

Preliminary Compilation of Self-Responsibility Questionnaire for College Students

Beilei Yao^{1,a}, Juan Ma^{1,b,*}, Yuxi Huang^{1,c}, Na Ni^{1,d}

¹*Shaanxi University of Chinese Medicine, Xiayang, Shaanxi, 712046, China*
^a1132864011@qq.com, ^bshximaj@126.com, ^c411653539@qq.com, ^dnina_kx@163.com
**Corresponding author*

Keywords: Self-responsibility, College Students, Questionnaire Compilation

Abstract: Objective: A questionnaire on self-responsibility of college students was developed and its reliability was tested. Methods: Using college students as subjects, the self-administered self-responsibility questionnaire was analyzed by item analysis, exploratory factor analysis and reliability and validity analysis to form a formal assessment questionnaire. Results: The Self-Responsibility Scale for college students contains three dimensions of survival responsibility, developmental responsibility and interpersonal responsibility, with 13 items and good reliability. Conclusions: The self-responsibility questionnaire has good reliability and validity and can be used initially as a measurement tool to assess the self-responsibility of college students.

1. Introduction

The word responsibility is originally derived from the Latin word "correspondeo", meaning the ability to fulfill an obligation; in psychology, responsibility refers to an individual's perception of his or her social role in social life, and the resulting emotional experience and corresponding behavior [1]. Self-responsibility, on the other hand, is an individual's emotional experience of whether the behavioral choices he or she makes in assuming responsibility for his or her own development, the process and consequences of the behavior are in line with inner needs, and the main processes targeted are the completion of personal tasks, the achievement of individual accomplishments, etc [2]. In social life, individuals play different roles in different social relationships, such as school roles, family roles, and self-roles, and thus assume different obligations and produce corresponding responsible behaviors. The sense of self-responsibility of college students, on the other hand, is the cognition of the responsible behavior that college students should take on themselves in their daily study life and the emotion they experience in the process, which includes individual emotion, individual behavior and individual cognition, etc. It is the basis of all individual responsibility, including the responsibility of self-survival and self-development [3].

Contemporary college students are in the era of continuous and rapid social development and diversified value orientation, which makes them increase their psychological conflicts and unwilling to face the reality; they show a look of no desire and no struggle in daily life [4], and this attitude of playing life and perfunctory study is a kind of negativism and lack of self-responsibility, which is

extremely detrimental to the growth and development of college students. Previous studies have shown that the cognitive style and subjectivity of individuals greatly affect the development of their sense of responsibility and the level of responsibility [5], and that internally controlled individuals believe that they should be responsible for themselves [6], therefore, research can improve the sense of self-responsibility of individuals by strengthening their self-responsibility awareness. From the family level, in one-child families, children are too dependent on their parents, and their inability to solve difficulties independently is also one of the factors leading to the lack of self-responsibility among college students. Baumrind classified parenting styles as authoritative, tolerant, and authoritarian, and after investigation found that authoritative parenting styles have the greatest impact on the development of responsibility in adolescents [7]. Zhang Lanjun et al. also found through their study that parenting style greatly affects college students' sense of responsibility [8], and individuals will have multiple responsibility relationships with others and society during their growth, but the first responsibility relationship acquired is that between individuals and their families, so the sense of responsibility is largely influenced by family factors. At the social and school level, the negative influence of the social environment and the failures of school education are the main influencing factors for the lack of individual responsibility [9]. College students are the successors of the new era, bearing and shouldering the great responsibility and mission for the development of the country and society, so it is evident that the sense of self-responsibility of college students is an inherent requirement for their growth and success. Therefore, based on the previous research, this study will compile a professional questionnaire related to college students' sense of self-responsibility from the perspective of psychology to supplement the gap in the measurement of college students' sense of self-responsibility, provide psychological questionnaires to support the mental health education activities related to self-responsibility in colleges and universities, and better promote the realization of college students' self-worth.

Currently, there are two main types of scales for measuring responsibility: the responsibility subscale of personality scales, such as the social responsibility subscale of the MMPI, and the "responsibility" subscale of the Big Five personality scales; the other is a specialized responsibility scale, such as the responsibility subquestionnaire of the moral-emotional questionnaire for adolescents developed by Lu , which was shown to have good reliability and validity [10], and the community responsibility questionnaire for Chinese residents developed by Yang Chao[11]. Most studies have used the "Dutifulness" subquestionnaire of the Big Five Personality Inventory to measure the social responsibility of college students, or the Adolescent Sense of Responsibility Questionnaire developed by Ding Qiang et al, which includes three dimensions of self-responsibility, interpersonal responsibility, and social responsibility, to measure the level of responsibility of college students. Therefore, based on previous studies and existing responsibility questionnaires, this study will develop a questionnaire suitable for measuring college students' self-responsibility based on the definition of the concept of self-responsibility, its composition and related influencing factors, so as to better understand the development of college students' self-responsibility and provide a corresponding basis for promoting the improvement of college students' self-responsibility level.

2. Questionnaire Construction

2.1. Formation of the Questionnaire Structure

Based on the research and analysis of previous literature, this study constructs the structural dimensions of college students' self-responsibility from the perspective of individual factors influencing self-responsibility based on the responsibility components and psychological processes of self-responsibility.

From the perspective of responsibility composition, the sense of self-responsibility is divided into the sense of responsibility for survival and the sense of responsibility for development [3]. Among them, the sense of responsibility for survival refers to the pursuit and love of healthy life and safety of college students, which includes responsibility, cognition, and emotion, and the actions put into it. The sense of responsibility for development refers to the sense of responsibility that arises from college students' concern for self-emotion, desire for respect and recognition, positive development of interpersonal relationships, having clear goals and striving for them, and self-actualization in a good state of existence.

From the perspective of psychological processes, responsibility is divided into three closely related and interacting psychological processes: responsibility cognition, responsibility emotion, and responsibility behavior [5]. Responsibility cognition refers to the individual's perception, assessment, and inference of the events, behaviors, and outcomes that occur in a certain situation. Responsibility emotion refers to whether the event, behavior and the result of the process are in line with the individual's needs or values, thus producing an emotional experience, including positive and negative emotions. Responsible behavior refers to the individual's direct or indirect behavior in the occurrence, process and results of a specific event, including both actions, such as doing one's job, and omissions, such as negligence, including both outward behavioral responses.

Therefore, this study divides self-responsibility into two dimensions: responsibility for survival and responsibility for development, and each dimension contains three elements: responsibility perception, responsibility emotion, and responsibility behavior.

2.2. Initial Questionnaire Formation

Based on the summarized structure of college students' sense of self-responsibility, referring to the relevant literature at home and abroad, and combining with the previous sense of responsibility questionnaire entries, the initial questionnaire of college students' sense of self-responsibility was formed, with a total of 30 items, using a five-level scoring method; and one psychology expert and five psychology postgraduates were invited to evaluate the original questionnaire by experts in total, and the initial questionnaire of college students' sense of self-responsibility was finally obtained.

3. Objects and Methods

3.1. Subjects

Using college students as subjects, 113 online questionnaires were distributed, and 103 valid questionnaires were distributed. Among them, 47 were male students, accounting for 41.7% of the total.

3.2. Research Tools

A self-administered self-responsibility questionnaire was used, which contains 30 questions, including 6 reverse scoring questions (2, 3, 4, 13, 26, 27), and were scored on a 5-point scale from 1 (very much in line) to 5 (very much not in line), with higher scores indicating higher levels of self-responsibility among college students.

3.3. Survey and Data Analysis

The questionnaires were distributed and collected on the online platform, and the invalid questionnaires were removed after recovery, the valid data were entered into SPSS, the reverse

scoring questions were recoded, and the total score was calculated. And then invalid questionnaires were removed based on the following criteria: observation of extreme values: subjects whose total scores were outside ± 3 standard deviations could be excluded; consecutive selection of the same option. The questionnaire was then subjected to item analysis, exploratory factor analysis, and reliability testing.

4. Results

4.1. Project Analysis

The total scores of the scale were sorted into high and low groups, and then independent sample t-tests were conducted to check whether the difference between the scores of the subjects on each question was significant. In this study, after sorting the total scores in ascending order, the top 27% of the scores were considered as the low group and the bottom 27% of the scores were considered as the high group, while independent sample t-tests were then conducted for the high and low groups of each question item. If the correlation coefficient was not significant or low, the meaning expressed in question was far from what was measured in the overall scale, and the homogeneity was poor, so it could be excluded; if the correlation coefficient was high, the homogeneity was good and it was retained. A total of 2, 13, 20, and 27 questions were eliminated by the above two methods. The results of data analysis are shown in Table 1.

Table 1: The results of the discrimination test and the results of the total question correlation analysis.

Item	CR	r	Item	CR	r
Q1	6.708**	0.529**	Q16	5.095**	0.494**
Q2	0.900	0.096	Q17	6.072**	0.600**
Q3	5.623**	0.401**	Q18	5.432**	0.549**
Q4	3.033**	0.380**	Q19	2.920**	0.353**
Q5	3.589**	0.415**	Q20	1.382	0.147
Q6	4.146**	0.487**	Q21	5.400**	0.522**
Q7	9.610**	0.763**	Q22	5.155**	0.465**
Q8	2.835**	0.314**	Q23	9.195**	0.647**
Q9	4.261**	0.385**	Q24	7.584**	0.537**
Q10	9.633**	0.714**	Q25	3.208**	0.279**
Q11	4.602**	0.466**	Q26	2.453*	0.258**
Q12	6.487**	0.660**	Q27	0.820	0.019
Q13	1.328	0.100	Q28	4.800**	0.527**
Q14	2.431*	0.222*	Q29	7.521**	0.546**
Q15	10.744**	0.750**	Q30	5.107**	0.497**

Note:**p<0.01,*p<0.05

4.2. Exploratory Factor Analysis

The exploratory factor analysis allows us to verify whether the constructed dimensions are reasonable, and then explore the potential structure among the questions and further cull the questions. When conducting exploratory factor analysis, the sample size should be at least three times the number of question items. 26 questions remain after item analysis, and the sample size is 103, which is more than three times the number of question items and meets the quantitative

requirements; in addition, exploratory factor analysis can only be conducted when the KMO index value is >0.8. In this study, the KMO value was 0.800, which is greater than 0.8 and Bartlett's sphericity test significance $p < 0.001$, so it is suitable for factor analysis. See Table 2.

Table 2: KMO and Bartlett's test

KMO and Bartlett's test		
KMO Sampling suitability quantity		.800
Bartlett's sphericity test	Approximate cardinality	1045.491
	Degree of freedom	325
	Significance	.000

In this study, the exploratory factor analysis of the questionnaire was conducted by principal component analysis, and the maximum variance method was used to rotate and extract the common factors with eigenvalues greater than 1. After repeating several times, a total of 10 questions were deleted and 13 questions were retained, and 3 common factors were extracted, with a cumulative variance contribution rate of 59.39%. The factors were named according to the significance and conceptual dimensions of the topics with higher loadings, and the results showed that the self-responsibility questionnaire for college students contained 13 questions with 3 dimensions, which were survival responsibility, development responsibility and interpersonal responsibility. See Table 3.

Table 3: Matrix of rotated components

Item	Factor		
	1	2	3
I'm cautious when strangers approach me	.734		
I am hopeful for the future	.726		
I think health is important	.695		
I will actively stay away from things that corrupt my mind	.555		
I think it is important to have a clear goal in life	.534		
I will find a part-time job to ease my parents' burden		.733	
I will take action to gain the respect and recognition of others		.724	
Recognition and respect from others is important to me		.711	
I am happy when I feel physically healthy		.627	
I am sad when I have conflicts with others		.620	
I can adapt well to my environment			.773
I can communicate with my teachers and classmates			.753
When I come to a new environment, I will take the initiative to make friends			.603

4.3. Confidence and Validity Analysis

4.3.1. Confidence Analysis

Table 4: Results of confidence analysis

Dimension	No. of items	Cronbach's alpha coefficient
Development Responsibility	5	0.767
Survival Responsibility	5	0.772
Interpersonal Responsibility	3	0.667
Total table	16	0.803

The reliability of the total and subscales was measured using the Cronbach's alpha coefficient method, and the analysis showed that the Cronbach's alpha coefficient for the total questionnaire was >0.8 , and the Cronbach's alpha coefficient for each dimension was >0.6 , which met the requirements of the reliability analysis. See Table 4.

4.3.2. Validity Analysis

The correlation between dimensions and the correlation between each dimension and the total questionnaire were used to test the structural validity of the questionnaire, and the results showed that there was a moderately significant correlation between the dimensions and the total score ($p < 0.01$) and a moderately significant correlation between the dimensions ($p < 0.01$), indicating that the questionnaire has good structural validity. See Table 5.

Table 5: Results of validity analysis

Dimension	Development Responsibility	Survival Responsibility	Interpersonal Responsibility
Development Responsibility			
Survival Responsibility	0.48**		
Interpersonal Responsibility	0.33**	0.45**	
Total table	0.87**	0.85**	0.68**
Note: ** $p < 0.01$.			

5. Research Reflection and Conclusion

It was found that the Self-responsibility Scale for College Students contains three dimensions of survival responsibility, development responsibility, and interpersonal responsibility, with 13 items, which better verifies the structure of college students' self-responsibility proposed in Liu Bingxue's study[3], reflects the characteristics and connotation of college students' self-responsibility, and has some reference value for the subsequent research related to college students' self-responsibility. According to the content of the questionnaire entries, this study defines survival responsibility as the individual taking some behavior and giving emotions in the pursuit of health and safety in the process of survival; development responsibility as the individual taking corresponding behaviors and giving corresponding effort and emotion in the process of long-term development; interpersonal responsibility as the individual's sense of responsibility embodied in the process of interaction with others, such as initiative, adaptation, etc. Through the results of the study, it can be seen that the self-responsibility of college students is mainly reflected in the three aspects of survival, development, and interpersonal, and through giving cognition, emotion, and behavior in these three aspects, it can better promote self-development and growth.

However, due to the limited ability of the researcher, this study still has certain shortcomings in sample size and measurement procedures. Later, we can add qualitative studies such as interviews, and on this basis, expand the sample size, add calibration standards for validation analysis, and improve the measurement procedures to further improve and expand the study.

In summary, this study concludes the following: (1) college students' sense of responsibility contains a total of three dimensions: survival responsibility, development responsibility, and interpersonal responsibility; (2) the reliability index of the self-administered college students' sense of self-responsibility questionnaire is good and can be used as a preliminary measurement tool for college students' sense of self-responsibility.

References

- [1] L. Z. Yang. (2004) A review of research on children's responsibility. *Journal of Liaoning Normal University (Social Science Edition)*, (3), 41-43.
- [2] J. L. Zhu. (2011) An empirical study of contemporary college students' sense of self-responsibility. Lanzhou University.
- [3] B. X. Liu. (2017) Analysis of the current situation of college students' self-responsibility and countermeasures. Shandong Normal University.
- [4] X. Q. Luo. (2007) *Research on the Development and Application of Responsibility Questionnaire for College Students*. Fujian Normal University.
- [5] L. X. Jiang. (2015) A study of elementary school students' sense of self-responsibility and its related factors. Shanghai Normal University.
- [6] Baumrind D. (1978) Parental discipline patterns and the social competence of children. *Youth and Society*, 50(9), 239-276.
- [7] L. J. Zhang, et al. (2006) Cognitive structure of college students' responsibility and parenting style - A Comparative Study of College Students in Military and Local Colleges. *Contemporary Youth Studies*, 2, 24-26.
- [8] M. Zhang. (2008) *Research on responsibility awareness education for college students*. Southwestern University.
- [9] J. M. Lu, et al. (2010) A study on the current status of moral emotions of Chinese adolescents. *Educational Research*, 12(371), 83-90.
- [10] C. Yang, et al. (2019) Development and reliability testing of a community responsibility questionnaire for Chinese residents. *Chinese Journal of Clinical Psychology*, (2), 242-245.
- [11] Q. Ding, et al. (2014) Development of a responsibility questionnaire for adolescents. *Chinese Journal of Clinical Psychology*, 22(5), 830-834.