

# Research on Influencing Factors of College Students' Mental Health

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**Abstract.** The research on the structure of College Students' psychological quality is related to a series of problems, such as the establishment of the psychological quality evaluation system, the training standards and the implementation plan. Psychological quality is an important part of the overall quality of human beings, and it is also the basis and carrier of social and cultural quality. Psychological quality is the intermediary between external stimulation and human behavior, and the intermediary between social and cultural quality and physiological quality. In view of the important position of psychological quality in the development of individual quality, it is a basic theoretical work to find out the structure of psychological quality when carrying out quality education. It should be the starting point of quality education, especially the cultivation of psychological quality.

## Introduction

Quality education is a localized concept, a kind of educational thought or educational value concept put forward by the educational circles in the late 1980s. Its original intention is to correct the deviation of the unilateral pursuit of the rate of enrollment in primary and secondary education and the excessive specialization of University education. After years of research and discussion, educational theorists have reached some consensus on quality education, the connotation and characteristics of quality. Scholars have realized that quality education is an open and developing system, and there is no and should not be a fixed and unchanged model. The essential feature of quality education is to promote students' all-round development, to face all students, and to promote students' effective growth. The connotation of quality has the characteristics of the times, and different times require different qualities.

The research on the structure of College Students' psychological quality is related to a series of problems, such as the establishment of the psychological quality evaluation system, the training standards and the implementation plan. Psychological quality is an important part of the overall quality of human beings, and it is also the basis and carrier of social and cultural quality. Psychological quality is the intermediary between external stimulation and human behavior, and the intermediary between social and cultural quality and physiological quality. In view of the important position of psychological quality in the development of individual quality, it is a basic theoretical work to find out the structure of psychological quality when carrying out quality education. It should be the starting point of quality education, especially the cultivation of psychological quality.

## Analytic Hierarchy Process (AHP)

Analytic Hierarchy Process (AHP) decomposes the decision-making problem into different hierarchical structures according to the order of general objectives, sub-objectives of each level, evaluation criteria and even the specific alternatives. Then, by solving the eigenvectors of the judgment matrix, the priority weights of each element in each level to a certain element in the upper level are obtained, and the weighting method is finally re-weighted. The final weight of each alternative to the overall objective is merged recursively, and the optimal scheme is the one with the largest final weight.

### System of the Influence Factors of College Students 'Mental Health

There are four factors in the first class incators, including personal factors, family factors, school factors, social factors. In the second class indicators. Personal factors includes physical health, emotional factors, single child. Family Factors includes family economy, family relations, parental expectations; School factors includes learning stress, classmates relationship, teachers and students relationship, school policy. Social factors: social information, community environment, social competition, social environment

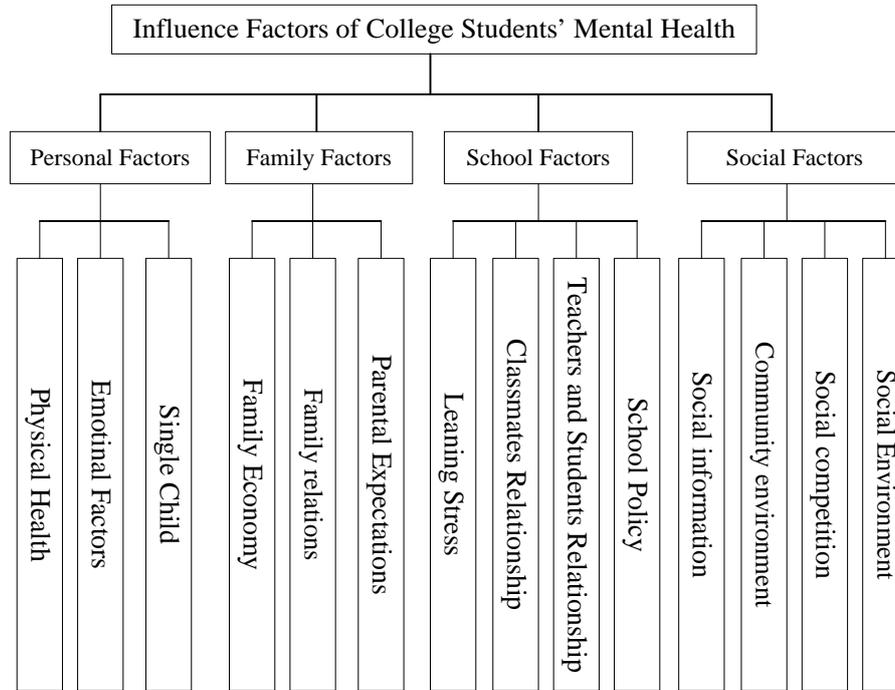


Figure 1. College Students 'Mental Health Model

### Setup Judgment Matrices

The hierarchical structure of this paper is based on the evaluation index system of Research on Influencing Factors of College Students' mental health and test the consistency, and weigh the value of each index layer as follow:

A0

$$\begin{bmatrix} 1 & 2 & 3 & 4 \\ 1/2 & 1 & 2 & 3 \\ 1/3 & 1/2 & 1 & 3 \\ 1/4 & 1/3 & 1/3 & 1 \end{bmatrix}$$

$$W = (0.4598, 0.2723, 0.1803, 0.0876)$$

$$\lambda_{\max} = 4.088, CI = 0.0295, CR = 0.0328 < 0.1$$

A1

$$\begin{bmatrix} 1 & 3 & 5 \\ 1/3 & 1 & 3 \\ 1/5 & 1/3 & 1 \end{bmatrix}$$

$$W = (0.6333, 0.2605, 0.1062)$$

$$\lambda_{\max} = 3.039, \quad CI = 0.0194, \quad CR = 0.0328 < 0.1$$

A2

$$\begin{bmatrix} 1 & 1/3 & 1 \\ 3 & 1 & 4 \\ 1 & 1/4 & 1 \end{bmatrix}$$

$$W = (0.1923, 0.6329, 0.1748)$$

$$\lambda_{\max} = 3.009, \quad CI = 0.0046, \quad CR = 0.0078 < 0.1$$

A3

$$\begin{bmatrix} 1 & 2 & 3 & 5 \\ 1/2 & 1 & 2 & 3 \\ 1/3 & 1/2 & 1 & 2 \\ 1/5 & 1/3 & 1/2 & 1 \end{bmatrix}$$

$$W = (0.4824, 0.2718, 0.1575, 0.0883)$$

$$\lambda_{\max} = 4.0145, \quad CI = 0.0048, \quad CR = 0.0054 < 0.1$$

A4

$$\begin{bmatrix} 1 & 3 & 4 & 6 \\ 1/3 & 1 & 2 & 4 \\ 1/4 & 1/2 & 1 & 2 \\ 1/6 & 1/4 & 1/2 & 1 \end{bmatrix}$$

$$W = (0.5495, 0.2438, 0.1338, 0.0729)$$

$$\lambda_{\max} = 4.0459, \quad CI = 0.0153, \quad CR = 0.0170 < 0.1$$

In the first class indicator, including personal factors, family factors, school factors, social factors, personal factor is more important ,In the second class indicators. Personal factors includes physical health, emotional factors, single child, single child factor is more important, .Family Factors includes family economy, family relations, parental expectations,and family economy is more important; School factors includes learning stress, classmates relationship, teachers and students relationship, school policy and learning stress is important. Social factors includes social information, community environment, social competition, social environment and social information is important.

## Conclusion

Building good relationships is very important to them! In the field of interpersonal communication! Every college student must pass their own efforts! On the one hand! Keep improving your mental health level \$on the other hand! Master the principles and methods of interpersonal communication! And through constant practice and unremitting efforts! Let it finally become your own habit! Become a part of your personality! This will bring us into society! That is, we are ready for our future growth and development. "That is to say! It makes every college student have this kind of ability! That is facing the new environment and change! In the shortest possible time! Establish a positive and effective interpersonal relationship in the group! "so as to lay a good foundation for their future growth and development."

**References**

- [1] Dingyuemin. Research on the Evaluation Method of Personnel Quality Based on Medical Personnel Competence Model. *Human Resources Management*, 2015(2), pp.195-196.
- [2] Feng D Y. On the Seafarer's Training of the Transitional Period of Implementing the STCW 78 / 10Convention. *Journal of Qingdao Ocean Shipping Mariners College*, 2013.
- [3] Frederic P, Philipp K, Roger S. Experience Co-creation in Financial Services:An Empirical Exploration. *Journal of Service Management*, 2015, 26 (2), pp.295-320.
- [4] Yu Huixian. Recruitment Based on Competency Model[J].*Chinese and Foreign Exchanges*, 2017,(17): 30
- [5] Assante M, Candela L, Castelli D. Are Scientific Data Repositories Coping with Research Data Publishing. *Data Science Journal*, 2016(15), pp.1-24.
- [6] Dnyandeo Dattatraya Shinde, Ramjee Prasad. Application of AHP for Ranking of Total Productive Maintenance Pillars. *Wireless Personal Communications*, 2018, 100 (2), pp.449-462.
- [7] Saeid Maknoui, Mohammad Zare, Ezzatollah Raeisi. Determining the hard rock groundwater pathway in Golgohar complex formation using hydrochemical data in AHP. *Arabian Journal of Geosciences*, 2018, 11 (8), pp.1-16.
- [8] Arthur S. Levine, Margaret C. McDonald, Charles E. Bogosta. Sino-U.S. partnerships in research, education, and patient care: The experience of the University of Pittsburgh and UPMC. *Science China Life Sciences*, 2017, 60 (10), pp.1150-1156.