



Compilation of Humor Scale for Applied Undergraduates in Fuzhou

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Authors' contributions

This work was carried out in collaboration among all authors. Author SL designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors CJH and TFY managed the analyses of the study. Author TFY managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The objective of this study aims at developing measure scale of sense of humor (SOH). The initial measure items were collected by reverent literature review of previous studies. Data was collected by questionnaire survey from an applied college and a total of 350 valid samples were received with a responded rate of 83%. The results of structure equation modeling (SEM) showed that the adequately reliability and validity of the scale could be met. Furthermore, five factors named humor creation, humor applied, humor attitude, humor collection, and humor copy were extracted from twenty measure items. Finally some suggestions were drawn to the college.

Keywords: Sense of humor; college student; interpersonal communication.

1. INTRODUCTION

At present, China's urbanization and industrialization are in the process of rapid development, and the demand for technology-applied talents is rising. In this context, a group of application-oriented undergraduate schools have emerged as the times require, and have become an important part of China's higher education. Application-oriented colleges cultivate talents who can apply professional knowledge and skills to professional social practice. Therefore, this requires that undergraduates trained in application-oriented undergraduate colleges have higher abilities and qualities in social practice, interpersonal communication and interaction than those of traditional undergraduate colleges. And the sense of humor, as an individual shows a habitual behavior, experience, emotion, attitude and ability in daily activities, is an important psychological quality and positive emotional experience. According to the social theory of humor, individuals with a sense of humor perform much better in communication and social adaptation than those without a sense of humor.

At present, scholars have developed some humor scales, but the existing humor scales have a large overlap and crossover. And sense of humor is closely related to factors such as environment and language. The former sense of humor scale has some defects in measuring the sense of humor of applied undergraduates under the new situation. Therefore this study based on applied undergraduate students, compile an applicable to private scale applied undergraduate college students' sense of humour, so as to lay a foundation for further research on the relationship between individual sense of humor, learning effect and employment difficulty [1,2].

2. RESEARCH METHODS

2.1 Preparation of Scale

The initial scale of this study refers to the compilation of humor scale published by Shurong Chen [3] and Shiming Chen [4]. On this basis, 30 students were randomly selected from a private application-oriented college for in-depth interviews. The open-ended questions for humor listed were the main topic of discussion, including "What do you think is humor?" What do you think

characterizes a person with a good sense of humor? "How do you feel about gaining or improving your sense of humor?" etc.

Based on the comparative analysis of the answers of 30 respondents, the following preliminary understandings were obtained:

It is generally believed that people who have a good sense of humor usually possess these qualities: 1. Make your friends happy in your interactions; 2. Fully display humor in study, life and interpersonal communication; 3. Better self-adjustment when facing difficulties and setbacks; 4. Prefer to read or collect books or information that make people happy; 5. They also have more cheerful and humorous friends.

Based on the information summarized, the final questionnaire containing 20 questions was developed based on expert evaluation and the scale compiled by predecessors, as shown in Table 1.

Then a total of 350 questionnaires were distributed to five colleges of a private application-oriented undergraduate university. In general, the larger the sample size, the more representative the population is. However, considering the cost factor, we need to scientifically set the sample size within the allowable error range to balance the relationship between survey cost and survey accuracy. Theoretically, 300 to 400 samples are sufficient to achieve a 95% confidence rate, so 350 questionnaires were finalized in this study [5].

In the end, 291 of the 350 questionnaires were effectively recovered, accounting for 83.14% of the total. For academic research questionnaires, the effective recovery rate of questionnaires above 70 is considered acceptable [5]. In this study, the effective questionnaire recovery rate is 83.14%, so it meets the requirement of recovery rate. The statistical data reflected in the questionnaire can be further analyzed.

2.2 Factor Analysis, Reliability and Validity Analysis

In this study, SPSS 20 was used to analyze the exploratory factors of five constructs of humor. In this study, the maximum variation method was used as the axis of rotation to extract factors with eigenvalues greater than 1. The KMO value of this scale is 0.899 and the Bartlett sphere test

Table 1. Measure items for sense of humor

No.		No.	
1	My witty remarks always make my friends laugh	11	I always smile when my life is not going well
2	I often make jokes with my friends	12	When I am not well, I often smile to relax myself
3	I often make people laugh	13	I usually read funny books
4	My witty remarks will make my friends happy	14	I like to watch some jokes, humorous stories or comedies
5	I often use humor to persuade others	15	I often laugh aloud when I read jokes or humorous stories
6	I use humor to express my dissatisfaction	16	When I am in a bad mood, I often watch some humorous stories or movies
7	I often use humor to comfort others	17	I often go out with people who are funny
8	I often turn people down in a lighthearted way	18	I usually pay attention to observe the life of those humorous people's words and deeds
9	I often look at difficulties and setbacks from a relaxed perspective	19	I often memorize the lines of humorous stories
10	In the face of life's disappointments, I often find pleasure in bitterness	20	I often memorize the lines of humorous movies

reaches a significant level, which is suitable for factor analysis. When the variance was rotated to the maximum, there were no questions with a common degree less than 0.40 and a factor load less than 0.4 in this scale. Therefore, all 20 questions in this scale are valid items according to the results of factor analysis. This scale extracted 5 factors, each factor contains 4 questions, which can explain 70.139% of the total variance.

3. RESULTS AND DISCUSSION

According to the results of the factor analysis, referring to the problems involved in each factor, and combining the interviewee's description of the five characteristics of people with a sense of humour. The five factors of this scale are named as: 1. Humor production; 2. Application of humor; 3. Humorous attitude; 4. Humor collection; 5. Humorous imitation [6]. The specific factor analysis results are shown in Table 2.

Five factors of the scale were analyzed for reliability and validity. The value coefficients of the five dimensions of the questionnaire are all above 0.60, reaching an acceptable level. It indicates that there is a high internal consistency among the questions in each level of the questionnaire and the reliability index is good. A good questionnaire structure requires a correlation coefficient between dimensions

between 0.1 and 0.6. All dimensions of this questionnaire meet this requirement, indicating that this questionnaire has good validity. The specific results are shown in Table 3 and Table 4.

3.1 Confirmatory Factor Analysis

Based on the results of exploratory factor analysis, AMOS 20 statistical software was used for confirmatory factor analysis to verify the correctness of theoretical or conceptual models. In this study, χ^2 , df, GFI, CFI, NFI, NNFI and RMSEA were selected as the criteria to evaluate the degree of model fitting. The values of GFI, CFI, NFI and NNFI should be close to 1. It is generally believed that the model has good fitting degree when the values of these three indexes are not less than 0.90. RMSEA is an index to measure the difference among degrees of freedom. If the value is less than 0.08, it can be considered that the model fits well.

Confirmatory factor analysis results show that χ^2 /df value is 2.691, between 1 and 5, indicating that the model has a good fitting degree. At the same time, CFI and NNFI values are both greater than 0.9, NFI value is 0.880, RMSEA value is 0.072, and all indicators are acceptable, indicating that the model has good structural validity. The specific model and factor analysis results are shown in Fig. 1 and Table 5.

Table 2. Factor analysis table

No.	Questions	The principal components				
		Humor production	Application of humor	Humorous attitude	Humor collection	Humorous imitation
1	My witty remarks always make my friends laugh	.825				
2	I often make jokes with my friends	.757				
3	I often make people laugh	.856				
4	My witty remarks will make my friends happy	.838				
5	I often use humor to persuade others		.543			
6	I use humor to express my dissatisfaction		.614			
7	I often use humor to comfort others		.680			
8	I often turn people down in a lighthearted way		.671			
9	I often look at difficulties and setbacks from a relaxed perspective			.781		
10	In the face of life's disappointments, I often find pleasure in bitterness			.804		
11	I always smile when my life is not going well			.845		
12	When I am not well, I often smile to relax myself			.757		
13	I usually read funny books				.641	
14	I like to watch some jokes, humorous stories or comedies				.812	
15	I often laugh aloud when I read jokes or humorous stories				.641	
16	When I am in a bad mood, I often watch some humorous stories or movies				.744	
17	I often go out with people who are funny					.438
18	I usually pay attention to observe the life of those humorous people's words and deeds					.711
19	I often memorize the lines of humorous stories					.843
20	I often memorize the lines of humorous movies					.855

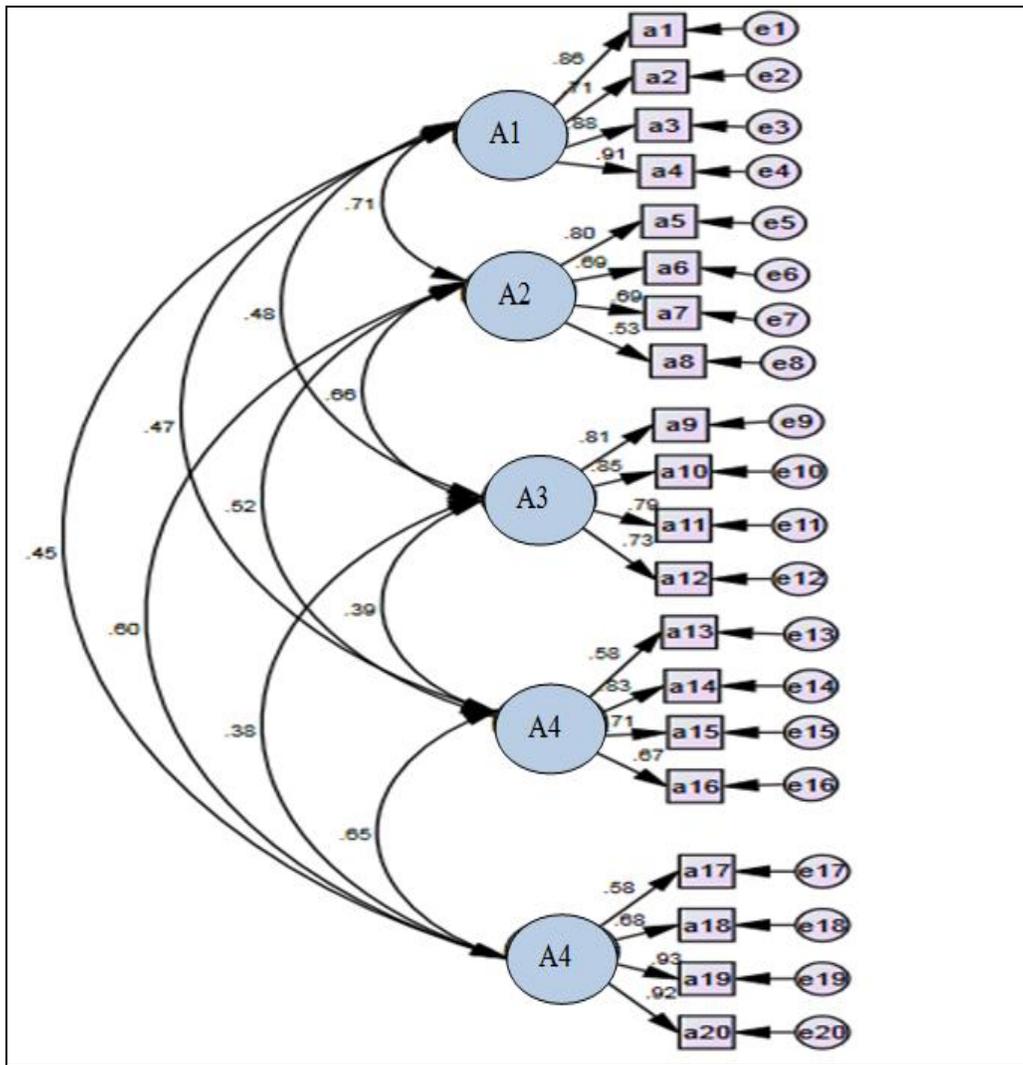


Fig. 1. Humorous structural equation mode

Table 3. Reliability of the factor

	Humor manufacturing	Humor application	Humor attitude	Humor collection	Humor imitation
Cronbach's α	0.793	0.767	0.810	0.795	0.777

Table 4. Correlation coefficient matrix

Factor	Humor manufacturing	Humor application	Humor attitude	Humor collection	Humor imitation
Humor manufacturing	1.000				
Humor application	.561	1.000			
Humor attitude	.418	.572	1.000		
Humor collection	.426	.458	.369	1.000	
Humor imitation	.495	.538	.394	.618	1.000

Table 5. Confirmatory factor analysis of humor

Statistical inspection	Index	Standard value	Humor	Achieved	Note
Absolute matching	X^2	The smaller the better	430.525	✓	
	X^2/df	1~5	2.691	✓	
	GFI	<0.9	0.872		Close
	AGFI	>0.9	0.832		Close
	RMR	<0.08	0.067	✓	
	RMSEA	<0.08	0.072	✓	
	Incremental matching	NFI	>0.9	0.880	
NNFI(TLI)		>0.9	0.905	✓	
CFI		>0.9	0.920	✓	
RFI		>0.9	0.857		Close
IFI		>0.9	0.921	✓	
Streamliningmatching	PNFI	>0.5	0.741	✓	
	PGFI	>0.5	0.775	✓	

4. CONCLUSION

The purpose of this paper is to make a preliminary discussion on the compilation of humor scale of applied undergraduates in Fuzhou. After literature discussion, in-depth interviews and data analysis, the following conclusions were obtained:

College students have a multi-layered perception of humor [7]. Through preliminary research, this paper obtains five variables of the sense of humor of application-oriented undergraduates. They are humor production, humor application, humor attitude, humor collection, humor imitation. Sense of humor is an important interpersonal communication mode for individuals, which helps freshmen to communicate with new classmates, resolve unnecessary differences, attract others' attention, ease tension and save face, so that individuals can adapt to the university environment more easily [8].

It can be seen from the daily behavior of an application-oriented undergraduate in Fuzhou that students with a strong sense of humor will externalize their sense of humor into habitual behaviors. This will subtly affect others around you and change the atmosphere. Enable students to benefit from group activities or social life. This will largely enable students to have a stronger social adaptability after graduation [9]. The results of this study are instructive for the teaching staff of applied undergraduates to pay attention to the mental health of students and guide students correctly. Because as applied graduates, they pay more attention to how to translate the knowledge they have learned into the relevant skills needed for future jobs. These

skills include not only professional skills, but also very important social skills. A sense of humor can easily dissolve awkward social barriers [10].

Quality psychological education is an important part of university education. For introverted students, how to improve the adaptability and self-confidence of their group life is one of the important tasks of psychological quality counselors [11]. By measuring the humorous perception of college students, it is helpful for teaching assistants to recognize the humorous characteristics of students. Through specific theme activities or psychological quality counseling, guide students to actively and correctly treat social interpersonal relationships, so as to better adapt to society.

Based on previous studies, this paper uses expert interviews and random selection of students to conduct in-depth interviews, and compiles a scale for measuring humor in applied undergraduates in Fuzhou. The reliability and validity of the scale and the fit of the structural model all meet the relevant requirements of statistical indicators. The scale is a scale with better stability. It can be used to measure the sense of humor of college students in schools of the same nature in Fuzhou.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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