. In this dimension, the least frequent coping strategy used by all three types of college students when facing psychological problems was proactive coping.

On the Dimension A3 (external diversion): introverted college students were more inclined to divert their attention, extroverted college students were more inclined to seek help from others, and equal introverted and extroverted college students had a higher probability of using alcohol dependence. On this dimension, the probability of using emotional catharsis was relatively low for all three personalities.

## 4. Conclusion

According to the Symptom Checklist 90 (SCL-90), that is, symptom self-rating scale, it shows that the SCL-90 scores of the national youth

group were significantly lower than those of the college students. Moreover, all SCL-90 factors were significantly different for the college students. Therefore, counseling is essential. Counseling is a process of helping people to help themselves, which involves change, development, and growth. The ultimate goal of counseling is self-actualization. China's current psychological counseling for college students can be divided into three main forms, namely, mental health education, group counseling and individual counseling.

Expanding the awareness of mental hygiene education and strengthening the research of mental hygiene professionalism is a common issue for us. Psychological counseling is a very important part of mental health education for college students. Universities have opened psychological counseling centers to provide specialized psychological counseling services for college students who are suffering from psychological stress caused by many factors such as study, interpersonal and economic factors, etc., so as to do all the positive work for the healthy development of college students' mental health. Group counseling is conducted in a group setting, i.e., it is a psychological counseling service for a group composed of many counselors. Group counseling is conducted in a group setting. Research has shown that group counseling can largely improve the negative psychological effects of college students and effectively promote the development of college students' psychological health. Individual counseling, i.e., one-on-one counseling, which can directly solve the psychological problems of the visiting students, and indirectly change the emotional and behavioral cognition of the visiting students. At present, whether it is the psychological counseling center of China's colleges and universities or the psychological counseling agencies in the community, the vast majority performs individual counseling. But perhaps because it is very common, leading that in China's current professional research on individual counseling as well as related counseling collation is particularly scarce!. Therefore, it is our common goal to strive to improve the psychological counseling mechanism of contemporary college students, and this study also provides a theoretical basis.

To summarize, this paper compiles a questionnaire applicable to the way of

counseling psychological problems of college students in China, which can effectively measure the way of counseling psychological problems of the college student group, but due to the large differences in the study group, the proportion of men and women is not balanced enough, which is also a limitation of this sample, and it is necessary to expand the size of the sample for further research in the future.

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