ANALYSIS INDEX STANDARD OF MENTAL HEALTH LITERACY TRAINING PROGRAM FOR JUNIOR HIGH SCHOOL STUDENTS IN ZIGONG CITY , SICHUAN PROVINCE USING THE CCIP-PF MODEL

JUNHUA ZHONG

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF
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PROGRAM IN TECHNICAL EDUCATION
FACULTY OF VOCATIONAL EDUCATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI
ACADEMIC YEAR 2023
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Name-Surname	Mr. Junhua Zhong
Program	Vocational Education
Dissertation Advisor	Associate Professor Suthiporn Boonsong, Ed.D.
Dissertation Co-Advisor	Assistant Professor Issara Siramanecrat, Ph.D.
Academic Year	2023

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ABSTRACT

The objectives of this study were: 1）to develop the CCIP-PF model and establish an assessment index system for mental health literacy training in junior high schools and 2）to apply the evaluation index system to junior high school mental health literacy training, thereby promoting the enhancement of educational quality. This study innovatively developed the CCIP-PF evaluation model building upon the foundations of the Tyler Mode and the CIPP model. Notably, it introduced the components of assessment testing and advisory feedback, rendering the evaluation process more comprehensive.

The sample group consisted of 17 experts who participated in discussions generating 162 viewpoints on the constituent elements of evaluation for junior high school mental health literacy training. The methodology employed the Delphi method; the instrument utilized a qualitative assessment approach, employing questionnaires to ensure anonymity and provide reliable feedback. A questionnaire survey was conducted among 422 participants in Sichuan province's relevant educational administrative authorities, middle school mental health education teachers, university lecturers and professors in mental health education, and psychological counselors. The response rate reached 96.2%.

The study analyzed the data using mathematical statistics and SPSSAU22.0, focusing on the reliability of the entire questionnaire and its dimensions. The findings of this study were as follows: 1) the development of the CCIP-PF model comprising 4 primary indicators, 14 secondary indicators, and 43 tertiary indicators. Among them primary indicators at average of 4.794, $SD = 0.473$, IQR = 0.125; secondary indicators at average of 4.823, $SD = 0.379$, IQR = 0.25; tertiary indicators at average of 4.790, $SD = 0.424$, IQR = 0.302. A factor contribution rate of 74.175% demonstrated efficacy. 2）The empirical study conducted across various districts of Zigong City accurately identified existing issues and the quality of education, providing a basis for precise problem solving. This effectively facilitated the improvement of educational quality, achieving the anticipated objectives.

Keywords: mental health education training, evaluation criteria, CCIP-PF model, China, junior high schools

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CHAPTER 1
INTRODUCTION

1.1 Background and Statement of the Problem

The World Health Organization (WHO) once put forward that health is the first wealth of human beings, and half of health is mental health. Mental health refers to a positive mental state, which is an important part of people's health and an important factor in determining whether a person is healthy or not. Mental health education is a kind of education that cultivates students' good psychological quality according to the laws of students' physiology and psychology and promotes students' overall quality to be improved in an all-round way (Sun Yan et al.,2010; China National Health Network,2014; Linfeng Yan and Dewen Yao ,2019).

At present, although all junior high schools in China, where the abbreviation "junior high schools refers to grades 7 to 9 of compulsory education, have set up mental health education courses. The status requirements of stress mental health education courses based on entrance examinations, the allocation of resources, the investment, and the degree of funds are far behind those related to entrance examinations, such as Chinese, mathematics, and English, which lead to the low level of mental health education for junior high school students. This is also the main reason for the serious mental health problems of junior high school students in China. For the supervision and control of mental health education, especially the research on how to build, implement, and evaluate the mental health education of junior high school students, there is less research at present, and it is urgent for the whole society to pay attention to it and carry out relevant research (Junying Ma,2022; Elegant,2021; Chunmei Huang ,2021; Meijie Cong 2020; Linfeng Yan and Dewen Yao,2019).

First, the contradiction between the widespread concern over China's state policy and the seriousness of the real problems still exists.

In China, although mental health education is recognized and valued by the government and society, many policies and regulations have been introduced to promote the development of mental health education for junior high school students. However, in recent years, mental health problems such as self-harm among junior high school students

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in China have occurred frequently, which has led to the failure of mental health education in junior high schools in China. There are many shortcomings in the growth of junior high school students, and the situation is not optimistic(Dongyuan Li 2020; Qiumei Yu et al. 2015; Liqiang Wei 2019).

Mental health education for junior high school students in China is highly developed in terms of policies and regulations.The Guidance Outline of Mental Health Education in Primary and Secondary Schools issued by China in 2012 (revised edition in 2012) clearly requires strengthening the leadership and management of mental health education in primary and secondary schools, ensuring the time for mental health education, bringing mental health education into the index system of school supervision and evaluation, and regularly carrying out special supervision and evaluation of mental health education(Ministry of Education of China, 2012). This not only emphasizes the need to ensure junior high school students' mental health education class hours but also emphasizes the need to strengthen the evaluation of junior high school students' mental health education. In 2014, the Ministry of Education of China issued the "Opinions on Comprehensively Deepening Curriculum Reform and Implementing the Fundamental Tasks of Moral Education," which clearly requires that students focus on cultivating their noble moral sentiment, solid scientific and cultural quality, healthy body and mind, and good aesthetic taste. This further emphasizes the importance of mental health education for junior high school students at the national level (Ministry of Education of China, 2014). In 2016, the China Health and Family Planning Commission, the Central Propaganda Department, the Ministry of Education, and other 22 departments jointly issued the "Guiding Opinions on Strengthening Mental Health Services," which clearly requires primary and secondary schools to pay attention to students' mental health education, cultivate positive and optimistic, healthy and positive psychological qualities, and promote students' physical and mental sustainable development (China Health and Family Planning Commission, 2016). The "Compulsory Education Quality Evaluation Guide," issued by the Ministry of Education, the Central Organization Department, the Ministry of Finance, and other six departments, incorporates the quality of junior high school mental health education into the evaluation index of compulsory education and puts forward specific requirements for psychological counseling places, mental health

education curriculum programs, and mental health education quality (Ministry of Education, 2021). In the same year, 2021, the "National Compulsory Education Quality Monitoring Program (Revised Edition, 2021) " issued by the Ministry of Education of China clearly requires monitoring the quality of mental health education in junior high schools (Ministry of Education of China, 2021). In 2023, the Ministry of Education and other 17 departments issued a notice on the special action plan for comprehensively strengthening and improving the mental health of students in the new era (2023-2025), which clearly required strengthening the monitoring and evaluation of the mental health of students in primary and secondary schools and made clear requirements for institutional mechanisms, health education, monitoring and early warning, and consulting services (17 departments such as the Ministry of Education of China, 2023).It can be seen that the degree of mental health education for junior high school students in China is still relatively high.

However, the mental health status of junior high school students in China is still severe, and problems such as self-harm and depression among junior high school students have not been effectively controlled. In 2021, the Chinese National Mental Health Report (2019–2020) released by the Institute of Psychology, Chinese Academy of Sciences, showed that the detection rate of depression in junior high school was about 30%, and the detection rate of severe depression was 7.6%–8.6% (Xiaolan Fu and Kan Zhang, 2021). From the data, we can see the severity of mental health problems among junior high school students at present. There are more cases of junior high school students killing themselves. For example, in 2020, a 15-year-old junior high school student in Heilongjiang Province killed his mother because of quarreling with her mother (Netease, 2021). In 2022, a 14-year-old junior high school girl in Shanghai jumped to her death because of the pressure of studying (Sohu.com, 2022). In 2018, a 14-year-old junior high school student in Shandong Province brutally killed his classmate because he was jealous of his classmates' better grades (Netease, 2022), and so on. These media reports of junior high school students suffering psychological problems and other mental health problems let us once again see the seriousness of psychological problems among junior high school students in China, and the situation of mental health education in junior high school is not optimistic.

From this, we can see that there are more and more delinquency problems caused by mental health problems among junior high school students, and the way junior high school mental health education and quality assurance are handled are the topics we need to study and solve. Second, the contradiction between the variety of forms of mental health education in Chinese junior high schools and the lack of theoretical research support still exists.

Due to the promotion of national policies and regulations, junior high schools in China have adopted various forms to offer mental health education courses and practical activities. For example, setting up special mental health education courses, infiltrating mental health education into Chinese, mathematics, English, and other courses, carrying out mental health lectures, analyzing psychological sitcoms, role playing, etc. It can be seen that the various forms of education are rich in content (Yanchu Ma & Wei Zhao, 2023; Mental health education in primary and secondary schools, 2023; Yanhua Guan, 2023; Deyun Jing, 2023; Gui Wang, 2022; Bing Wu, 2022; Juanping Huang, 2022; Xulian Wang, 2022).

However, contrary to the diversity of educational forms, there are few theoretical studies on the curriculum and evaluation of mental health education in junior high schools, and the theoretical support is seriously insufficient. At present, as far as the research object is concerned, the existing research focuses on the mental health education of college students, and the research on the mental health education of junior high school students is less; As far as the research contents are concerned, most of the existing research is aimed at the performance and causes of mental health problems in junior high school students, the present situation, and countermeasures to mental health education, and the research contents have great similarities. Due to the lack of theoretical research, the curriculum of mental health education in junior high school lacks theoretical support and guidance, especially a scientific management and evaluation system, which leads to great differences in mental health education in junior high school and seriously affects the educational effect. The theoretical research on mental health education for junior high school students is insufficient, especially the research on evaluation systems. Mental health education in junior high school will directly affect education and effect without the constraint and guidance of evaluation(Tianyin Song et al., 2023; Meng Li, 2022; Leiling

Wang, 2020; Chunhui Yang, 2019; Zhiyuan Sun, 2018; Rui Jing, 2018; Rongxiao Chen, 2018).

Thirdly, the imbalance in the development of psychological health education between the eastern and western regions of China still persists. The "2022 Survey Report on the Mental Health Status of Adolescents," jointly released by the Institute of Psychology, Chinese Academy of Sciences, and the Social Sciences Academic Press, reveals that approximately 14.8% of adolescents exhibit varying degrees of depression risk. Among them, 4.0% fall within the category of severe depression risk, while 10.8% belong to the mild depression risk group. Notably, adolescents in western China exhibit slightly higher scores in depression, loneliness, and smartphone addiction compared to their counterparts in the eastern and central regions （Institute of Psychology, Chinese Academy of Sciences，2023）.

The occurrence of such conditions in the western region can be attributed primarily to its lower educational quality. In comparison to the eastern region, the western region exhibits several shortcomings as follows: (1) Lagging behind in ideological development, educational concepts in the western region predominantly revolve around rote learning, with students often lacking understanding regarding the purpose and utility of their studies. Education is frequently regarded merely as a means to "escape rural areas" or "break free from impoverished regions."(2) There is insufficient integration between education in the western region and practical sectors such as agriculture and technology. The linkage between agricultural science and education is not merely insufficient but rather close to non-existent.(3) The educational structure in the western region remains irrational, with a lack of coordinated development between basic education, vocational education, and higher education, as well as between urban and rural education.(4) Relative educational backwardness persists in the western region concerning vulnerable groups such as rural populations, impoverished individuals, and people with disabilities. The majority of China's impoverished and rural populations are concentrated in the western region. Despite substantial national support for education in the west, including the implementation of "two exemptions and one subsidy" policies and numerous poverty alleviation and development initiatives, relative educational lag persists for this demographic due to economic constraints and lingering outdated

perceptions (Mou, 2021; Yi, Z., Lei, W., 2023).Therefore, this study has chosen the city of Zigong in Sichuan Province, western China, as its research subject.

At present, the construction of the evaluation index system of mental health education in junior high school and the effect of play are subjects that we urgently need to study.This thesis draws on the strengths of both the Tyler Mode and the CIPP model while avoiding their shortcomings. Adopting a third-party evaluation perspective, the study follows a closed-loop approach of "Constructing Evaluation Framework - Practice Testing - Feedback Suggestions." This approach not only emphasizes the assessment of the educational process but also underscores the evaluation of educational outcomes. Furthermore, it introduces elements of practical application and feedback recommendations, culminating in the formulation of the CCIP-PF assessment model.As illustrated in Figure 1.1.
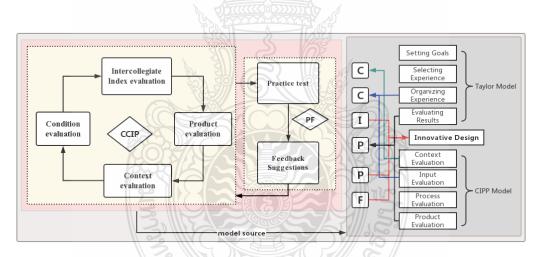
Figure 1.1 CCIP-PF Model and its Source

Figure 1.1 shows the CCIP-PF evaluation model on the left-hand side, which comprises six components:（1）Context evaluation；（2）Condition evaluation；（3）Intercollegiate Indexe valuation；（4）Product evaluation；（5）practice test；（6）Feedback Suggestions. Among them, sections (1) to (4) constitute the CCIP, which forms the evaluation standard system, while sections (5) to (6) represent the PF. The right-hand side of the CCIP-PF model represents its sources, wherein context evaluation（C） and product evaluation(P) are derived from CIPP. Condition evaluation(C) combines elements

from CIPP's input assessment and the organization of experiences from the Tyler Mode. Intercollegiate Indexe valuation, practical validation, and feedback recommendations are original contributions to the model.

In the CCIP-PF logical relationship diagram, CCIP is an interrelated and mutually influential indicator system. PF is the practical verification and feedback suggestion of the indicator system. The arrow from Feedback Suggestions to CCIP in PF indicates that these suggestions may be suggestions for any of the four types of indicators in CCIP, so this arrow does not point to a fixed object.

In summary, in view of the current situation of mental health education in junior middle schools in China and the lack of theoretical research, although there are some theoretical studies, there is few model for adjusting and mixing the Tyler Mode and the CIPP model. Therefore, for the first time, this thesis will adjust and innovate the Tyler Mode and CIPP model to form a CCIP-PF model suitable for the evaluation of mental health education in junior high schools in China.

Especially research on evaluation index systems, this thesis, based on the comparative analysis of the Tyler Mode and the CIPP evaluation model, combined with the actual Chinese junior high school mental health education, fully absorbed the advantages and avoided the disadvantages of the Tyler Mode and the CIPP evaluation model, and innovatively constructed the CCIP-PF evaluation model from the perspective of third-party evaluation, which is suitable for the evaluation of Chinese junior high school mental health education, as can be seen from its advantages.

1.2 Research Questions

1.2.1 How to develop a model and assessment index system for mental health literacy training in junior high schools?

1.2.2 How to enhance the quality of mental health literacy training in Chinese junior high schools?

1.3 Research Objectives

　　1.3.1 To develop the CCIP-PF model and establish an assessment index system for mental health literacy training in junior high schools.

　　1.3.2 To apply the evaluation index system to junior high school mental health literacy training, thereby promoting the enhancement of educational quality.

1.4 Research Scope

1.4.1 Content of the Study

　　The main contents of this research thesis include the following aspects: First, the domestic and foreign institutions and regulations, literature, and government reports on mental health education in junior high schools. Second, the problems in the mental health of Chinese junior high school students, the analysis of the causes, and the hazards brought about.Third, the current situation and effectiveness of mental health education in junior high schools in China, as well as the analysis of problems and causes. Fourth, the models and methods of education evaluation at home and abroad Fifth, the development of a quality evaluation index system for mental health education in Chinese junior high schools and the selection of some junior high schools in Zigong City for practical application and verification of the effects.

1.4.2 Population

　　Mental health education personnel in charge of education administration departments include full-time and part-time teachers and class teachers of mental health education in secondary schools, professors of mental health education in universities, psychological counselors, doctors of mental health centers in hospitals, parents, and representatives of secondary school students.

1.4.3 Time

The study time period for this thesis is from November 2022 to December 2023.

1.4.4 Area

Zigong City, Sichuan Province, China.

1.5 Definition of Terms

　　Mental health mainly refers to a perfect personality, normal intelligence,

correct cognition, proper emotion, proper will, a reasonable attitude, positive behavior, and proper adaptation to a good state. All aspects and activities of psychology are in a good or normal state, which is a positive psychological state.

Mental health education refers to an educational activity aiming at cultivating social citizens with physical and mental health and providing scientific health professional guidance for social citizens by using the continuous improvement of health management and functional humanities. Moreover, it relates to psychological education and means to cultivate students' good psychological quality according to their physiological and psychological characteristics, promote their overall physical and mental harmony, and overall improve their quality.

Junior high school students are the collective term for students who are studying in junior high school, which has a three-year school year and includes seventh grade (first year), eighth grade (second year), and ninth grade (third year).

The CCIP-PF model is an innovative middle school mental health education evaluation model constructed by the author, which mainly includes six parts: context evaluation, condition evaluation, intercollegiate index evaluation, product evaluation, practice test, and feedback suggestions.

Context evaluation (C) is the background factor that affects mental health quality training in junior high schools in China, mainly including institutional setting, system construction, etc.

Condition evaluation (C) is the condition that affects mental health quality training in junior high schools, mainly including curriculum setting, funding investment, etc.

Intercollegiate index evaluation (I) is the difference between schools on mental health quality training in junior high schools, mainly including investment per student, investment in teachers, investment in teaching facilities, etc.

Product evaluation (P) is the outcome factor of junior middle school mental health quality training, which mainly includes student gains, mental health conditions, social evaluation, etc.

Practice test (P) is to select some junior high schools to practice the established evaluation index system to test the scientificity and effectiveness of the index system.

Feedback suggestions (F) refer to feedback on deficiencies in the evaluation index system during the practice and application of the evaluation index system in junior high schools, and then modify and improve the evaluation index system based on the feedback suggestions.

1.6 Limitations of the Study

Since the CCIP-PF evaluation model developed in this study is designed with six links and has secondary and tertiary indicators, data collection will be difficult and require more effort. At the same time, the CCIP-PF evaluation model developed in this study was selected in Zigong City, China, during the time application phase, mainly in southern China, and no practical application was conducted for middle schools in other parts of China, such as coastal areas, which may lead to limitations in its effect validation.

1.7 Expected Benefits

1.7.1 From the perspective of third-party evaluation, we innovatively constructed the CCIP-PF evaluation model and developed an evaluation index system for the quality of mental health education in Chinese junior high schools.

1.7.2 The CCIP-PF evaluation model and its index system are applied to the practice of mental health education in junior high schools to provide a standard basis and action guidelines for improving the quality of mental health education in junior high schools.

1.7.3 The CCIP-PF evaluation model and its index system can promote the psychological health of junior high school students, reduce the occurrence of junior high school students' mental health problems, and ensure the healthy growth and success of junior high school students.

1.7.4 This study can make up for the shortage of current research on the evaluation of mental health education in junior high schools by Chinese scholars and provide them with theoretical references.

1.7.5 This study can go to government departments to provide decision-making references and provide a theoretical and practical basis for improving the decision-making system and supervision methods of mental health education in junior high schools.

1.8 Research Implementation

The construction of the CCIP-PF model and index system is of great value and use for mental health education in junior middle schools in China, which is mainly reflected in the following aspects:

1.8.1 This study makes up for the shortcomings of the Tyler Mode and the CIPP model, enriches the existing research on education evaluation models, broadens the evaluation ideas and methods of mental health education in junior high school, and can provide a practical evaluation model for mental health education in junior high school.

1.8.2 The research results will promote the improvement of the quality of mental health education in these junior high schools, promote the improvement of the teaching level of mental health education teachers, and encourage students to benefit from mental health education.It has certain practical value.

1.8.3 The evaluation results of CCIP-PF can provide decision-making reference for the education administrative department in policy formulation, fund allocation, hardware investment, teacher training, education supervision, and other aspects, which is conducive to the education administrative department's ability to accurately find and solve problems and to promote the quality improvement of mental health education in junior high schools in the region.

1.8.4 In this study, the Tyler Mode and CIPP model are mixed and innovated, which not only makes up for the shortcomings of the current theoretical research in this area, but also provides experts and scholars with a theoretical reference for the evaluation of mental health education in junior high school, so that experts and scholars benefit, has a certain theoretical value.

1.9 Research Framework

The research framework includes three parts: research ideas, research contents, and research As shown in Figure 1.2.
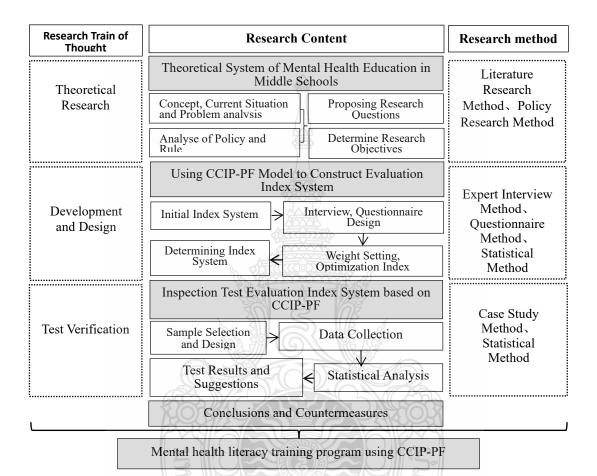
Figure 1.2 Research Framework Diagram

CHAPTER 2
LITERATURE REVIEW

Junior high school students are in puberty, which is a key stage of rapid physiological and psychological changes. The quality of mental health education is directly related to the healthy growth of junior high school students. This chapter will bring together literature on mental health, mental health education, evaluation models, evaluation indicators, and other literature and national policies through literature research to provide theoretical support for the research model and indicator system design of this thesis.

This chapter will review the domestic and foreign literature on mental health education in junior high schools. The specific contents are as follows:

2.1 Mental health

2.2 Mental health education

2.3 Education Evaluation

2.4 Construct Evaluation Index System and Test Evaluation Index System

2.5 Evaluation Index System

2.6 Tyler Mode and CIPP Evaluation Model

2.7 Related research of Domestic and International Studies on Tyler Mode and CIPP Evaluation Model

2.1 Mental Health

2.1.1 The connotation of mental health

In 1946, the Third International Conference on Mental Health believed that mental health refers to the development of an individual's state of mind into the best state within a range that is not contradictory to the mental health of others physically, intelligently, and emotionally. In 1987, the Concise Encyclopedia of Britain pointed out that mental health is the ability to adapt to the physical, emotional, spiritual, and social aspects of the environment for a long time (Lai et al., 2022).

Some experts and scholars believe that mental health mainly refers to a positive and optimistic mental state that people have, which is manifested in the fact that individuals have the motivation for life, have a good inner feeling, can better adapt to society, can

give full play to their own advantages, realize the value of life, and make their own contributions to society (Jie Ma, 2011; Hui Cao et al., 2023; Jie Hu et al., 2022).

Mental health refers to all aspects of psychology and the process of performing activities in a good or normal state. Its ideal state is to maintain a perfect character, normal intelligence, correct cognition, appropriate emotion, reasonable will, a positive attitude, appropriate behavior, and good adaptation (China National Health Network, 2013).

2.1.2 Mental health problems of junior high school students

Junior high school students are generally 12 to 15 years old. This is the fastest stage of their physical and psychological development in adolescence, and it is also an important transition period from naive to mature and from dependence to independence. This stage is also the most prone to psychological problems. The research shows that the common psychological problems of junior high school students are mainly manifested in eight aspects: (1) inferiority; (2) rebellious psychology; (3) escape psychology; (4) jealousy; (5) melancholy psychology; (6) weariness psychology; (7) puppy love psychology; (8) addicted to the network (Shuguo Sun, 2011; Quanzheng An and Aiqing Sun, 2013; Rong Cao, 2015; Lihua Huang, 2016; Jiasen Chen and Jingfang Shi, 2022; Li Ma, 2022; Pei Shao, 2022; Jiajun Zhu et al., 2022).

2.1.2.1 Inferiority psychology

Inferiority refers to the psychological state of self-denial and self-rejection caused by inappropriate self-evaluation and self-knowledge. Appropriate inferiority can stimulate people to make up for their own shortcomings and surpass themselves; however, excessive inferiority can lead to depression, which seriously affects our physical and mental health (Meiying Li, 2022).Students with inferiority complexes often believe that failure is permanent. Once they encounter failure, they will think that they are useless, blame themselves, internalize the problem within themselves, and thus enhance their sense of self-defeat (Xiating Li, 2022). Usually, every student has a sense of inferiority, more or less. Teachers should take effective measures to guide students to integrate into life and the collective, learn to communicate with people, build self-confidence, and try to eliminate their inferiority complex (Fu Qu, 2022).

2.1.2.2 Rebellious psychology

Rebellious psychology mainly refers to disgust or resistance emotions and opposing

behavioral intentions when the objective environment does not match the needs of the subject (Yuxue Chi and Yijun Liu, 2019). Junior high school students are in adolescence; they have a strong sense of independence, with particular emphasis on individual freedom and democracy, but their behavior is often hindered by paranoia, resistance, and rash behavior. Improper handling may lead to their weariness, truancy, and even domestic violence, suicide, wounding, and other phenomena (Mei Han et al., 2016; Yunhui Chen et al., 2005). In the face of junior high school students' rebellious psychology, teachers and parents should correctly understand it, not wear colored glasses to look at students with rebellious psychology, fully understand the changes in students' lives and psychology, and pay attention to communication with students. If there are some extreme conditions, they should be solved in time to avoid irreparable damage (Mei Chen, 2021; Min Zhu, 2020; Siyi Wang, 2020).

2.1.2.3 Escape psychology

Ying Xie (2012) thinks that escape psychology refers to the psychological phenomenon that students choose to avoid contradictions and conflicts when they can't consciously solve contradictions and conflicts with society and others in real life. Chunqi Zhang (2012) believes that the main characteristics of escape psychology are to avoid social activities because he is afraid of setbacks, but this often makes him encounter more setbacks. He desires to succeed, but he is afraid of competition and hardship, so he always wants to take a shortcut to pessimism. Consider the problem, like to point instead of face, drill, always with a negative pessimistic attitude towards things, eager to deny things, unwarranted doubt about ordinary things, like worry, resentment. Yujie Zhou (2019) pointed out in his research that escaping psychology is not terrible. This is an intermittent psychological state that everyone often produces when facing themselves. Almost no one can avoid the emergence of this mentality. We should face it squarely, understand it, ease it, and not let ourselves fall into passive pessimism. Let this mentality affect our personal lives.

2.1.2.4 Jealousy

Jealousy is a form of social psychology and consciousness. Jealousy generally refers to a psychological state of worry, fear, resentment, and hatred that is superior to others or may exceed themselves. It is a negative emotion (Hui Cui, 2021). Jealousy can make

jealous people suffer, affect their normal interpersonal communication, and even hurt others in severe cases (Fengyun Yin, 2020). Junior high school students are in adolescence, and their correct outlook on life, values, and world outlook have not yet been formed. Some students will cause their inner imbalance because of others' beautiful faces, excellent academic performance, good family conditions, love from teachers and students, etc., resulting in jealousy.

2.1.2.5 Depression psychology

Melancholy is usually a psychological phenomenon of depression, anxiety, or even panic. It is an emotional experience of excessive sadness (Zengrang Luo and Xin Zhang, 2015). If the melancholy psychology is too careful and cautious, it will lose opportunities and reduce morale, and the consequences will be unimaginable. The biggest harm of melancholy is that it affects the leader's decisive decision-making and the spirit of struggle in the leadership group.Especially in the information society, if you do not seize the opportunity to make a decision in time, it will delay the event (Wenyao Yin, 2012).

2.1.2.6 Weariness psychology

Yafei Chen (2022) synthesizes the views of many researchers and defines school-weariness psychology as students' negative treatment of learning life, loss of interest in learning, and even being tired of going to school, resulting in resistance and bad behavior. GuanyuHuang (2021) believes that schools should play a leading role, strengthen cooperation with society and families, focus on cultivating students' external motivation, build a three-dimensional transformation system for weariness students, help weariness students regain their interest in learning, overcome weariness psychology, and master the most basic knowledge and skills so as to better meet the needs of social development.

2.1.2.7 Puppy love psychology

Hui Chen (2019) believes that the psychology of puppy love among junior high school students is essentially a reflection of adolescent psychological disorders and a manifestation of their unhealthy psychology of making up for the lack of feelings in their own way.Xiaomei Yuan (2008) believes that the puppy love psychology of junior high school students is theoretically a psychological phenomenon of mutual admiration between men and women in the case of the development and maturity of their sexual physiology and sexual psychology. However, if this phenomenon is not correctly guided,

it will have a puppy love problem, which will have a negative impact. Jingwen Ye (2017) believes that schools should strengthen adolescent education for middle school students, with sexual education as the core content, including sexual knowledge education, emotional education, sexual morality education, and sexual restraint education.

2.1.2.8 Addicted to the network

At present, the rapid development of information technology has promoted the high integration of education and networks and enriched educational resources. However, the network is also a double-edged sword for junior high school students because their self-control ability is not high and it is easy to overuse and rely on the network (Feizhe Pan, 2022). When carrying out network mental health education, junior high schools should make good use of network resources, give full play to the active work of the network, guide students to avoid the influence of negative network information, and let students develop physical and mental health in a good network environment (Min Wang, 2020; Ranyong Yan, 2015).

These studies show that although China's government and schools have taken many measures for the mental health education of junior high school students, the psychological problems of junior high school students are still diverse and serious, indicating that the quality and effectiveness of education have not yet reached the expected goals. From the research, it can be seen that the most important thing that schools should do at present is to develop targeted education programs based on students' psychological problems, equip psychology professional instructors, carry out targeted mental health education for junior high school students, strengthen education quality evaluation, ensure education effectiveness, and reduce or avoid junior high school students' psychological problems.

2.2 Mental Health Education

2.2.1 Domestic Research Review

In this study, the China National Knowledge Infrastructure (CNKI) was selected as the data resource bank, and the theme of "mental health education in junior high school" was searched. The retrieval time was February 11, 2023. A total of 2449 articles were

retrieved, including 2077 journal articles, 243 master's and doctoral dissertations, and 121 international and domestic conferences.

Through combing the relevant literature, it is found that in the 1930s, there were many people of insight in China. For example, the famous educator Nanxuan Wu began to vigorously call for the development and promotion of mental health campaigns. The research on modern mental health education in China sprouted in the 1980s. Chinese scholars learned from the research and practical results of western mental health education, compiled some practical mental health education textbooks, and gradually began to explore domestic mental health education(Wang Yining & Lan Jijun, 2022; Li Dongyuan, 2020; Wan Meixi, 2019; Li Na, 2019; Liu Xiaoming, 2018).

Regarding junior high school mental health education, from the CNKI database, the earliest literature record of this part of the study is the article "Strengthening Mental Health Education to Improve the Rational Quality of Junior High School Students," published by scholar Cheng Jingyi in the "Sichuan Education" journal in 1995.

From the perspective of the number of studies, there were only nine articles in the CNKI database before the 20th century. In the 21st century, research on mental health education in junior high school has gradually developed, especially in the past 10 years. From the CNKI database, 1751 articles related to ' junior high school mental health education ' were retrieved, accounting for 71.5%. From the perspective of the theme of the research, the research on junior high school mental health education is mostly about the content, curriculum, existing problems, and their causes and countermeasures of school mental health education, and according to the ' junior high school mental health education evaluation ' CNKI database retrieval, only 18 articles are on the evaluation of junior high school mental health education, so the research on the evaluation of mental health education needs to be further strengthened.

2.2.1.1 Research on the Content of Mental Health Education

For the content of school mental health education, the academic community has not yet unified norms, showing a benevolent situation, but there are also many scholars on the content of school mental health education to sort out and classify as a whole or achieve certain results.

The main representatives of the research on the content of mental health education are Zhang Haihui (2022), Li Yalan (2021), Solangwangm (2020), Zhao Chun (2015), and Xiao Shuang (2010). At the same time, the "Guidelines for Mental Health Education in Primary and Secondary Schools (2012 Revision)" issued by the Ministry of Education of China also define the content of mental health education in junior high schools. See Table 2.1

Table 2.1 Research and definition of mental health education content

Codes	Content of mental health education	Object
Haihui Zhang (2022)	General Mental Health Knowledge and Learning Psychological Guidance: Significance Education Emotional Adjustment Guidance.	Senior high school students
Yalan Li(2021)	Under the COVID-19 epidemic, it should include overcoming fear, psychological pressure, and correct health concepts.	Primary school
Solang Wangm (2020)	Mental health knowledge education, active adaptation education, sound personality education, healthy emotion education, interpersonal communication education, job selection psychological education, healthy psychological education, and psychological potential education	Vocational college students
Chun Zhao (2015)	Know yourself, learn interpersonal communication, adjust emotions, go to school, choose jobs, and adapt to life and society.	Primary and secondary schools
Shuang Xiao (2010)	Help students understand self-acceptance; cultivate study habits and social habits; and carry out psychological work.	Teenagers
Ministry of Education	The content of mental health education in junior high school is defined as: (1) understanding the physiological and psychological characteristics of adolescence; (2) cultivating correct learning	Junior high school

of China (2012)	concepts; (3) establishing good interpersonal relationships; (4) effective management of their emotions; (5) cultivating career planning awareness; and (6) developing the ability to cope with failures and setbacks.	students

In summary, the research on the content of mental health education for junior high school students is not mature enough, and there is no systematic and standardized content system, which needs further research. At the same time, the policy provisions of the Ministry of Education are also relatively macro. In terms of content requirements, they pay more attention to direction and goal requirements. In terms of implementation, schools need to further concretize and practice the educational content.

2.2.1.2 Research on Mental Health Education Curriculum

The mental health education curriculum is one of the most effective measures to help junior high school students adjust their mental state. It can enable students to understand mental health knowledge in various forms and teach them how to adjust their mental state in the face of pressure so as to maintain an optimistic attitude to cope with life and learning challenges (Shuang Xu, 2022). In the early 1990s, China's mental health education curriculum was originally presented in the form of activity classes. In the late 1990s, scholars studied mental health education courses from the perspective of curriculum system construction (Dongyuan Li, 2020). Xiaoju Wu (2020) believes that the curriculum system of mental health education in junior high school should include three aspects: educational objectives, educational methods, and curriculum evaluation. Taohua Liang and Zhenhua Liang (2019) believe that the curriculum system of mental health education in junior high school is divided into four levels: enhancing the level of teacher education, determining educational goals, attaching importance to curriculum evaluation, and building an information-based education system. Xiaojie Shao (2019) divided the curriculum system of mental health education in junior high school into four aspects: clarifying curriculum objectives, improving curriculum setting, paying attention to curriculum evaluation, and paying attention to the second classroom. Xiulian Zou (2018) pointed out in the study that the curriculum system of mental health education in junior high school includes establishing curriculum objectives, popularizing mental health

knowledge among teachers, organizing extracurricular mental health education activities, and improving the quantification and evaluation system of mental health education.Hong Zhu (2017) believes that the curriculum system of mental health education in junior high school includes the establishment of curriculum objectives, curriculum content and organizational forms, and curriculum evaluation. The curriculum content and organizational forms include physical and psychological counseling and special lectures, subject infiltration courses, and student community activity courses. Curriculum evaluation pays more attention to process evaluation than result evaluation.

At the same time, the "Guidelines for Mental Health Education in Primary and Secondary Schools (2012 Revision)"" issued by the Ministry of Education of China pointed out that schools should always carry out mental health education throughout the whole process of education and teaching, carry out mental health education, and set up mental health education courses in school courses. It can be seen that mental health education has received the attention of the Chinese government and meets the requirements and actual needs of the national system for setting up mental health education courses.

In summary, experts and scholars have a common point in the study of junior high school mental health education curriculum: they attach great importance to curriculum evaluation. They agree that curriculum evaluation is the premise and key to ensuring the quality of mental health education, but they only discuss the importance of curriculum evaluation and do not study its evaluation index system. Therefore, the evaluation system of the junior high school mental health education curriculum needs to be further studied.

2.2.1.3 Research on Mental Health Education

Based on the theme of "junior high school mental health education" in CNKI, the search time was February 9, 2023, and a total of 222 related articles were retrieved, including 163 journals, 44 master's and doctoral dissertations (including 1 doctoral dissertation), 12 international and domestic conferences, and 3 newsthesiss. These articles analyzed and studied the problems and countermeasures of junior high school mental health education from both theoretical and practical aspects.

At present, there are relatively few studies on mental health education in junior high school.The research perspectives and problems are various, but the research ideas and

directions are similar. Xiaoju Wu (2020) believes that the main problems existing in the current mental health education of junior high school students include insufficient attention, a lack of sound organizations, institutions, and rules and regulations, a low teacher education level, a lack of a professional team, an unreasonable distribution of educational resources, insufficient investment, and an evaluation and reward and punishment system that is not perfect. Yuanyuan Huang and Hongmei Lai (2019) believe that the problems of mental health education in junior high schools from the perspective of rural junior high schools mainly include a lack of institutional guarantee, a lack of financial guarantee, and a lack of teachers. Dan Chen (2017) believes that the problem of mental health education in junior high schools is not formal enough. Teachers' professional level is not high. The integration degree of educational resources is not high and has not yet formed a joint force. Lack of acceptance, evaluation, and reward mechanisms. Gaiyun Pan (2009) believes that the problems of mental health education in junior high schools include emphasizing intellectual education over moral education; the content of school life is single; Teachers' mental health education for students is not enough. Lack of an evaluation system.

To sum up, the research of experts and scholars on mental health education in junior high school objectively shows that the existing problems, especially the lack of an evaluation system, are basically common problems, so the key measures to solve the problems in studying the evaluation system of mental health education in junior high school at present.

2.2.1.4 Research on the Countermeasures of Mental Health Education in Junior Middle School

In view of the problems existing in junior high school health education, experts and scholars have also launched targeted research and put forward many countermeasures and suggestions combined with the actual situation of junior high school education in China, which has promoted junior high school mental health education to a certain extent.

Peng Gao (2021) put forward specific countermeasures for mental health education in his research: First, improve teachers' own professional quality and ability; second, pay attention to mental health education for students in school activities; The third is to let students find their own problems and find solutions in practice. Fourth, the connection

between parents and teachers of students realizes the joint efforts of families and schools; fifth, multi-disciplinary joint penetration and guidance.

Chaoxiu Yang and Chuncheng Zhang (2022) put forward the following countermeasures and suggestions for the problems of mental health education in junior high schools: First, improve the understanding of school-leading teachers on mental health education; The second is to promote the continuous improvement of relevant rules and regulations. The third is to strengthen the construction of school hardware. Fourth, strengthen the construction of mental health education teachers; Fifth, mental health education is combined with the teaching of various disciplines. Sixth, school education, family education, and community education should be combined to improve students' mental health.

In her master's thesis, Xiaowan Wu (2020) puts forward countermeasures and suggestions to solve the problems of mental health education in junior high school at four levels. First, improve the curriculum of mental health education; second, actively develop school-based textbooks for mental health education; third, optimize the teaching mode of the junior high school mental health education curriculum; and fourth, strengthen the construction of teaching staff.

In her master's thesis, Tingting Qi (2017) mainly put forward five suggestions on mental health education in junior high school: first, to promote the attention and correct understanding of social groups on the mental health of eugenics in junior high school; second, to create a good school mental health education environment; third, benign parent-child interaction promotes the mental health of junior high school students; fourth, to promote students to actively carry out self-education; fifth, to carry out frustration education for junior high school students.

In summary, in view of the problems of mental health education in junior high school, reasonable suggestions and countermeasures are put forward for insufficient attention and a low level of teachers. However, there is a lack of research on the evaluation system for the quality of mental health education in junior high school. If there are no constraints and guidelines for assessment and evaluation, the quality of education cannot be guaranteed. The poor quality of education will inevitably lead to the breeding and spread of students' psychological problems.

2.2.2 Foreign Research Review

The most representative foreign research on mental health education is in developed regions such as Japan, Europe, and the U.S. The U.S. was the first country in the world to implement mental health education in schools, and Japan was the first country in Asia to start research on mental health education. Influenced by the United States, school mental health education research in Europe, America, and other places has developed faster, while most developing countries in Asia, Africa, and Latin America have relatively little research on school mental health education (Dongyuan Li, 2020; Pediatrics, 2004).

2.2.2.1 Studies on the Stages of Development of Mental Health Education in Foreign Countries

Mental health education in foreign schools has roughly gone through three stages: the gestation period, the childhood period, and the prosperity period, as shown in Figure 2.1.
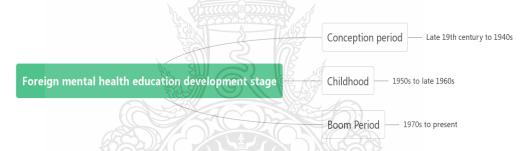
Figure 2.1 Foreign mental health education development stage map

Stage 1: This refers mainly to the gestation period from the end of the 19th century to the 1940s. Mental health education at this stage was at the level of psychological measurement and psychological diagnosis, mainly for children with mental retardation or developmental disorders; psychological measurement, intellectual diagnosis, classification, and then interpretation based on the results of psychological measurement and diagnosis; and constructive educational reference suggestions to school teachers and parents of students.

Stage 2: This refers mainly to the childhood period from the 1950s to the late 1960s. During this period, mental health education was at the level of counseling and psychological support. In the 1950s, counseling was conducted for "problem children" to

analyze and provide counseling responses, and in the 1960s, on-site direct counseling and group counseling were conducted.

Stage 3: This is mainly the boom period from the 1970s to the present. Mental health education in this stage is at the level of comprehensive school mental health education activities (Jie-Ting Zhang, 2016; Nan Jiang, 2021; Xiaoyue Sun, 2019; Jing Lin & Hong Fu, 2017; Ziqing Ye,Yidu Ye, 2020) .

2.2.2.2 Research on the Content of Mental Health Education Abroad

As we have already introduced, the most representative foreign research on mental health education is in developed regions such as Japan, Europe, and the United States. Here we briefly introduce the research on the content of mental health education at the junior high school level in the United States, the United Kingdom, and Japan.

The content of school mental health education at the secondary level in the United States includes effective communication with others, analysis of self-image, effective conflict resolution, setting and achieving personal health goals, and prevention of mental illness (Yu-Feng Hu, 2020).

In "An overview of health education in elementary and secondary schools in the United States and its implications," Wenli Liu and Mingqi Lu (2021) introduced health education in the United States from three aspects: health education standards, health education lesson plans, and health education content. It is mentioned in the thesis that the content of psychological problem prevention in the United States mainly includes mental health problem screening, school violence prevention, school bullying prevention, social skills training, conflict resolution, suicide awareness and prevention, drug education, parent training, and creating a positive school environment through parents and educators together.

Mao-Mao Li's (2021) study on "A Comparison of the Current Situation of Mental Health Education in Primary and Secondary Schools in China and the United States". It introduced the main contents of mental health education in primary and secondary schools in the United States, which mainly include three aspects: first, the correction of various mental illnesses and psychological problems. The second is the prevention of possible mental illnesses and psychological problems. The third is to improve students' ability to adapt to objective reality and promote their development.

Chunmiao Zhou (2011) conducted a comparative analysis of mental health education in China and the United States from three aspects: curriculum, education methods and approaches, and intervention means, and introduced that the curriculum content of mental health education in the United States mainly includes scientific psychological knowledge, cooperative services, extensive life guidance, mental health counseling and follow-up, and career planning and counseling in five The curriculum content of mental health education in the United States mainly includes five aspects: scientific psychological knowledge, collaborative services, extensive life guidance, mental health counseling and follow-up, and career planning and counseling.

Ting Wu (2020) analyzed and compared the similarities and differences in mental health education in China and the UK in five specific aspects, including educational background, educational content, teaching flexibility, teaching implementation methods, and guidance for teachers, in the article "Analysis of the similarities and differences in mental health education at the secondary school level in China and the UK". Among them, the six lessons of mental health education at the junior high school level in the UK are introduced: Lesson 1 is a transition course; Lesson 2 is "Promoting Emotional Health", which is the core course; Lesson 3 is "Resilience and Reconstructing Failure"; Lesson 4 is "Unhealthy Coping Strategies:Self-Harm"; Lesson 5 is "Unhealthy Coping Strategies:Eating Disorders"; and Lesson 6 is "Understanding and Controlling Depression and Anxiety".

In "A Study of the Curriculum and Materials of PSHE Education in UK Secondary Schools", Qiong Chen (2014) analyzes the UK PSHE Education materials, which are based on the concept of "student-centered and back-to-life" and provide students with a large number of activities, focusing on the development of social adaptability and skills training.

In "The new round of PSHE curriculum reform in primary and secondary schools in the UK: background, initiatives, and features", Peacock Huang and Ming Xu (2022) stated that the mental health content for UK middle school students includes: using appropriate vocabulary to talk about emotions; identifying early signs of mental health problems; common types of mental illness (e.g., anxiety and depression); critically assessing the impact of what one does or is involved in on one's own or others' mental

health; and the importance of physical activity, outdoor activities, community involvement, and volunteering for mental health and well-being.

In "Mental Health Education in Japanese Elementary and Secondary Schools: Cultivating a "National with a Perfect Personality," Chao-Mang Luo (2018) introduces a textbook for mental health education in junior high schools such as this one as "Irreplaceable Me, Irreplaceable Health," which has seven chapters, of which mental health is specifically discussed in Chapter 2, with five main sections on finding the self: thinking about the self, discovering one's strengths, thinking about stress and desires, mastering ways to cope with stress, and mastering ways to communicate.

Ziqing Zhao and Xiuya Lei (2014) introduced in the article "Mental Health Education Model in Japanese Primary and Secondary Schools and Suggestions for China" that Japan carries out mental health education for students, uses the spirit of Japanese tea ceremony to convey the truth and significance to students, and then improves their psychological problems.

2.2.2.3 Foreign Studies on the Ways and Means of Mental Health Education

There are more ways and channels to implement mental health education in 2.2 Western schools, mainly including: first, through the corresponding curriculum and the school's health center to organize and implement; second, through the school's youth service center, campus life infiltration, social services, and health library (Daoyang Wang, 2012).

In western middle school mental health education, classroom theory education occupies only a small part of the content, while practical education occupies an important position in mental health education. There are two types of practical education in general: one is counseling, which is carried out regularly for students with mental health problems. The second is extracurricular mental health education, such as social welfare activities, social practice investigations, and other extracurricular activities, which is an important way of providing mental health education for junior high school students (Yijuan Zhang, 2015) .

Mental health education in American schools is mainly implemented through infiltration into health and physical education courses and moral education courses, and they offer psychology classes in elective courses, such as introductory psychology and

social psychology, which are mainly designed to help students learn to apply theoretical approaches of psychology to solve problems related to learning, stress, and emotions." (Zirkelback, Emily A.; Reese, Robert J., 2010).

The U.S. uses the establishment of mental health centers as a way to improve students' ability to adapt to society and help them improve their ability to deal with interpersonal relationships and family crises while setting up specialized coping groups for children with different problems. The Youth Service Center, on the other hand, mainly provides some counseling and tutoring services for students and focuses more on using community resources to intervene with students (Sumie.Saw, 2011).

Mental health education classes in foreign schools use the "peer psychological support" educational method, which is one of the main forms of mental health education for students. "Peer support" includes peer counseling, peer mediation, and peer reading, which emphasize the role of students in mental health education and turn them from educated to educators. One such program is the Peer Support Training Program at Oxford University (Kenneth, 2010).

There are three methods commonly used for mental health education in Japan: First, SGE (structured group encounter), which is a mental health education method that helps humans review their way of being with the goal of improving interpersonal interactions and self-discovery. The second is SST (Social Skills Training), which is a general term for social skills training that helps people learn their own deficiencies or fail to perform well in colleges and universities against the background of behavioral theory. The third is SEL (Social and Emotional Learning), which is a general term for about 80 programs covering a wide range of areas from sex education and substance abuse prevention to school business. Three models, SGE, SST, and SEL, have their own characteristics, but all focus their teaching objectives on social and interpersonal interactions, and they are complementary to each other (Zicheng Zhao, Xiuya Lei, 2014).

In summary, we can see that there are various ways and means of mental health education in foreign schools. In addition to individualized mental health programs and service centers, there is also mental health guidance that permeates the entire life of all students. At the same time, schools have also joined hands with families and communities to provide comprehensive psychological guidance and assistance to students. All of these

approaches and methods are worth studying and learning from.

2.3 Education Evaluation

2.3.1 Domestic Research

The number of studies on education quality evaluation by Chinese experts and scholars has gradually increased in the last decade, which also reflects the high importance attached to education quality evaluation.

2.3.1.1 Research on Educational Evaluation Models

Educational evaluation is an important part of educational activities. In 2020, the Central Committee of the Communist Party of China (CPC) and the State Council issued the General Plan for Deepening Educational Evaluation Reform in a New Era, which provides policy guidelines for educational evaluation in China by putting forward new requirements and making new arrangements for educational evaluation reform in China at multiple levels, including schools, teachers, and students (CPC Central Committee and State Council, 2020).

Educational evaluation research in China began in the 1980s, and educational evaluation is a process of value judgment; the object of evaluation includes many elements of curriculum planning, implementation, and results, and the mode of evaluation not only reflects the evaluator's value orientation and concepts, but also contains specific means of implementation (Xiu-Yu Li, 2015).

In his study, Aibin Tang (2022) explored the construction of an evaluation model for STEM education in Chinese elementary schools, which established three level 1 objectives: "project learning," "teamwork," and "expressive communication." The evaluation model established three level 1 objectives: "project learning," "teamwork," and "expressive communication," and assigned different weights to them. Among them, "project learning" includes two secondary indicators: "program design" and "project results"; "teamwork includes "team efficiency", "team division of labor", "team communication" and "team participation"."Four secondary indicators are included in "Teamwork"; three secondary indicators are included in "Expression", "Subject Expression," and "Expression." In "Expressive Communication", there are three secondary indicators: "verbal expression,", "disciplinary expression," and "physical

expression.".

In her study, Fang Li (2022) used the OBE concept to construct a multidimensional developmental assessment and evaluation mechanism for college civics courses, which is mainly manifested as follows: (1) Focusing on double assessment, the assessment and evaluation objects are teachers' teaching quality and students' learning effectiveness. (2) Focusing on the combination of diagnostic and developmental assessment, taking students' learning effectiveness as the footing point of civics evaluation, and taking students' ability cultivation and development as the final goal of assessment (3) Mostly a combination of assessment methods, focusing on diversity in evaluation subjects and methods and sustainability in evaluation results.

Deming Wang and Siyong Li (2020) proposed the "Ternary + Third Party" vocational education evaluation model for vocational education, which organically combines students, schools, enterprises (referred to as "Ternary"), and third parties to conduct a comprehensive evaluation of students' curricula, cultural quality, professional skills, vocational aptitude, job competence, physical quality, and mental health. It is a kind of vocational education evaluation mode that integrates students, schools, enterprises (referred to as "tertiary"), and third parties to conduct comprehensive evaluations on students' curriculum thinking, cultural quality, professional skills, vocational literacy, job competence, physical quality, and mental health.

In his study, Liang Ke (2019) introduced the CIPP model and used it to construct an educational evaluation system with context, input, process, and outcome as components, which can be used to test the achievement of applied talent training goals.

In his study, Qi Hu (2020) constructed an applied professional evaluation system containing the elements of objectives, inputs, processes, and outcomes based on the CIPP evaluation model, which has important methodological insights into the construction of a teaching evaluation model oriented to the objectives of applied talent training.

Fangfang Liao (2014) innovatively constructed the "three more" evaluation model of "multiple subjects + multiple items + multiple forms" for mental health education. "Multiple subjects" refers to the evaluation method of "other assessment + self-assessment"; "multiple items" refers to multiple items of external behavioral changes and internal psychological development, such as changes in learning attitudes, sense of

responsibility and obligation, and emotional control; "multiple forms" refers to the multi-pronged approach of diagnostic evaluation, formative evaluation, summative evaluation, and follow-up evaluation, which emphasizes the guidance function of evaluation and downplays the screening and selection function of evaluation.

Fan Yi (2013) analyzed the response model of educational evaluation and listed its advantages: firstly, it pays close attention to the issues raised by educational practitioners; secondly, it relies on educational practitioners to solve actual educational problems; thirdly, it accepts quantitative research methods of educational evaluation; and its disadvantages: the interview method and interview method require a lot of energy and time, and it is difficult to promote them.

Bao-Sheng Dang (2012) conducted a study on the value-added evaluation method, which is a value-added evaluation method using student achievement data to evaluate teachers, and its evaluation process includes four aspects: sampling, index development, value-added analysis, and model construction and selection, while analyzing the realistic role and drawbacks of the value-added evaluation method.

In summary, Chinese experts and scholars have gradually improved the educational evaluation model by applying it flexibly and developing innovations on the basis of research on foreign educational evaluation models.

2.3.1.2 Research on the Content of Educational Evaluation

The content of educational ratings is the object of educational evaluation, an important cornerstone for achieving educational goals and essential for preserving the quality and effectiveness of teaching and learning.

According to Jingmin Xu and Hanqiang Zhang (2021), the content of mental health education evaluation includes two parts: first, the content system of classroom learning evaluation; and second, the content system of stage academic achievement evaluation.

The Basic Requirements for Teaching Mental Health Education Courses for Students in General Higher Education Schools, issued by the Ministry of Education in 2011, state that the assessment of mental health education courses in colleges and universities includes aspects such as students' understanding and mastery of knowledge and the improvement of students' psychological adjustment ability to solve practical problems (Ministry of Education, 2011).

Zaiwen Wang (2022) conducted a study on the content of vocational education evaluation, including three aspects: (1) loyalty to the Party's education cause, the evaluation content is the school's direction, school philosophy, school conditions, school efficiency, school characteristics, ability to serve economic development, etc.; (2) following the laws of vocational education type, the evaluation content is the school's professional setting, curriculum, professional construction, etc.; (3) meeting the Teachers and students' development needs, evaluation content for teachers' ideological quality, teaching ability, teaching attitude, teaching effect, skills condition, teaching research ability, etc., and students' ideological quality, learning attitude, learning ability, hands-on ability, cooperation ability, innovation ability, craftsmanship spirit, etc.

Weibin Wang et al. (2021) analyzed the evaluation content of future education, and he believed that with the development of educational philosophy, technological innovation, and resource sharing, the evaluation of future education will also undergo significant changes, mainly including: evaluation of the ability to acquire knowledge; evaluation of the interactivity of teaching and learning; evaluation of the practical application of learning; and evaluation of the intertwined process and results.

Peng Zhao and Jipeng Pan (2022) conducted a study on the evaluation mechanism of the learning effect of junior high school civics. They believe that the enrichment and expansion of the evaluation content is the key to the evaluation of the learning effect, and the evaluation should not only focus on the students' understanding and application of knowledge but also on whether the ideological and moral qualities are really formed, so the evaluation content is comprehensive, not a single merit or demerit of achievement.

In his master's thesis, "Research on the Construction of Professional Competence Evaluation System for Middle School Physical Education Teachers", Xiangke Fan (2022) studied the professional competence evaluation of physical education teachers and listed the main components of the evaluation as: moral competence, athletic competence, teaching competence, extracurricular physical education management competence, teaching research and scientific research competence, and communication and cooperation competence, and constructed a three-level evaluation index system on this basis, which provided a theoretical guide for the professional competence rating of middle school physical education teachers.

In the article "Problems of Secondary School Language Teaching Evaluation and Solutions,", Nani Wei (2022) analyzed the significance, problems, and causes of secondary school language teaching evaluation and proposed corresponding solutions. He argues that the evaluation of secondary school language teaching should start at two levels: for teachers, the evaluation includes students' test scores, professional ethics, and teaching practice ability; for students, the mastery of cultural knowledge, learning attitude, and ideological morality.

In summary, the research on educational evaluation in recent years has taken various forms and varieties and has also achieved certain results, promoting educational development and students' growth, but the research on the evaluation of mental health education in junior high schools is still relatively small and has to be further strengthened.

2.3.2 Review of Foreign Studies

Foreign research on mental health education was earlier and developed rapidly, and with the depth of research, the education evaluation system was established, which played an active role in guaranteeing the quality of mental health education (Ying Wang ,2017).Foreign academics refer to the curriculum evaluation theories before the 1970s as traditional curriculum evaluation theories, and those after that as contemporary curriculum evaluation theories.

2.3.2.1 Research on the Evaluation of Mental Health Education in Primary and Secondary Schools

The United States attaches great importance to the quality and effectiveness of mental health education in schools, and in order to guarantee the quality of education, they have also constructed an effective quality assurance system, which mainly includes two aspects: professional staff training and the implementation of mental health education quality evaluation (Xingwan Zhao, 2012).As early as the 1990s, American scholars Nabors and Weist et al. (NbaorS, Weist, 1999) proposed that a quality evaluation system for mental health education in primary and secondary schools should be established.Dr. Raider of Wayne State University (Raider, 1997, 1999) argued that the evaluation of the quality of mental health education in schools should focus on both goal and process evaluation, one without the other. Dr. Ledder of New York University, on the other hand, suggested that the quality of accomplishment of the goal tasks and process effects should

be examined in an integrated manner.

In the United States, mental health education quality evaluation expert groups are usually hired by the relevant departments, and they are the main force to evaluate the quality of mental health education conducted in schools (Si Li, 2011; Minchan Xiao, 2005). Here are two influential cases: (1) In Baltimore, the United States, they have established the "Primary and Secondary School Mental Health Quality Monitoring Group", which consists of a certain number of university experts and academics who regularly conduct professional evaluations of mental health education in primary and secondary schools in the region and then make recommendations to rectify the problems found in the evaluations and plan for the next step, which strongly guarantees the quality of mental health education in primary and secondary schools. (2) In the United States, the School-Based Mental Health Center has also been established, which is a functional organization that specializes in conducting quality testing of mental health education in individual schools in the United States. The quality evaluation of school-based mental health education in the United States generally includes structural evaluation, process evaluation, and outcome evaluation (Xingwan Zhao, 2012; Wenli Liu & Mingqi Lu, 2021).

2.3.2.2 Studies on Other Educational Evaluations

Studies on the evaluation of university education courses tightm (2011) in Higher Education argues that university students' perceptions of course evaluation play an important role in shaping learning behavior. Leggetyerh et al. (2013) demonstrate that students who conduct self-evaluation perform better academically in their courses than those who do not. Lightg, Coxr, and Calkinss (2009), in Teaching and Learning in Higher Education, pointed out that the SERVQUAL questionnaire for course evaluation is an efficient means of judging and evaluating the quality of the course visually.

Research on the evaluation of preschool programs Karinlshimine (2011) identified four key elements for evaluating preschool programs, including the physical environment, teacher-child interaction, curriculum and instruction, and family collaboration. d. Ceglowski et al. (2002) argued that an industry-recognized set of standards for professional practice should be developed and that child care institutions should develop high-reliability evaluation criteria or tools and have them implemented by a third party to

ensure impartiality. For example, the Association for Childhood Education International Global Guidelines Rating Inventory (ACEI) and the Kindergarten Environment Rating Scale (ECERS-R).

Research on the evaluation of online courses Currently, one of the more influential online course evaluation standards at home and abroad is the E-Learning Certification Standards developed by Dr. Lynette Gillis in the U.S. S.P. (2013), "Writing Assessment in MOOCs: Automatic Scoring and Calibrated Peer Review,", the MOOC A comparative analysis of composition assessment methods in MOOCs explores automatic scoring and calibrated peer review. Meyer, J.P., and Zhu, S. (2013) constructed a study of a framework for MOOC learning assessment to stop deception from occurring in online assessment in "Measuring Fairness and Equity in Student Learning in MOOCs.".

2.4 Construct Evaluation Index System and Test Evaluation Index System

2.4.1 Domestic research on the evaluation index system and test of mental health education

CNKI's China Academic Journals Online Publishing Database was used as a data resource to search for "mental health education evaluation index system", and the search time was February 14, 2023. It can be seen that there is less research on mental health assessment by Chinese experts and scholars, especially less research on mental health assessment in junior high school, which needs more attention and research.

2.4.1.1 Evaluation index system for mental health education in junior high school

There are five literature sources on the evaluation index system of mental health education in junior high schools retrieved from CNKI's Chinese Academic Journals Network Publishing Database, which are (1) Exploring the evaluation criteria of mental health education classes in primary and secondary schools--a practical exploration based on the selection of psychological quality classes in Nanjing (Jing Lin, 2019); (2) Research on the evaluation index system of secondary school mental health education curriculum (Linfeng Yan & Dewen Yao , 2019); (3) Research on the evaluation system of mental health education work in primary and secondary schools in Dongsheng District, Ordos City (Ying Wang , 2017); (4) Construction of the evaluation index system of positive

mental health education in primary and secondary schools (Xingwan Zhao , 2012); (5) Mental health education in primary and secondary schools The construction of a classroom teaching evaluation index system (Xiang Li et al., 2011). The specific studies are shown in Table 2.2.

Table2.2 Research on the evaluation index system of mental health education in junior high school

Codes	Relevantextracts				
	Lin Jing	Linfeng Yan & Dewen Yao	Wang Ying	Xingwan Zhao	Xiang Li et al.
Problem Research	How to select quality psychology classes for primary and secondary schools?	How to construct a secondary school mental health curriculum evaluation index system?	How to evaluate the effectiveness of mental health education work?	How to construct an evaluation index system for positive mental health education in primary and secondary schools?	How to assess the effectiveness of mental health education efforts in schools?
Solution	The evaluation index system is constructed by using literature research method and case study	Questionnaires and interviews were used, and the CIPP model was applied to construct the evaluation index system.	A combination of literature, expert interviews, questionnaires, qualitative and quantitative research was used to construct the	Using action research method, empirical method, survey method, and literature method, the evaluation	From the three core elements of teachers, teaching, and Students are the three core elements to build the teaching

method.	evaluation index system.	index system was constructed.	evaluation system of mental health education courses.	
Population &Sample	Teachers and students of primary and secondary schools; teachers and students of some primary and secondary schools in Nanjing.	Population: psychology teachers in universities, first-line mental health teachers in secondary schools, and administrators of mental health education programs in secondary schools; Sample: 15 people were interviewed and 170 people were questioned.	Population: mental health education specialists in educational institutions, educational research groups, and different types of schools in different regions; Sample: 18 people were selected, including 8 people in administrative positions, 5 people in academic research groups, and 12 people as front-line teachers of	Population: Psychology teaching and research officers or directors of teaching and research offices, principals of primary and secondary schools, and mental health teachers in each region. Sample: Psychology teaching and research officers or directors of teaching and research offices in 18 counties	Population: Primary and secondary school teachers and students Sample: Selected primary and secondary school teachers and students.

		mental health education in schools.		(cities) and districts in Tangshan, 10 principals of primary and secondary schools, and 10 front-line mental health teachers.	
Research instruments	SPSS software	Delphi method, questionnaire star.	SPSS software, structural equation software (Amos)	SPSS software	
Data analysis+statistics	Weighting design, reliability and validity analysis, etc.	Weighting design, reliability and validity analysis, etc., arithmetic mean.	Variance, reliability, validity, and validation factor tests, expert review averaging, etc.	Key characteristics survey method, expert judgment averaging method, and weight setting.	Literature research method, descriptive research method.
Results	Evaluation index system of mental health education classes in	Evaluation index system of mental health courses in secondary schools.	Evaluation index system of mental health education in Dongsheng	Evaluation index system of positive mental health education in primary and	Classroom teaching evaluation index system of mental health

	primary and secondary schools in Nanjing.	District of Erdos City.	secondary schools.	education in primary and secondary schools.
Recommendations		The evaluation of mental health education requires the joint efforts of the whole society, and a three-dimensional education evaluation system with the cooperation of society, schools and families should be created.		
Limitations	This evaluation index system evaluates the course context and the teachers themselves, and is inadequate in	The evaluation system has not yet been applied to the primary and secondary schools in Dongsheng District for	Little information is available on the evaluation of positive mental health education, making the	

terms of course The evaluation system evaluates the course background and the teachers themselves, and is inadequate in the achievement of course objectives or the completion of classroom instruction.	practice, and the effectiveness of the evaluation has not yet been verified.	literature base for this study somewhat limited.

2.4.1.2 Comparison of mental health education evaluation indexes in schools and universities

The representative studies of mental health education evaluation indexes in schools and universities were compared and analyzed in CNKI's Chinese Academic Journals Online Publishing Database to provide theoretical guidelines for the rating index system of this study, as shown in Table 2.3.

Table 2.3 Different authors' views on the composition of mental health education evaluation indicators

Codes	Mental health education evaluation index	Object
Linfeng Yan & Dewen Yao (2019)	Primary indicators (4): background evaluation, teacher evaluation, process evaluation, and effect evaluation. Secondary indicators (18): (1) background evaluation: 6 for system construction, institutional setting, curriculum setting, etc.; (2) teacher evaluation: 3 for teacher qualification, teaching level, etc.; (3) process evaluation: 5 for policy implementation, teaching plan execution, use of teaching tools, etc.; (4) effectiveness evaluation: 4 for individual student benefit, collective student benefit, teacher growth, etc. Three-level indicators: a total of 28 under the second-level indicators.	Junior High School
Lin Jing (2019)	Primary indicators (4): design preparation, activity process, activity effect, and teacher quality. Secondary indicators (16): (1) design preparation: objectives, contents, programs, and resources; (2) activity process: means, pedagogy, and levels; (3) activity effectiveness: 5 of the achievement of activity design goals; (4) teacher literacy: 4 of the classroom presentation of teacher counseling and consultation techniques.	Primary and secondary schools
Ying.Wang (2017)	First-level indicators (6): organization and management, hardware facilities, faculty, evaluation content, evaluation methods, and evaluation effects. Secondary indicators (21): (1) organizational management: 3 for leadership, system integrity, etc.; (2) hardware facilities: 3 for special funding, etc.; (3) faculty: 3 for full-time and part-time teachers, etc.; (4) evaluation content: 3 for emotional experience and personality building, etc.; (5) evaluation methods: 6 for	Primary and secondary schools

	mental health activity classes, etc.; (6) effectiveness evaluation: schools, students, teachers	
Xingwan Zhao (2012)	First-level indicators (6): organizational management, hardware facilities, team building, implementation content, implementation methods, and implementation effects. Second-level indicators (24): (1) group management: 3 for principals' attention, etc.; (2) hardware facilities: 4 for special funding and counseling room construction, etc.; (3) team building: 5 for full-time and part-time mental health education teachers, etc.; (4) implementation content: 3 for shaping positive personalities, etc.; (5) implementation methods: 6 for psychological counseling, etc.; (6) implementation effects: students, teachers, and mental health education activity classes.	Primary and secondary schools
Xiang Li et al. (2011)	Evaluation of lesson dimensions (total score of 100 points): (1) Teacher (40% of total score), including static (25 points), empathy (25 points), concern (25 points), and concept (25 points). (2) Teaching process (40% of the total score), including teaching objectives (20 points), teaching materials (20 points), teaching linkage (10 points), teaching methods (20 points), evaluation of the teaching process (10 points), and classroom atmosphere (20 points). (3) Students (20% of the total score), including behavioral participation (30 points), emotional experience (35 points), and cognitive concepts (35 points).	Primary and secondary schools
Yingnan Liang (2020)	Primary indicators (4): environment, teaching materials, students, and teachers. Secondary indicators (9): (1) environment: hardware, software; (2) teaching materials: content, objectives; (3) students: process, literacy; (4) teachers: quality, ability, effectiveness.	University
Yinghui You	Primary indicators (5): teachers, students, teaching materials, teaching environment, and teaching effectiveness. Secondary indicators (13): (1) teachers: teacher quality, teaching	University

（2017）	ability, teaching attitude; (2) students: student literacy, learning process; (3) teaching materials: textbook objectives, textbook content; (4) teaching environment: hardware construction, software construction, guarantee construction; (5) teaching effect: individual student growth, collective student growth, teacher growth.	
Jingqun Wang et al. (2018)	Primary indicators (5): background evaluation, teacher evaluation, teaching materials evaluation, process evaluation, and effectiveness evaluation. Secondary indicators (22): (1) background evaluation: 5 for institutional setting and system construction, campus culture construction, etc.; (2) teacher evaluation: 4 for teacher qualification and teaching level, etc.; (3) Textbook evaluation: textbook objectives, technical features, content features, etc.; (4) Process evaluation: 5 for policy implementation, teaching plan implementation, etc.; (5) Effectiveness evaluation: 5 for individual student benefit, etc. Three-level indicators correspond to a total of 53 secondary indicators.	University

To sum up, there have been more studies on mental health education in China in recent years, but the studies on the evaluation index system of mental health education are not mature enough. Among the existing studies by Chinese researchers, in terms of the content of evaluation indicators, the content composition of indicators in large, medium, and small schools is similar and does not reflect differences; in terms of practicality, they basically stay at the level of theoretical research, and practice and feedback links are basically not mentioned.Thus, the construction of a mental health education evaluation index system for junior high schools still needs to overcome the shortcomings of current research and increase research efforts and depth.

2.4.2 Foreign research on education quality evaluation index system and test

Since the 21st century, a series of developments have been made in the evaluation

index system and the testing of foreign courses. Experts and scholars have explored and constructed new curriculum evaluation models and methods (Dongyuan Li, 2020). According to the analysis of the literature, the conclusion of foreign researchers on the education evaluation index system is that the teaching quality evaluation index system is multidimensional; see Table 2.4.

Table 2.4 Research on foreign mental health education evaluation indexes

Codes	Mental health education evaluation index
Kolitch（2012）	Four dimensions: course organization, student performance assessment, behavior management, and student-teacher relationship.
Marsh&Dunkin（2013）	Five dimensions: teaching organization, teacher-student relationship, teaching competence, assignment setting, and teaching structure.
Marsh（2010）	Nine dimensions: teaching organization, teaching attitude, teacher-student interaction, teacher-student relationship, knowledge grasp, test scores, learning difficulty, learning attitude, and homework.
Babansky	Nine dimensions: execution, curriculum knowledge, comprehension, learning ability, assessment ability, teaching ability, teacher-student relationship, teaching attitude, and grasping student psychology.

In summary, we can see that, compared with Chinese research on educational evaluation, from the viewpoint of evaluation subjects, foreign experts and scholars pay more attention to the role and status of students in evaluation, especially the absolute evaluation and self-differentiated evaluation of students. In terms of the function of evaluation, more attention is paid to the process of educational development and to formative evaluation.

2.5 Evaluation Index System

The performance or efficacy of a certain entity, such as a company, project, or system, can be evaluated and measured using an evaluation index system. It is made up of a number of standards or benchmarks that are employed to assess various factors and offer quantitative or qualitative measurements.

A performance or success of the entity being evaluated is to be evaluated in an organized and objective manner using an evaluation index system. It simplifies decision-making processes and aids in recognizing strengths, shortcomings, and areas for improvement.

Comprehensive, pertinent, and measurable should all be characteristics of an effective evaluation index system. A well-balanced selection of indicators covering the various facets of the entity being assessed should be included. Various categories, including financial success, operational effectiveness, customer satisfaction, employee involvement, environmental impact, and social responsibility can be used to group these indicators.

There are various phases involved in creating an assessment index system. First, it is important to outline the evaluation's objectives and aims. This aids in choosing the evaluation's scope and focus. The next step is to identify pertinent indications based on the unique context and specifications. They ought to be SMART indicators—specific, measurable, achievable, relevant, and time-bound.

Following the identification of the indicators, the proper measurement techniques or instruments are chosen to gather information and evaluate each indicator's performance. Surveys, interviews, observations, and record and report analysis are all methods for gathering data. After being gathered, the data is examined and interpreted to produce pertinent findings.

The validity and dependability of the used indicators and measurement techniques should also be taken into account by the assessment index system. Making sure the system produces accurate and impartial outcomes is crucial. The system has to be reviewed and updated on a regular basis.The basic set of the evaluation index system should include the following five parts:

2.5.1. Science

Education is a methodical undertaking encompassing a broad range of topics, including educational objectives, material, instructional strategies, and educational technologies. Numerous elements make up each element. Therefore, there are a lot of factors that must be considered in order to establish the educational assessment indicators objectively. The basic rules of school human resource development should be followed,

the definition of educational evaluation indicators should accurately reflect the ideas and concepts that serve as a basis for educational activities, and it should also accurately reflect the educational process. The essential components of appraisal must therefore be highlighted, but other components cannot be disregarded. The primary component of education assessment work is the education evaluation index system. This component influences evaluation findings, which in turn influences how accurately schools are evaluated.

2.5.2. Convenience

All indicators aim to be quantifiable, comparable, practical, and simple to use. Accurate information can be given, specific adjustments can be addressed, and a successful departmental education diagnosis can be produced by reviewing the evaluation data. According to the features of the assessment factors, a combination of qualitative and quantitative methodologies is used to describe the significance of the evaluation elements and scoring standards. To ensure that specialists can be believed, the qualitative explanation is as transparent as feasible. The degree of alignment between the actual state of department-level education work and the required goals can be simply and correctly determined by quantitatively expressing a high academic level and rich educational management expertise. Try to pass statistical examination of some fundamental data for quantifiable components to accurately portray the fundamental status of educational activities. Additionally, keep in mind that the levels shouldn't be overly specific but also shouldn't be overly general, and the indicators should be reasonably sensible. The findings of the evaluation will be impacted by the inadequate recognition. To encourage the creation of assessment projects, the indicator system must support the evaluated university's self-monitoring and self-evaluation.

2.5.3. Direction

Undoubtedly, the performance evaluation system will serve as the educational baton in university-based activities. The indicator system thus intends to play an objectively leading role in university development, education reform, and college instruction. The importance of the actual connection between colleges and universities is highlighted, the characteristics of university application-oriented talent training are emphasized as much as possible, and education is given importance. The quality requirements of the team's

"dual-teacher type" pay attention to the applicability and relevance of educational content. In addition, the assessment system ought to direct institutions of higher learning in handling relationships between scale, quality, structure, and efficiency as well as those between teaching and research, innovation, and distinctiveness.

2.5.4. Unity

On the one hand, evaluating, recognizing, and summarizing the work and accomplishments of colleges and universities is part of the role of educational evaluation. Guide and oversee the completed work concurrently. The status quo and the growing tendency are in conflict in the sphere of education, whether it be while developing a grading system or putting one into practice. Unrealistic emphasis on the growth trend's predictive index will undoubtedly make individuals feel impossible and have an impact on their confidence in higher education. The index system has no incentive effect and is not helpful for enhancing educational initiatives when it is merely based on the status quo. In order for the standards established by the evaluation to be better integrated and the status quo to maintain consistency with the contradictory trends, the model of the index system should not only be derived from the actual education system of the university but also be able to adhere to higher standards, instill the spirit of reform, conform to the development direction, and link up with the curriculum.

2.5.5. Flexibility

Although there are certain commonalities throughout university education, there are also distinctions among institutions in terms of the actual educational difficulties, disciplines, and training objectives. It is impossible to create an index system that accounts for the distinct educational objectives of every college, every type of study and curriculum, and every university's practical education. It needs to be cut up very carefully. To ensure that the index system in this article covers the educational activities of many colleges and universities, we must take into account as many common components as we can.

If the educational activity data from specific universities is lacking during the actual evaluation, the missing data can be processed.

2.6 Tyler Mode and CIPP Evaluation Model

2.6.1 Tyler Mode

2.6.1.1 The connotation of Tyler Mode

Tyler, R.W., a renowned American curriculum theorist and practitioner, the founder of modern curriculum theory, and the master of curriculum science, proposed two major principles of educational evaluation and curriculum development in the 1930s and 1940s, collectively known as the "Tyler Model." Taylor's model consists of four aspects: determining goals, selecting experiences, organizing experiences, and evaluating results, with the core being educational goals. The entire evaluation activity is centered on the goals. The goal is the basis of the whole evaluation activity, and it is the starting and ending point of the evaluation (Tang, D. H. et al., 2019; Xing, G., and Zhao, Z., 2017).

2.6.1.2 Composition of Taylor mode

The ' Tyler Mode ' mainly includes four aspects: goal setting, experience selection, organizational experience, and evaluation results. Its core is an educational goal, and the whole evaluation activity is carried out around the goal. The goal is the basis of the whole evaluation activity, the starting point, and the end point of the evaluation. (Dehai Tang et al., 2019; Zhengquan Xing and Zhong Zhao, 2017).

In his research, Tyler (2012) pointed out that the Tyler Mode is mainly used for periodic evaluation or summative evaluation of teaching programs, and the implementation steps are shown in Figure 2.2.
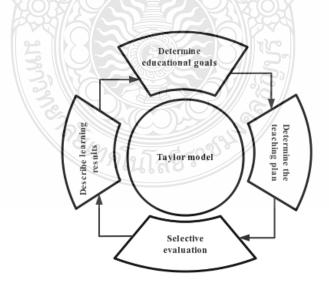
Figure 2.2 Using Tyler Mode to evaluate the teaching plan flow chart

2.6.2 CIPP evaluation model

2.6.2.1 The connotation of CIPP model

Stufflebeam (2003a) believed that the CIPP model was designed by Guba. Later, American scholar Stufflebeam (D.L.) proposed the CIPP model to further develop it on the basis of reflection on Taylor's behavioral goal model in 1967. The CIPP model stems from the observation that traditional evaluation design methods are imitated and often seem too rigid for evaluating dynamic social environments.

Stufflebeam and Shinkfield (2007) argued that the CIPP evaluation model focuses on providing a basis for deriving and validating specific evaluation criteria through the interaction between evaluators and customers. It is based on a constructivist approach that requires evaluators to operate on the basis of trust and respect for all stakeholders, regardless of their power, gender, or cultural background.

According to Stella Tan, Nicolette Lee, and David Hall (2010), the CIPP evaluation model focuses more on improving design and first considers development work planning and implementation. When using the CIPP model, evaluators must consider the feasibility of assessing the scope of the project, the security of all users, the importance of assessing the impact on the project and project results, and the fairness of stakeholders and decision-makers.

2.6.2.2 Composition of CIPP model

The CIPP evaluation model consists of the first letter of the four evaluation activities: (1) context evaluation, (2) input evaluation, (3) process evaluation, and (4) product evaluation. The CIPP evaluation model regards improvement as the primary task of evaluation, weakens the control tendency of evaluation, pays more attention to the process of evaluation, and has certain limitations in the application and feedback of evaluation results (Linfeng Yan and Dewen Yao, 2019; Dongyuan Li, 2020; White, J.G., 1981; Yong Wang et al., 2022).

As mentioned above, each component of CIPP requires specific issues related to the current stage of development in the assessment process, and its logic diagram is shown in Figure 2.3 (Stufflebeam, 2003).
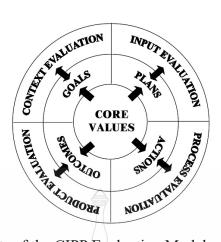
Figure2.3 Key components of the CIPP Evaluation Model and associated relationships (Stufflebeam,2003).

The three concentric circles in Figure 2.3 depict the basic elements of the model. Among them, the inner circle represents the core value. The middle circle includes four evaluation focuses: goal, plan, action, and result. The outer ring represents the evaluation types that serve the four evaluation focuses, namely context evaluation, input evaluation, process evaluation, and product evaluation (Singh, MD, 2004; Fan Yang & Yueyuan Kang, 2023).

Background assessment mainly refers to assessing needs, problems, resources, and opportunities in a certain environment. Input evaluation mainly refers to the evaluation of the conditions, resources, and schemes needed to achieve the goal on the basis of background evaluation. Its essence is to evaluate the feasibility and effectiveness of the scheme. Process evaluation mainly refers to the continuous supervision, inspection, and feedback of the implementation of the program. Outcome evaluation is the evaluation of the degree of goal attainment(Stella Tan, Nicolette Lee, and David Hall, 2010; Li Pan & Fei Xue, 2023; Longquan Huang & Lei Wang, 2020; Chao Wang & Chunhua Du, 2023).

2.7 Related research of Domestic and International Studies on Tyler Mode and CIPP Evaluation Model

At present, the basic models of educational evaluation that have great influence are mainly the Tyler Mode, the CIPP model, the CSE model, the opponent model, the respondent model, the consumption-oriented model, the goal-wandering model, and so

on (Xiaosheng Zhao, 2018). Here, we compare and analyze the commonly used Tyler Mode and CIPP model and synthesize their advantages and disadvantages, from which we can obtain ideas for constructing the evaluation model of mental health education in China.

2.7.1 A review of Research on Taylor's Model

2.7.1.1 Review of Domestic Studies

The study selected CNKI's Chinese Academic Journals Online Publishing Database as the data resource and searched with the theme "Tyler Mode". The research and application of Taylor's model are generally less extensive. From the search, the earliest was the article "Theoretical Basis and Principles of the System of Evaluation Methods for Overall Educational Reform," published by Li Quanzhu in 1992 in the Journal of Hebei Normal University (Social Science Edition), which analyzed the points and shortcomings of Taylor's model.

1）Research on the advantages and disadvantages of the Tyler Mode

Weichuan Zheng (1993) argued that the advantages of Taylor's model mainly include the parsimony of the model and the measurability of the goal, and the disadvantages mainly include the difficulty of examining unintended effects, the rigidity of the goal, and the convergence of the model.

According to Xianfa Ye (1994), the purpose of Tyler Mode assessment is not to select students but to improve curriculum and teaching programs. He believes that the disadvantage of the Tyler Mode is that it still believes that student behavior is related to statistical knowledge and that quantitative must be objective and scientific; the advantage is that it replaces relative assessment with a goal-based assessment model, focuses on the development of each student, and reflects the educational nature of assessment.

According to Wei Zhang (1995), limitations of the Tyler Mode include: no evaluation of the rationality of goals; the goals set are mostly proposed by educational administrators with little consideration of students' needs; and the inability to use unified goals to evaluate people with independence.

According to Fan Yi (2012), the Tyler Mode has three characteristics: the purpose of evaluation is to compare the strengths and weaknesses of instructional programs, clarifying educational goals is the key to educational evaluation, and using multiple

approaches to describe learning outcomes. Three misconceptions were also seen in teachers' use of the Tyler Mode for instructional evaluation, mainly including neglecting the goals in the affective and psychomotor domains in terms of evaluation content, relying too much on thesis-and-pencil tests in terms of evaluation methods, and rarely using behavioral terms to describe educational goals in terms of evaluation implementation.

Yonghong Wang (2011) argues that Taylor's use of predetermined goals as a unified frame of reference and unified standard for evaluation implicitly implies that predetermined goals are absolutely infallible and lack evaluation of their reasonableness.

According to Zhengquan Xing and Zhong Zhao (2017), the Tyler Mode overly pursues the degree of conformity of the evaluated object's behavior with the intended goal, thus ignoring the rationality of the goal itself and neglecting the opinions of other stakeholders involved in the evaluation and the unintended goal and its evaluation.

According to Mei Yang (2021), the advantages of Taylor's model are that the advocated model of curriculum goals is purposeful, planned, and scientific and combines assessment with goals, replacing the traditional view of testing with the assessment view. The disadvantages are that Taylor's model does not fully take into account the needs of students and the overall quality of teachers, which is not conducive to mobilizing students' motivation and initiative.

2）Research on the application of Tyler Mode

An Tang (2020) takes the Guqin school-based curriculum as an example to apply the Tyler Mode in teaching the high school curriculum and identifies the goals as the level and standard of music appreciation and skill development, the selection experience as the establishment of a correct view of music and the orientation of professional skills, the organization experience as the teacher's selection, understanding, and grasp of the work in relation to how it is permeated in teaching, and the evaluation results as the direction, process, and presentation of a three-dimensional experience.

In his study, HuaYi Zhang (2011) elaborated on the application of Taylor's model for constructing indicator systems in educational assessment, decomposing educational objectives into a 2-level indicator system, with the first level of indicators called first-level indicators, such as A1, A2, A3... and the second level of indicators called second-level indicators, such as A11, A12, A21, A22... At the same time, statistical principles are

applied to assign weights to the indicator system at each level..

In their study, Xinhao Gao et al. (2015) constructed a curriculum design based on Taylor's principles, pointing out that based on Taylor's curriculum design model, a systematic and discipline-specific curriculum framework is constructed by designing around curriculum objectives, learning experiences, subject knowledge, curriculum content, and organizational forms.

In her study, Yanni Feng (2009) proposed that the curriculum design concept in Taylor's model is closely aligned with the goal design, structure design, and content design of the project-based curriculum.

Dehui Wang and Qiao Sun (2009) proposed the application of the Tyler Mode to the new curriculum for physical education in their term study, giving physical education teachers more power.

In summary, we can see that the Tyler Mode has both advantages and disadvantages, and its application is relatively widespread. Its advantages are: (1) strictly separating evaluation from testing; (2) conducting evaluation in a purposeful, planned, and organized manner; and (3) a compact and logical structure of evaluation procedures. (4) Focus on a comprehensive evaluation. The weaknesses are: (1) the rationality of the objectives is not evaluated; (2) the objectives are seldom proposed considering what the students need; (3) the evaluation criteria are rather arbitrary and mechanical; and (4) the results are emphasized rather than the process.

2.7.1.2 Review of Foreign Studies

LunenburgFC. Key, in Components of a Curriculum Plan:Objectives, Content, and Learning Experiences, uses the Taylor Classical Curriculum Model to examine the relationship between objectives, content or topics, and learning experiences to determine the development and implementation of the instructional plan.

Bellack AA, in Kliebard HM, Curriculum and Evaluation, suggests that Taylor is aware of the flaws in the three major sources of goals, tries to use philosophy as a means of covering up any flaws, and suggests that philosophy is the source of Taylor's goals and that the other three sources specified are only superficial, leaving educational goals without in any significant sense addressing the question of which goals we leave behind and which we discard once we make a commitment.

Wheeler, D. K. (1985) argued that according to the "Taylor chess style", if the evaluation results do not meet the expected goals, feedback cannot be achieved to reformulate the curriculum, so he changed it to a circular style based on the Tyler Mode, changing the one-way process from goals to evaluation in the Tyler Mode.

The British curriculum theorist Robin Barrow abandoned the traditional American emphasis of curriculum theory on curriculum development and Taylor's principles on goals, design, implementation, and evaluation. Robin Barrow did not respond directly to Taylor's principles; instead, he focused on Pratt's (1980) refinement of Taylor's principles.

2.7.2 Review of Research on CIPP Evaluation Model

2.7.2.1 Review of Domestic Studies

The study selected CNKI's Chinese Academic Journals Online Publishing Database as the data resource and searched with the theme "CIPP", and the search date was February 19, 2023. From the search, the earlier study of the CIPP model is somewhat representative of Zhang Hengzhong and Lin Biying's "Five Essays on Quality Education: About Quality Education Assessment Work," published in the Journal of Fuqing Branch of Fujian Normal University in 1998, which conducted a research analysis of the CIPP educational evaluation model. In this study, the relevant literature was sorted out, and the research is mainly as follows:

1）Study on the points and drawbacks of the CIPP evaluation model

According to Heng-Chung Zhang and Bi-Ying Lin (1998), the CIPP evaluation model breaks away from Taylor's framework and has evolved in many ways, most notably in that the relevance and feasibility of the objectives are given full attention. Although the shortcomings of the Tyler Mode are overcome here, the CIPP model still places emphasis on quantitative goals.

According to Wei Zhao (2006), the characteristics of the CIPP model are: (1) decision-oriented; (2) emphasis on the improvement function of evaluation; (3) a complete and organic combination of diagnostic evaluation, formative evaluation, and summative evaluation; and (4) flexible implementation. Its advantages are: (1) proposing contextual evaluation and incorporating objectives into evaluation, which improves the rationality of objectives; (2) proposing input and process evaluation, which avoids the problem that the Tyler Mode ignores conditions and unintended results; (3) inheriting the

outcome evaluation of the Tyler Mode but being more logical and continuous than the Tyler Mode; and (4) highlighting the developmental function of evaluation. Its disadvantages are: (1) evaluation lacks value judgment; (2) evaluators mainly collect information for decision makers, ignoring the needs and values beyond decision makers, which reduces the meaning and validity of evaluation. (3) Lack of rigorous evaluation procedures and multiple openings in evaluation types; (4) The evaluation steps and contents of the CIPP model are more complex.

According to Hualing Luo (2011), the advantages of the CIPP model are: (1) it has a decision-oriented function; (2) it incorporates goals into evaluation activities and emphasizes formative evaluation, changing the excessive emphasis on summative evaluation in the past; and (3) the focus of evaluation is on promoting the improvement and development of school education. The disadvantages are: (1) too much emphasis is placed on the service to educational decision-making rather than value judgment of educational decision-making; (2) the background, input, process, and result evaluations done are biased toward assessing information collection and collation; (3) the focus is on descriptive research rather than value judgment of decision-making or action programs in the real sense, which leads to over-reliance of evaluators on decision-makers and reduces the effectiveness and efficiency of its use.

According to Xiaoliang Cai and Mu Zhuang (2013), the strengths of the CIPP model are: (1) a rationality review of the objectives, which makes up for the deficiencies of the Tyler Mode; (2) the proposal of input evaluation and process evaluation, which avoids the deficiencies of the Tyler Mode that ignore conditions and unintended outcomes; (3) a more systematic approach; and (4) more flexibility. The disadvantages are: (1) excessive focus on descriptive information, neglecting to make value-based judgments about the program and its implementation, and lacking the spirit of reflective criticism of practice. (2) evaluators may make false perjury for the political convenience of decision makers; (3) the implementation process is complex and requires a lot of human, material, and financial resources to implement complicated activities, thus limiting its scope of application.

2）**Research on the application of CIPP evaluation model**

In the article "Study on the Current Situation and Countermeasures of Residency

Standardized Training from the Perspective of Lead Teachers Based on the CIPP Evaluation Model", Yanling Lan et al. (2023) used the CIPP evaluation model to explore the bottlenecks of residency training operation and develop intervention strategies from four aspects: background, input, process, and outcome, and constructed an evaluation and analysis framework of the current situation and countermeasures of residency training in Guangdong Province, so as to promote the optimization of the residency training system, increase of input, and improvement of training process.

In his master's thesis "The Construction and Application of Middle School Physical Education Homework Evaluation Index System", Deming Liu (2022) used the CIPP evaluation model as the theoretical basis to build a theoretical model of middle school physical education homework evaluation and constructed a middle school physical education homework evaluation index system from four dimensions: "background-input-process-result".

In his master's thesis, "Research on the Evaluation of Comprehensive Practical Activities in Junior High School Physics Under the CIPP Model,", Shi-Feng Wu (2021) designed an evaluation system for comprehensive practical activities in junior high school physics based on the CIPP model by pointing the four links of the CIPP model to teaching goal evaluation, teaching program evaluation, teaching process evaluation, and teaching result evaluation.

In his master's thesis, "A Study on the Assessment Framework of Elementary and Middle School Art Specialized Curriculum Based on the CIPP Model," Ang Ma (2021) analyzed and judged the relationship between the CIPP model and the appropriateness of this kind of curriculum for elementary and middle school art specialized curriculum and designed and constructed the assessment dimensions of elementary and middle school art specialized curriculum based on the CIPP model, including the assessment of goal construction pointed by the context dimension, the assessment of resource allocation pointed by the input dimension, the assessment of operational design pointed by the process dimension, and the assessment of expected performance pointed by the outcome dimension.

In his doctoral dissertation, "Research on the Construction of an Evaluation System of School Football Characteristic Schools in Beijing Primary Schools Based on CIPP",

Jian Zhang (2019) constructed an evaluation system of school soccer characteristic schools in Beijing based on CIPP, which consists of four primary indicators, 18 secondary indicators, and 57 tertiary indicators of development goals, resource guarantee, organization and implementation, and development results.

In the article "Evaluation of middle school geography classroom teaching based on the CIPP model", Jianping Liu and Xiujuan Wen (2015) constructed evaluation indexes of middle school geography classroom teaching based on the CIPP model for the characteristics of middle school geography classroom teaching and evaluated the formulation of teaching objectives, the design of teaching programs, the process of teaching activities, and the results of teaching, respectively.

From the above scholars' studies, we can see that Chinese scholars' research on the application of the CIPP model includes six main areas: (1) instructional evaluation. (2) School evaluation. (3) Curriculum evaluation. (4) Teacher self-evaluation. (5) Student academic evaluation. (6) Construction of evaluation index system.

In summary, we can find that over the 20 years since the CIPP model was introduced to China, scholars have continued to refine and explore the CIPP model in the process of research, introducing its content while also trying to apply the model in practice, exploring the strengths and weaknesses of the CIPP model in the process of practice, and exploring a more suitable and relevant curriculum evaluation model based on the CIPP model and the integration of other evaluation models.

At the same time, we see that the CIPP model has both advantages and disadvantages. Its advantages mainly include: (1) the contextual evaluation is proposed, and the objectives are included in the evaluation, which improves the rationality of the objectives and makes up for the deficiencies of the Tyler Mode; (2) the input and process evaluation is proposed, which avoids the problems of the Tyler Mode of ignoring conditions and unintended outcomes; (3) the outcome evaluation of the Tyler Mode is inherited, but it is more logical and continuous than the Tyler Mode. (4) It highlights the developmental function of evaluation. Its shortcomings are: (1) too much emphasis on the service to educational decision-making with a certain administrative orientation; (2) Excessive emphasis on descriptive information and lack of value judgment in evaluation (3) Lack of rigorous evaluation procedures (4) The implementation process is complicated, with a

large investment in human, material, and financial resources and a lack of promotion.

2.7.2.2 Review of Foreign Studies

According to an analysis of foreign literature, the CIPP evaluation model has been widely used in a number of fields since its formation in the 1960s. In describing the CIPP model, Stufflebeam (2000) argues that the CIPP model can be applied to a wide range of evaluations of materials, personnel, students, programs, and plans in a wide range of disciplines.

1）Research on the application of CIPP model to educational evaluation

White, J.G. (1981) used the CIPP model to study the evaluation of intercultural teacher training programs and made his own comments on retention, improvement, and discontinuation of the programs in his periodical study. In their study, Campbell et al. (1992) took a methodological approach to explore the application of the CIPP model in agronomy education. In their study, Erla M. et al. (2010) used the CIPP model to analyze and make recommendations using learning object management. Hania M. Al-Shanawani (2019), in their study, used the CIPP model to evaluate a self-learning program in a kindergarten in Saudi Arabia and made recommendations accordingly.

2）A study on the application of the CIPP model to evaluation in areas other than education

There has been a gradual increase in the application of the CIPP model abroad outside of the education field. In terms of practical applications, according to the literature, there are foreign evaluations of social service programs using the CIPP model. For example, Laos in Thailand used the CIPP model for the evaluation of public employment training programs, and the U.S. community used the CIPP model for the evaluation of parent training programs. Kemp, M. (1981), in Self-Evaluation of Sign Language Programs, used the CIPP model to evaluate a sign language program for the blind and made recommendations for improvement in response to the evaluation results to promote the quality of the sign language program for the blind. In B Shams and P Golshiri (2005), "Development of a Model for Child Nutrition Improvement and Growth Promotion,", the CIPP model was used to construct an evaluation model for child nutrition improvement and growth promotion with respect to child nutrition and child growth, and in B Shams and P Golshiri (2008), "Maternal Involvement in Improving Child Growth and Nutrition:

A Community Involvement Model,", a new model for child health was developed by combining the CIPP model with community services. B. Shams and P. Golshiri (2008), in the article "Mother's Participation in Improving Child Growth and Nutrition: A Community Involvement Model,", again studied a new model of child health development in depth by combining the CIPP model with community services for child health. Kim et al. (2017) studied the satisfaction of a new nurse training program in a Korean hospital using the CIPP model. Megan Lippe (2018), in their study, used the CIPP model to construct an evaluation system to assess the quality and merits of nursing education programs.

In summary, it is evident from foreign studies that the CIPP model has been quite influential in the field of educational evaluation and training programs worldwide, and its flexibility and operability have been confirmed in the practice of many scholars. In terms of research geography, there are developed countries, developing countries, and less developed regions. In terms of research objects, foreign scholars focus more on the operational application of the CIPP model in practice, as well as the continuous verification of the rationality and applicability of the theory in practice and the continuous broadening of its application scope and field.Chinese scholars' research on CIPP model still has some shortcomings, mainly in two aspects: (1) the evaluation system is detached from the practical application, lacking a complete and unified "evaluation system construction - practical application - effect Feedback" empirical research. (2) In the practical application of CIPP evaluation model, there is a lack of detailed elaboration on the needs and problems arising from its application.

In summary, a comparative study of the Tyler Mode and the CIPP model is conducted, and the advantages and disadvantages of both are summarized. This thesis draws on the advantages of the Tyler Mode and the CIPP model, avoids their disadvantages, and constructs the CCIP-PF evaluation model from the perspective of third-party evaluation. For a comparison of the advantages and disadvantages of the Tyler Mode, the CIPP model, and the CCIP-PF evaluation model, see Figure2.4.
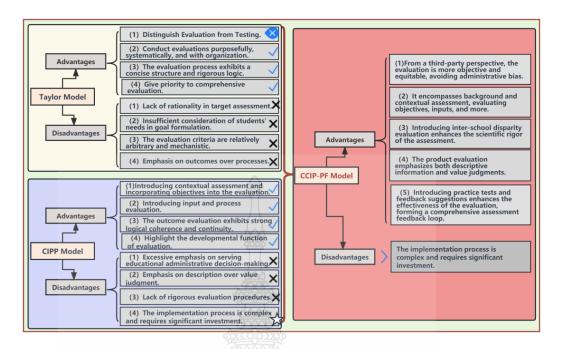
Figure 2.4 Comparative Analysis Chart of the Advantages and Disadvantages of Tyler Mode, CIPP Model, and CCIP-PF Model.

Figure 2.4 shows that the Taylor and CIPP models have four main advantages and disadvantages. The CCIP-PF model adopts the strengths of the Taylor and CIPP models, as indicated by the checkmarks in the left figure while avoiding their weaknesses, as represented by the crosses in the left figure.

One of the advantages of the Tyler Mode lies in separating evaluation and testing. In the CCIP-PF model, evaluation and testing are placed in two consecutive stages, facilitating a more rigorous examination of the scientificity of the evaluation indicator system. Additionally, this approach includes the incorporation of feedback recommendations. A pentagram symbol was marked in the fourth drawback of the CIPP model. In the CCIP-PF model, this limitation was avoided by collaborating with the Education Bureau of Zigong City, Sichuan Province, which helped mitigate the need for significant financial and material resources and enhanced replicability. However, there remains to be a drawback of having a relatively complex procedure requiring substantial input of effort.

In conclusion, the CCIP-PF model is superior to the Taylor and CIPP models and better suited for this study.

CHAPTER 3

RESEARCH METHODOLOGY

The research on the evaluation system of mental health education for junior high school students mainly adopts a combination of qualitative and quantitative research methods and develops the CCIP-PF evaluation model, the details of which are as follows:

3.1 Research Design

3.2 Population and Sample

3.3 Research Instruments

3.4 Statistics and Analysis

3.5 Data Collection Process

3.6 Framework of R&D Design

3.1 Research Design

This study employs a mixed research methodology, combining the Tyler Mode and CIPP model, and innovatively designs the CCIP-PF model. The purpose of this research is to establish an evaluation index system for junior high school mental health education, aiming to enhance its quality. This model serves as a means to benefit both teachers and students. This study employs the Delphi method, with expert interviews and surveys as the primary tools, to gather the constituent elements of the index system and construct the CCIP-PF index system. Furthermore, the author applies the CCIP-PF index system to junior high schools in Zigong, Sichuan, China, to test and refine the scientific and rational aspects of the research index system.

3.2 Population and Sample

3.2.1 Population

The total population is 2，360, including the following parts: (1) There are 65

managers in the Supervision Bureau of the Department of Basic Education in China; (2) There are 30 administrators of education administrative departments in Fushun County, Zigong City, China; 210 middle school mental health education teachers and class teachers; 45 hospital mental health center doctors; 200 training institution teachers; and 1540 middle school students. (3) There are 40 lecturers and professors of mental health education in colleges and universities in Zigong, 70 psychological counselors, and 160 psychological associations of college students. The choice of interviewees is not discriminatory, and their privacy will be guaranteed. The names of the interviewees will not appear. Their opinions will be collected only for academic research purposes.

3.2.2 Sample

3.2.2.1 Sample of questionnaire survey

This study used probability sampling techniques (Wasserman, L., 2004; Zou et al.; J.D., 2022). The formula used for calculating the sample size was as follows:

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{e^2} \qquad (1)$$

In the formula, n represents the required sample size，Z signifies the Z-score corresponding to the chosen confidence level，p denotes the proportion of a specific attribute within the population，and e represents the allowable margin of error. In this study, Z is set at 95% (corresponding to a Z-score of approximately 1.96), p is established as 50%, and e is determined to be 5%. Consequently, the calculated sample size is 384. To mitigate potential survey collection errors, we augmented the sample size by over 10%, resulting in a final sample size of 422 cases. See Table 3.1 for the sample population and number.

Table 3.1 Questionnaire sample setting table

Number	position	Number of population	Number of sample
1	Educational Administration Administrators	95 people	30 people
2	Teachers and class teachers of mental health education in junior high schools	210 people	60 people
3	Lecturer and professor of mental health education in colleges and universities	40 people	20 people
4	Psychological Counselor	70 people	30 people
5	Mental health doctor	45 people	15 people
6	Junior high school students	1,540 people	160 people
7	Teachers of training institutions	200 people	50 people
8	College Student Mental Health Association	160 people	57 people
	Total	2,360 people	422 people

3.2.2.2 Sample of Expert Interviews

Seventeen people were selected for the expert interviews, and the specific interviewees are detailed in Table 3.2.

Table 3.2 Interviewees and standard setting table

Serial number	Sample	NO.of people	Standard
1	Mental health education administrators in educational administrations	3 people	3 years of mental health management, understanding of mental health education in junior high school, and a bachelor's degree or above.

2	Middle School Mental Health Education Teacher	5 people	Have been engaged in mental health education for 5 years and have a bachelor's degree or above.
3	Professor of Mental Health Education in High Schools	3 people	10 years of research in mental health education, master's degree, professor title.
4	Psychological Counselor	2 people	2 years of psychological counseling, more than 10 counselors, undergraduate degree or above, 1 male and 1 female.
5	Mental Health Physicians	2 people	Have been engaged in the treatment of mental health disorders for 2 years, treat more than 5 people, and have a bachelor's degree or above.
6	Teachers of training institutions	2 people	Engaged in the work of class teacher in training institutions for at least 2 years, with a college degree.

3.3 Research Instruments

3.3.1 Expert Interviews

The expert interviews were conducted in four phases. The primary aim of these interviews was to solicit expert opinions on the constituent elements of the junior high school mental health education evaluation index system. Through brainstorming sessions and three rounds of questionnaire interviews, experts provided suggestions and recommendations regarding the scientific, rational, and operational aspects of the index system. Based on these suggestions and recommendations, revisions and improvements were made, ultimately resulting in the CCIP-PF junior high school mental health education evaluation index system.

3.3.2 Questionnaire Survey

The questionnaire survey was conducted using the Questionnaire Star software

in China, utilizing internet-based surveys for added convenience and time efficiency.

3.3.3 Interview Questionnaire Methodology and Process

Data for this study were gathered through the Delphi method, involving expert interviews consisting of brainstorming sessions and three rounds of questionnaire surveys. The questionnaire surveys were primarily conducted using the Chinese Wenjuanxing software, while question assessment utilized the Likert scale.The purpose of expert interviews and questionnaire surveys is to identify the constituent elements of the index system, seek opinions and recommendations from expert scholars regarding the initially proposed index system, and make revisions and improvements to enhance the scientific, rational, and relevance aspects of the index system. This is done to increase the accuracy and effectiveness of the index system evaluation.

Likert Scale：Using a Likert scale, the initial index system, ' Degree of Consent," 'is set to 5 levels. The specific score is set as follows:

Level 5 represents strongly agreeing.

Level 4 represents agreement.

Level 3 represents truth to some extent.

Level 2 represents do not agree."

Level 1 represents strongly disagreeing.

Please refer to Figure 3.1 for the detailed steps.
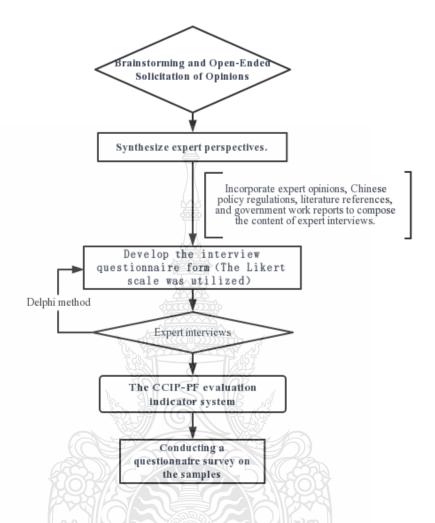
Figure3.1 Flowchart of Interview Questionnaire.

3.4 Statistics and Analysis

3.4.1 Descriptive Statistics

Descriptive statistics refers to the activities involving tabulation and categorization, graphical representation, and calculation of summary data to depict the characteristics of the data.Descriptive statistical analysis involves statistically describing the relevant data of all variables in the surveyed population, mainly including frequency analysis, measures of central tendency analysis, measures of dispersion analysis, distribution analysis, and some basic statistical graphs (Zhou, J., 2013).

In this study, the SPSS software was employed to conduct statistical analysis primarily on the mean, standard deviation, and interquartile range. The results adhere to the following principles:

Average： 1.00-1.49 = Strongly disagree; 1.50-2.49 = Disagree; 2.50-3.49 = Neutral; 3.50-4.49 = Moderately agree; 4.50-5.00 = Strongly agree.

Interquartile Range (IQR): IQR≤ 1.00 = Congruent; IQR>1.00 = Incongruent. SD = Standard Deviation.

3.4.2 Reliability and Validity Analysis

Utilizing the SPSS statistical analysis software for reliability analysis, validity analysis, and so forth.

3.4.2.1 Reliability Analysis

Reliability refers to the degree of consistency in measurement data, specifically, the extent to which the results obtained are consistent when the same method is repeatedly applied to the same object.It is commonly divided into test-retest reliability, parallel forms reliability, split-half reliability, Kuder-Richardson, Cronbach's alpha, and inter-scorer reliability (Wu, Song, 2022).

In this study, reliability analysis primarily utilizes Cronbach's alpha, with its formula as follows:

$$\alpha = \frac{K}{K-1}(1 - \frac{\sum S_i^2}{S_x^2}) \qquad (2)$$

In the equation, α represents the reliability coefficient, K stands for the number of test items, S_i^2 signifies the score variability among all participants on item i, and S_x^2 represents the variance of the total scores obtained by all participants.In fundamental research, a reliability level of at least 0.80 is deemed acceptable; in exploratory research, a reliability of 0.70 is acceptable, with values falling between 0.70 and 0.98 considered as high reliability, while below 0.35 indicates low reliability and must be rejected (Dai,

H., Zhang, F., 2018). Given that this study falls under fundamental research, a reliability level above 0.80 is expected.

3.4.2.2 Validity Analysis

Validity is the degree to which a measurement tool or instrument can accurately measure the thing to be measured. Validity refers to the degree to which the measured result reflects the content to be examined. The more the measurement result matches the content to be examined, the higher the validity; conversely, the lower the validity. Validity can be divided into three categories: content validity, criterion validity, and structural validity.

In measurement theory, validity is defined as the ratio of the number of true variances (i.e., effective variances) to the total number of variances in a series of measurements that are relevant to the purpose of the measurement.

$$r_{xy}^2 = \frac{S_y^2}{S_x^2} \qquad (3)$$

r_x represents the validity coefficient of the measurement, S_y^2 represents the effective variation number, and S_x^2 represents the total variation number.

Validity can be categorized into three types: content validity, criterion validity, and construct validity, with construct validity being a commonly used approach in validity analysis.This study employed construct validity for the validity analysis. Firstly, the Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were conducted. Regarding the KMO test, a value above 0.9 is highly suitable for factor analysis; between 0.8 and 0.9 is considered appropriate; between 0.7 and 0.8 is suitable; between 0.6 and 0.7 is still acceptable; between 0.5 and 0.6 indicates marginal adequacy; below 0.5 suggests inadequacy. The KMO value test indicated the presence of correlations among item variables, aligning with the requirements of factor analysis.For Bartlett's test, if the significance is less than 0.05, the null hypothesis is rejected, indicating the suitability for

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conducting factor analysis. If the null hypothesis is not rejected, it suggests that these variables might independently provide some information and are not suitable for factor analysis (Wu, Song, 2022).

3.4.3 Factor Analysis

Factor analysis refers to a statistical technique used to extract common factors from a set of variables. Its types include exploratory factor analysis and confirmatory factor analysis. In this study, exploratory factor analysis is primarily conducted using the principal component analysis and common factor analysis methods (Wang, Y. et al., 2010).

Principal component analysis serves as the foundation of factor analysis, wherein factor analysis builds upon principal component analysis by applying spatial rotation to allow several virtual principal components to possess interpretable professional significance.Analyzing the communal factor variance, the communal factor variance should generally be above 0.5, indicating that each variable can be adequately represented.Analyzing the total variance involves primarily assessing the contribution of factors to variable explanations. If the contribution is too low, it may necessitate adjusting the number of factors, with a general requirement for contribution rates not to fall below 60%. In general, a higher variance explained indicates greater importance of the principal component, and its corresponding weight should also be higher (Gao, H., 2005).

3.4.4 Indicator Weight Setting

Indicator weights are carried out in two steps. In the first step, calculate the arithmetic mean of each indicator with the following formula:

$$f_i = \frac{\sum_{i-1}^{N} A_i}{N} \tag{4}$$

where is the score given by the respondents to the corresponding indicator; is the resulting average and the final score; and N is the number of valid questionnaires.

Step 2: Calculate the weights of each indicator with the following formula:

$$W_i = \frac{f_i}{\sum f_i} \qquad (5)$$

Where the numerator is the value of the corresponding indicator, and the denominator is the sum of the scores of the corresponding primary or secondary indicators.

3.4.5 Calculation of the Coefficient of Variation

The coefficient of variation (commonly known as CV), proposed by the British statistician Karl Pearson (Karl Pearson), is a set of data standard deviation S and the ratio of the mean, which is a normalized measure of the degree of dispersion of the probability distribution and is used to reflect the degree of concentration of opinion indicators. The formula is as follows:

$$CV = \frac{S}{\overline{X}} \times 100\% = \frac{\sqrt{\sum_{i=1}^{n}(X_i - \overline{X})^2 \times (P_i/P_N)}}{\overline{X}} \qquad (6)$$

$$X_i = x_i / P_i \qquad (7)$$

$$\overline{X} = \sum_{i=1}^{n} x_i / P_N \qquad (8)$$

$$P_N = \sum_{i=1}^{n} P_i \qquad (9)$$

In the formula, X_i denotes the value of an indicator for school i (middle school or elementary school) in the district's balanced indicator system. x_i is the original value of the ith school for that indicator. P_i is the number of students enrolled in the school i (middle or elementary). $\overline{X}$ denotes the district average of this indicator: PN is the number of students enrolled in all middle (or elementary) schools in the district.

The coefficient of variation (CV) is expressed as a percentage, with larger values indicating more dispersed expert opinion and vice versa. If the coefficient of variation is greater than 15%, it is important to consider that the data may be abnormal and should be excluded.

3.4.6 CV calculation applet design

In order to facilitate calculations, Microsoft Excel software was utilized to create a simple computational tool for the Curriculum Vitae (CV) design. This tool allows

users to input basic data, including tertiary-level indicators, and obtain immediate calculation results, significantly enhancing both the efficiency and quality of the work.At this juncture, five tertiary-level indicators were arbitrarily set, and eight schools from a particular county were taken as an example. The computational tool's functions and details were presented and explained. The program interface is depicted in the accompanying figure 3.2.

	Name	Number of students in school	Level III index C1:Number of teachers per 100 students with higher than required qualifications	Level III index C10: Area of teaching and supporting rooms per student	Level III index C11: Average area of sports venues per student	Level III index C13: Value of teaching instruments and equipment per student	Level III index C20: Special education schools average public funds per student
	Total of the county	36851	41.1	40.6	69.6	21050	0.38
	County average $\overline{X}$	------	0.001115302	0.001101734	0.001888687	0.571219234	1.03118E-05
	Standard deviation $CV=\frac{S}{\overline{X}}=\frac{\sqrt{\sum_{i=1}^{n}(X_i-\overline{X})^2\times(P_i/P_N)}}{\overline{X}}$	------	0.117125139	0.181612235	0.197071599	0.299299036	0.356931869
1	School1	5025	6	4.9	9.6	1800	3.10%
2	School2	4620	4.8	5.2	8.4	2600	5.80%
3	School3	4800	5.4	4.6	7.9	3200	4.20%
4	School4	4580	4.9	4.8	8.2	2100	5.60%
5	School5	6300	5.8	5.3	8.5	2700	3.70%
6	School6	3890	5.2	5.2	9.3	3400	4%
7	School7	4356	4.7	5.9	9.1	2450	5.60%
8	School8	3280	4.3	4.7	8.6	2800	6.00%

Figure 3.2 CV Calculation Program Interface Diagram

In the diagram, the blue area represents the automated calculation section. Within this area, only the indicator names can be modified, while any other alterations may result in errors. The gray area is the editable section, where school information can be filled in based on actual data. Rows can be deleted and inserted within this gray area, and each cell in this section must contain data.

In this context, C2 = SUM(B5:B12), and the functions or codes used for D2, E2, F2, G2, H2 are consistent with that of C2. Similarly, D3 = D2/C2, and the functions or codes for E3, F3, G3, H3 are identical to that of D3. Likewise, D4= SQRT($\sum_{i=1}^{n}(x_i-\overline{X})^2\times(P_i/P_N)$)/D3, and the functions or codes for E4, F4, G4, H4 are the same as those for D4. This final result represents the value of the dissimilarity coefficient (CV).

3.4.7 Calculation of Index System Scores

The scores of the three-level indicators were scored using a percentage system, and the scores of the three-level indicators were multiplied by the corresponding weights to obtain the scores of the three-level indicators. The scores of the third-level indicators under the second-level indicators are added together and multiplied by the corresponding weight of the second-level indicators to obtain the scores of the second-level indicators. The scores of the second-level indicators under the first-level indicators were added together and multiplied by the weights of the first-level indicators to obtain the scores of the first-level indicators, and the scores of the first-level indicators were added together to obtain the total scores of the evaluation of the mental health education program of the school.

Finally, the quality level of mental health education is evaluated according to the evaluation score, and the evaluation level is divided into five levels: excellent, good, average, qualified, and unqualified. 90–100 points are evaluated as excellent, 80–89 points are evaluated as good, 70–79 points are evaluated as average, 60–69 points are evaluated as qualified, and less than 60 points are evaluated as unqualified. As shown in Figure 3.3.

Figure 3.3 Mental Health Education Quality Rating Chart

3.5 Data Collection Process

The data collection is mainly carried out by means of network database queries,

government department acquisition, on-site research and study, etc. The following methods will be adopted to complete the data collection:

3.5.1 Collect relevant information through CNKI, Wanfang Data, and other network databases.

3.5.2 Obtain work reports, industry reports, survey reports, statistical data, and other information from government agencies.

3.5.3 A questionnaire survey was conducted on 425 samples, and 17 experts and scholars were interviewed to obtain relevant data and information.

3.5.4 Use open data platforms such as governments, schools, and research institutes or ask for help collecting data

3.6 Framework of Research and Development Design

The design of this study mainly includes four stages, as shown in Table 3.3.

The first stage : through the literature research method and policy analysis method, the existing mental health education research, national policies and regulations, mental health education status and so on are studied, and the theoretical framework of China 's mental health education evaluation is exported.

The second stage : through the questionnaire survey method, expert interview method and statistical analysis method, the results of the first stage output, as well as the background evaluation, condition evaluation, inter-school evaluation and result evaluation index system of mental health education are studied, and the Likert scale, Delphi method, SPSS statistical analysis software and other tools are used to output the CCIP-PF model and evaluation index system of mental health education in junior middle school in China.

The third stage : through the software development method, the results of the second stage output and the quantitative indicators in the CCIP-PF evaluation index system are studied. Using EXCEL, MOODLE and other software, the data processing

software is developed and designed to output the CCIP-PF model and index system of mental health education in junior middle school in China.

The fourth stage : through the case study method and empirical research method, the output results of the second and third stages, as well as the data and effects of the relevant indicators of junior high school mental health education are studied, and some junior high schools in Zigong City are selected as empirical research objects.Output ' China junior high school mental health education quality evaluation situation and countermeasures and suggestions '.

Table 3.3 Framework of Research and Development design

Stage	Research method/ Research Objective	Research scope	Population /target gr. /sample/input	Research tool/data collect	Data analysis/criteria	Output
1	Literature research method, policy analysis method/ synthesis of domestic and international theoretical framework of mental health education.	-Connotation of mental health -Present situation, contents and problems of mental health education -Mental health education evaluation model and index system -The requirements of national policies and regulations on mental health education.	Theoretical articles, policies and regulations / grasp the status of theoretical research, grasp the requirements of national policies and regulations and practice. /Mental health education in junior high school.	1) CNKI, Wanfang Data and other network databases. 2) Chinese government data platform. 3) Books, Internet, periodicals, newsthesiss, etc.	Content analysis, matrix mapping, etc.	A theoretical framework for evaluating mental health education in junior high schools in China
2	Expert interview method, questionnaire method, statistical analysis method / Exploring the components of the evaluation index	-Stage 1 output results -Contextual evaluation, condition evaluation, inter-campus evaluation, preliminary construction and improvement of	Mental health education personnel in charge of education administration departments, full-time and part-time teachers and class teachers of mental health education in secondary	Questionnaire Star, Likert scale, Delphi method, SPSS statistical analysis software, etc.	Reliability analysis, validity analysis, weighting design	Evaluation model and index system of mental health education in junior high schools in China

Table 3.3 Framework of Research and Development design

Stage	Research method/ Research Objective	Research scope	Population /target gr. /sample/input	Research tool/data collect	Data analysis/criteria	Output
	system of mental health education in Chinese junior high schools.	outcome evaluation index system	schools, professors of mental health education in colleges and universities, psychological counselors, doctors of mental health centers in hospitals, parents and representatives of secondary school students/384 people.			
3	Software development method / Development of evaluation index system data processing applet.	-Phase 2 output results -Quantitative indicator system		-EXCEL, MOODLE and other software		Data processing applet of the mental health education evaluation model and index system for junior high schools in China
4	Case study method, empirical research method/ Selecting some middle schools in Zigong, China as a pilot to apply the	-Phase 2 output results -Stage 3 output results -Data and effects of indicators related to mental health education in junior high schools	Education administration, junior high schools, junior high school teachers, junior high school students, etc.	Mind mapping, qualitative research, quantitative research, etc.	Variance coefficient calculation, evaluation score calculation, error analysis.	Quality rating of mental health education in junior high schools and suggestions for countermeasures

Table 3.3 Framework of Research and Development design

Stage	Research method/ Research Objective	Research scope	Population /target gr. /sample/input	Research tool/data collect	Data analysis/criteria	Output
	indicator system in practice.					

CHAPTER 4
RESEARCH RESULT

In this chapter, a descriptive and meaningful analysis was conducted on the evaluation indicators for middle school students' mental health quality training developed using the CIPP-PF model in Zigong City, Sichuan Province, China.The primary focus of this chapter is the analysis of Delphi technique results, expert interviews, and questionnaire survey data, along with empirical research on the indicator system. The main contents of this chapter are as follows：

4.1 The result of developing the CCIP-PF model and establish an assessment index system for mental health literacy training in junior high schools

4.2 The result of applying the evaluation index system to junior high school mental health literacy training, thereby promoting the enhancement of educational quality

4.1 The result of developing the CCIP-PF model and establish an assessment index system for mental health literacy training in junior high schools

4.1.1 Demographic data

The demographic characteristics of Delphi participants are as follows: among the 17 experts, 47.1% are male, and 52.9% are female.These experts primarily come from various backgrounds, including psychological health education administrators in the Chinese education administrative departments, middle school psychological health education teachers, university professors specializing in psychological health education, psychological counselors, mental health doctors, and instructors from training institutions. They possess 2 to 10 years of experience in the field of mental health quality training, hold at least an undergraduate degree, and have a comprehensive understanding of mental health quality training.Specifically as shown in Figure 4.1 and Table 4.1.
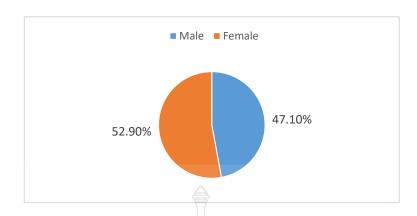
Figure 4.1 Gender Distribution Among 17 Experts

Table 4.1 Information Table of 17 Experts

Number	Expert's Affiliation	Name
1	Managers of the Compulsory Education Division of the Ministry of Education's Supervision Bureau	Qinghua Wu
2	National Institute of Education Administration, Experts in Education Assessment and Supervision	Anyuan Nie
3	Managers of the Education Bureau of Zigong City	Wenqiu Zhang
4	Zigong Huinan Experimental School	Yu Zeng
5	Zigong Huidong Experimental South Lake Campus	Caixia Wu
6	Zigong Huidong Experimental South Lake Campus	Youcai Chen
7	Zigong Jiefang High School	Rui Chen
8	Zigong Longhu Middle School	Xiujia Zhong
9	Vice President of Sichuan University of Science & Engineering,Professor	Xingzheng Xiao
10	Sichuan University of Science & Engineering, School of Education Dean, Professor	Hua Xie
11	Sichuan University of Science & Engineering, psychological counselor	Wanchun Yan
12	Sichuan University of Science & Engineering, Psychological Counselor	Jing Fan

13	Sichuan University of Science & Engineering, Psychological Counselor	Yao Peng
14	Doctor at Zigong First People's Hospital	Youli Wen
15	Zigong Fourth People's Hospital	Weiyang Shi
16	Junior high school teacher at Zigong Education and Training Institution	Qian Wu
17	Junior high school teacher at Zigong Education and Training Institution	Xin Zeng

From Table 4.1, it is evident that among the 17 experts, 3 are from the education administration department, 5 are from middle schools in Zigong City, 3 are professors specializing in psychological health education from universities, 2 are psychological counselors from universities, 2 are doctors from public hospitals in Sichuan Province, and 2 are from education and training institutions for middle school education in Zigong City. They have over 2 years of experience in fields related to mental health, possessing extensive experience and knowledge, meeting the requirements for this interview. Their educational backgrounds are depicted in Figure 4.2.Please see Appendix A for the invitation letters of the 17 experts.
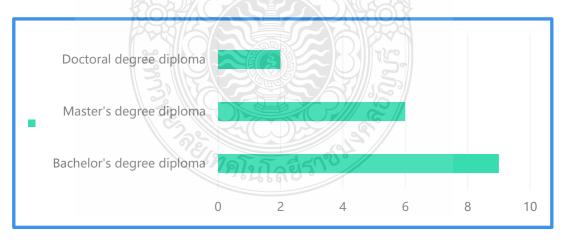
Figure 4.2 Distribution of Educational Backgrounds Among the 17 Experts

From Figure 4.2, it can be observed that among the 17 experts, 9 hold a bachelor's degree, 6 possess a master's degree, and 2 have a doctoral degree. All experts have attained at least a bachelor's degree, meeting the educational requirements for this

research.

4.1.2 Delphi Technique Analysis

STEP 1: Conduct a brainstorming session.Draft predictive questions for the indicators and standards of the junior high school mental health education training program. Anonymously solicit input from 17 experts in the field of mental health education in an open manner. Summarize and organize expert opinions, ensuring proper categorization.

The feedback from the experts primarily encompasses content in four main aspects:

Firstly, it pertains to the context evaluation.Experts generally agree that the background assessment factors for junior high school mental health quality training should include:

Institutional Development.Development of a School Mental Health Education Plan，Incorporating the Mental Health Education Plan into the overall school reform and development plan，Integrating the Mental Health Education Plan into the school's talent development system，Establishing a school mental health management system，Clear division of responsibilities and effective measures for school mental health quality training，A specialized examination system for mental health quality training in schools，County-level educational research institutions should be equipped with psychological research officers，Establishing a reward and penalty system for mental health quality training.

Organizational Structure. Establishing a school mental health education curriculum research office or research group，Establishing a school counseling center to carry out early warning and intervention activities， Establishing a collaborative mechanism for school and family mental health quality training，Establishing a collaborative mechanism between schools and mental health medical institutions for mental health quality training， Comprehensive infrastructure for mental health quality training，Establishing a collaborative mechanism for mental health quality training between schools and the community， Establishing a collaborative mechanism for

mental health quality training between schools and charitable organizations，Establishing a collaborative mechanism for mental health quality training between schools and the community." (Note: This is a repetition of point 14, please confirm if it's a duplicate or if there's a different point you'd like to translate，Establishing a leadership group for school mental health quality training.

Curriculum Development.The teaching plan meets the requirements set by the Ministry of Education，Conducting online mental health quality training，The teaching hours meet the requirements set by the Ministry of Education，The curriculum objectives align with the requirements set by the Ministry of Education，Mastery of the necessary components for students' mental health quality training，The curriculum content conforms to the requirements set by the Ministry of Education，The curriculum content aligns with the actual needs of local students，The education administration department places high importance on mental health quality training，Specialized mental health education materials are available，Offering a course on the psychology of love，Establishing extracurricular mental health education activities, such as mental health education lectures，Strict enforcement of national policies and regulations related to mental health quality training，Regularly screening educational psychology films，The education administration department conducts classroom observations and inspections for mental health quality training.

Please refer to Appendix B, Tables 1 and 2, for specific details and information on this matter.

Secondly, it concerns the condition evaluation.Experts generally agree that the conditions assessment factors for junior high school mental health quality training should encompass:

Teacher Support.The school is equipped with at least two full-time or part-time mental health education teachers，Establishing assistant teachers for mental health quality training to assist with teaching，Establishing a separate title evaluation system for mental health education teachers，Promotion of mental health education teacher titles is based on years of service without the requirement to publish articles，Compensation

is no lower than the average salary income of teachers in compulsory education schools in the entire county，Establishing a mental health therapy room for teachers，Establishing special incentives for mental health quality training teachers，Establishing teacher dormitories，Establishing a teacher's lounge，Establishing a coffee shop-style counseling room to create a relaxed environment，Establishing a separate pathway for the promotion of mental health education teacher ranks.

Student Support.Establishing a 'One Life, One Plan' mental health record for students，Centralized management of students with mental health issues，Establishing a relaxation room for students with mental health issues in the educational area，Establishing a student mental health website, with regular updates and interactive features，Establishing class committee leadership support groups，Establishing a crisis intervention plan for student mental health，Establishing a feedback channel for student classroom experiences，Providing students with opportunities for active participation in teaching，Providing separate dormitory arrangements for students with mental health issues，Scheduling mental health quality training films or videos for students on a weekly basis，Conducting regular mental health assessments for students，Implementing a system that allows students with mental health issues to change homeroom teachers if needed，Providing convenient leave options for students with mental health issues.

Financial Support.The county-level government includes funding for student mental health initiatives in the fiscal budget，The county-level government should allocate funding to schools based on the number of students，Schools include funding for student mental health initiatives in their budgets，Adequate funding is provided for student mental health quality training，Providing special allowances to mental health quality training teachers，Allocating special funds for the professional skill training of mental health education teachers，Establishing special funds for the treatment of student mental health issues，Establishing special funds for student mental health counseling services，Establishing special funds for county-level government mental health

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management personnel，Establishing special funds for part-time teachers engaged in mental health work，Establishing special funds for research projects on student mental health quality training，Providing funding incentives for research achievements in student mental health quality training，Providing funding rewards for research achievements in student mental health quality training，Establishing emergency funds for mental health issues，Establishing special funds for teacher mental health support.

Please refer to Tables 3 and 4 in Appendix B for specific details and information on this matter.

Thirdly, it relates to the intercollegiate index evaluation.Experts generally agree that the evaluation factors for intercollegiate differences in junior high school mental health quality training should encompass:

Teacher Management.Training for mental health education teachers，Completion rate of 360 hours of training over 5 years，Rotation of mental health quality training teachers，The annual proportion of teachers participating in inter-county exchange and rotation，The gender ratio of mental health quality training teachers，Full-time mental health education teachers hold a qualification certificate in psychology teaching，The rate of full-time mental health education teachers holding a qualification certificate in psychology when assuming their positions，Mental health education teachers holding a counseling psychologist certificate，The rate of part-time mental health education teachers being equipped.

Hardware Resources.Per capita area of mental health teaching facilities，Per capita area of mental health support facilities，Per capita area of sports and athletic facilities，Per capita dormitory area，Per capita value of mental health teaching instruments and equipment，Per capita library area，Per capita number of books and audiovisual materials required for mental health，Per capita number of audiovisual materials required for mental health，Per capita area of recreational rooms，Per capita cafeteria area，Per capita area of emotional release rooms，Per capita area of mental health laboratories.

Level of Informatization.The number of network multimedia classrooms per one hundred students，The number of computers per one hundred students，Establishing a mental health education website，Establishing a WeChat official account for mental health quality training，Teachers proficiently use information technology for organizing teaching, resulting in a high utilization rate of facilities and equipment，Establishing an electronic information platform for mental health，Utilizing platforms such as Tencent Meeting and VOOV Meeting for conducting online teaching activities，Establishing an online platform for communication between parents and teachers，Establishing an online forum for mental health education.

Classroom Teaching.Employing teaching methods such as case studies, role-playing, and psychological games effectively，The curriculum engages students to participate actively, respond to questions, and creates an enthusiastic atmosphere，Teachers maintain a calm demeanor and do not bring negative emotions into the classroom，Teachers are good at guiding students，Teachers are able to handle classroom emergencies appropriately，Teachers are able to rationalize the design of teaching sessions，Students are able to complete assignments on time，Teachers and students can treat each other equally in the classroom，Students are able to get to and from class on time，Students showed interest in the mental health quality training program.

Please refer to Tables 5 and 6 in Appendix B for specific details and information on this matter.

Fourthly, it pertains to the product evaluation.Experts generally agree that the evaluation factors for outcomes in junior high school mental health quality training should encompass:

Individual student benefits.Psychological tests show greater improvement in better mental health，Percentage of students with psychological testing problems，Student participation in mental health quality training，Student motivation for quality mental health training，Student performance on mental health quality training，Learn to regulate and control your emotions，Learn to evaluate yourself objectively，Learn to

face setbacks properly，Learn to make objective judgments about problems in academic life，Respect for teachers，Be friendly to classmates and be able to get along，Treat parents and elders with respect and are not rebellious，Have your own circle of friends among your classmates，Not to be addicted to the Internet，No aversion to learning，Do not arrive late or leave early for class，No propensity for violence，Correct treatment of love, no early love behavior，To be able to analyze and solve problems facing him/her independently.

Collective benefit to students.Class cohesion has improved significantly，The classroom culture has improved significantly，The classroom culture has improved significantly，Higher participation in classroom activities，The sense of collective honor has increased significantly，Overall academic performance in the classroom has increased significantly，The impact of the class has increased significantly，To develop an optimistic, harmonious and upwardly mobile mental health culture，Teachers are more likely to recognize the class，The class has a cordial relationship with other classes.

Teacher Growth.Teachers are able to reflect on the process of teaching and learning and their capacity is enhanced，Teachers have no mental health problems，Teachers' titles have been upgraded，Schools rate teachers' teaching highly，Student recognition of teachers is high，Parental approval of teachers is high，Higher social recognition of teachers，Teachers' skills in mental health quality training have been improved，Teachers are constantly improving their personalities and are psychologically positive，The number of teachers trained in the quality of mental health has been strengthene，Teachers reflect on the annual summary of the mental health quality training program，Teachers update and improve the mental health quality training curriculum annually.

Recognition.Percentage of social "satisfaction" ratings，Percentage of parental "satisfaction" ratings，Percentage of student "satisfaction" ratings，Percentage of teachers' "satisfaction" ratings，Percentage of "satisfaction" ratings from education administrations，Percentage of "satisfaction" ratings by experts in the field of mental

health，Percentage of "satisfaction" ratings between sc，Mental health quality training programs are actionable， Mental health quality training programs are scalable.Please refer to Tables 7 and 8 in Appendix B for specific details and information on this matter.

Based on the results from the brainstorming stage and considering governmental regulations on psychological health education in China along with existing literature research, a total of 53 elements were distilled as the constituent indicators and standards for the junior high school mental health education training program. Utilizing the Likert five-point scale, these were organized into the first interview survey form, detailed in Tables 9 to 11 in Appendix C.

STEP 2: The first interview questionnaire was used to solicit opinions from the 17 experts. After considering the feedback and identifying the factors and indicators generally deemed unnecessary by the experts, these elements were removed from the indicator system. The system was then revised and improved by incorporating new elements based on the experts' recommendations. The interview questionnaire was adjusted accordingly, resulting in the creation of the second interview questionnaire，please refer to Tables 12 to 14 in Appendix D for the respective procedures..

STEP 3: The second interview questionnaire, which incorporated the revisions and improvements based on the feedback from the initial round of 17 experts, was used to seek opinions and suggestions from the same group of experts again. The indicator system's constituting elements were further refined and adjusted considering their valuable input. The interview questionnaire was modified accordingly, resulting in the creation of the third interview questionnaire.Please refer to Tables 15 to 18 in Appendix E for further procedural details.

STEP 4: Seventeen experts are required to provide responses of 'yes' or 'no' to Questionnaire Three, ultimately forming the index standard system for the Mental Health Education Training Program at the middle schools in Zigong City, Sichuan Province, China.

Questionnaire survey: A questionnaire survey was conducted to validate the reliability and validity of the indicator standards for psychological health education and training programs in junior high schools in Zigong City, Sichuan Province, China, developed through the Delphi method.The questionnaire details can be found in Appendix

F.

4.1.3 Descriptive Statistics of Variables

4.1.3.1 Analysis of Results from Expert Interview Questionnaire I

Descriptive statistics were employed using SPSS AU software to analyze the results from Expert Interview Questionnaire I. The analysis primarily focused on Mean, Standard Deviation, and Interquartile Range. Subsequently, the consistency of expert opinions was assessed, and indicators with low consensus were excluded. Additionally, recommendations from experts were considered for revisions to specific indicators. The expert opinions are presented in Tables 4.2 to 4.3.

In Tables 4.2 to 4.5,

Averange：

1.00-1.49=Strongly disagree;

1.50-2.49 = Disagree;

2.50-3.49=Neutral;

3.50-4.49=Moderately agree;

4.50-5.00=Strongly agree.

SD represents Standard Deviation.

IQR signifies Interquartile Range:

IQR≤1.00=Congruent;

IQR>1.00=Incongruent.

Table 4.2 Expert Opinions on Primary and Secondary Indicators in Questionnaire I.

Level 1 indicators	Level 2 indicators	Averange	SD	Opinion of experts	IQR
A1. Context evaluation	B1. System building	4.647	0.493	Strongly agree	1.000
	B2. Institution-building	4.706	0.470	Strongly agree	1.000

Level 1 indicators	Level 2 indicators	Average	SD	Opinion of experts	IQR
	B3. Curriculum development	4.706	0.470	Strongly agree	1.000
TOTAL		4.765	0.562	Strongly agree	0.000
	B4. Teacher guarantees	4.706	0.470	Strongly agree	1.000
A2.Condition evaluation	B5. Student protection	4.706	0.470	Strongly agree	1.000
	B6. Financial security	4.765	0.437	Strongly agree	0.500
TOTAL		4.765	0.437	Strongly agree	0.500
	B7. Teacher development	4.647	0.493	Strongly agree	1.000
	B8. Hardware resources	4.824	0.393	Strongly agree	0.000
A3.Intercollegiate Indexe valuation	B9. Informatization level	4.882	0.332	Strongly agree	0.000
	B10. Classroom instruction	4.824	0.393	Strongly agree	0.000
TOTAL		4.824	0.332	Strongly agree	0.000
	B11. Individual student benefits	4.824	0.393	Strongly agree	0.000
A4.Product evaluation	B12. Collective benefit for students	4.824	0.393	Strongly agree	0.000
	B13. Teacher growth	4.765	0.437	Strongly agree	0.500

Level 1 indicators	Level 2 indicators	Averange	SD	Opinion of experts	IQR
	B14. Level of recognition	4.706	0.470	Strongly agree	1.000
TOTAL		4.647	0.606	Strongly agree	1.000

Table 4.2 presents the opinions of 17 experts regarding 4 primary indicators and 14 secondary indicators.

Among these, the strongest agreement averange for A1 is 4.765, with a standard deviation (SD) of 0.562 and an interquartile range (IQR) of 0, indicating a unanimous consensus among the experts. Within A1, the averange values for the strongest agreement regarding the secondary indicators B1, B2, and B3 are 4.647, 4.706, and 4.706, respectively. Their corresponding standard deviations are 0.493, 0.470, and 0.470, with an IQR of 1.000 for each, signifying a unanimous consensus among the experts.

The strongest agreement averange for A2 is 4.765, with a standard deviation (SD) of 0.437 and an interquartile range (IQR) of 0.500, indicating a unanimous consensus among the experts. Within A2, the averange values for the strongest agreement regarding the secondary indicators B4, B5, and B6 are 4.706, 4.706, and 4.765, respectively. Their corresponding standard deviations are 0.470, 0.470, and 0.437, with IQRs of 1.000, 1.000, and 0.500, respectively, signifying a unanimous consensus among the experts.

The strongest agreement averange for A3 is 4.824, with a standard deviation (SD) of 0.332 and an interquartile range (IQR) of 0.000, indicating a unanimous consensus among the experts. Within A3, the averange values for the strongest agreement regarding the secondary indicators B7, B8, B9, and B10 are 4.647, 4.824, 4.882, and 4.824, respectively. Their corresponding standard deviations are 0.493, 0.393, 0.332, and 0.393, with IQRs of 1.000, 0.000, 0.000, and 0.000, respectively, demonstrating a unanimous consensus among the experts.

The strongest agreement averange for A4 is 4.647, with a standard deviation (SD) of 0.606 and an interquartile range (IQR) of 1.000, indicating a unanimous

consensus among the experts. Within A4, the average values for the strongest agreement regarding the secondary indicators B11, B12, B13, and B14 are 4.824, 4.824, 4.765, and 4.706, respectively. Their corresponding standard deviations are 0.393, 0.393, 0.437, and 0.470, with IQRs of 0.000, 0.000, 0.500, and 1.000, respectively, demonstrating a unanimous consensus among the experts.

Table 4.3 Expert Opinions on Tertiary Indicators in Questionnaire I.

Level 3 indicators	Averange	SD	IQR	Opinion of experts
C1. Develop a mental health education plan.	4.588	0.507	1.000	Strongly agree
C2. Establishment of a Psychological Health Management Policy.	4.765	0.437	0.500	Strongly agree
C3. Establishment of a Psychological Health Education and Research System.	4.765	0.437	0.500	Strongly agree
C4. Establishment of a Psychological Health Competency Training and Examination System.	3.353	0.606	1.000	Moderately agree
C5. Establishment of a Psychological Health Education Curriculum Research Office.	4.647	0.606	1.000	Strongly agree
C6. Establishment of a Psychological Counseling Office.	4.647	0.493	1.000	Strongly agree
C7. Establishment of a School Psychological Health Competency Training Leadership Team.	2.941	0.659	0.500	Neutral
C8. Establishment of Collaborative Mechanisms Between Schools and Families, among Others.	4.824	0.393	0.000	Strongly agree
C9. Ensuring that the Teaching Plans Meet the Requirements Set by the Ministry of Education.	4.765	0.437	0.500	Strongly agree
C10. Ensuring that the Curriculum Objectives and Content Align with the Requirements Set by the Ministry of Education.	4.706	0.470	1.000	Strongly agree

Level 3 indicators	Average	SD	IQR	Opinion of experts
C11. Conducting Online Psychological Health Competency Training.	3.000	0.612	0.000	Neutral
C12. Availability of Specialized Psychological Health Education Materials.	4.647	0.493	1.000	Strongly agree
C13. Offering Extracurricular Psychological Health Education.	4.706	0.470	1.000	Strongly agree
C14. The School is Staffed with at Least 2 Full-time or Part-time Psychological Health Education Teachers.	4.412	0.507	1.000	Moderately agree
C15. Establishing a Café-style Psychological Counseling Room to Create a Relaxing Environment.	2.941	0.659	0.500	Neutral
C16. Establishment of a Separate Title Evaluation System for Psychological Health Education Teachers.	4.647	0.493	1.000	Strongly agree
C17. Compensation Not Lower Than the Average Salary Income Level of Teachers in Compulsory Education Schools.	4.706	0.470	1.000	Strongly agree
C18. Establishment of a "One Life, One Plan" Psychological Health Record System.	4.706	0.470	1.000	Strongly agree
C19. Establishment of a Student Psychological Health Website.	4.588	0.507	1.000	Strongly agree
C20. Establishment of a Crisis Intervention Plan for Student Psychological Health.	4.647	0.493	1.000	Strongly agree
C21. Establishment of Student Classroom Feedback Channels.	4.588	0.618	1.000	Strongly agree
C22. County-level Government Includes Funding for Student Psychological Health Work in the Fiscal Budget.	4.706	0.470	1.000	Strongly agree

Level 3 indicators	Average	SD	IQR	Opinion of experts
C23. Establishment of a Special Fund for Student Psychological Health Counseling.	3.000	0.707	1.000	Neutral
C24. The School Includes Funding for Student Psychological Health Work in the Budget.	4.529	0.514	1.000	Strongly agree
C25. There is a Special Fund for Professional Skills Training for Psychological Health Education Teachers.	4.588	0.507	1.000	Strongly agree
C26. Completion Rate of 360 Hours of Training for Psychological Health Education Teachers over a 5-Year Period.	4.706	0.470	1.000	Strongly agree
C27. The Annual Proportion of County-wide Rotation and Exchange of Psychological Health Education Teachers.	4.647	0.493	1.000	Strongly agree
C28. The Gender Ratio of Teachers in Psychological Health Competency Training.	2.647	0.702	1.000	Neutral
C29. The Rate of Full-time Psychological Health Education Teachers Holding a Qualification Certificate for Psychological Teachers When Taking Up Their Positions.	4.706	0.470	1.000	Strongly agree
C30. Per Capita Area for Psychological Health Teaching and Auxiliary Facilities.	4.706	0.470	1.000	Strongly agree
C31. Per Capita Area of Sports Facilities.	4.647	0.493	1.000	Strongly agree
C32. Per Capita Value of Psychological Health Teaching Instruments and Equipment.	4.706	0.470	1.000	Strongly agree
C33. Per Capita Number of Required Books and Visual Materials for Psychological Health.	4.765	0.437	0.500	Strongly agree
C34. The Number of Network Multimedia Classrooms per One Hundred Students.	4.824	0.393	0.000	Strongly agree

Level 3 indicators	Average	SD	IQR⬜	Opinion of experts
C35. Establishment of a WeChat Official Account for Psychological Health Competency Training.	2.647	0.702	1.000	Neutral
C36. Teachers Proficiently Utilizing Information Technology to Organize Teaching.	4.647	0.493	1.000	Strongly agree
C37. Effective Use of Teaching Methods, Such as Case-Based Instruction.	4.706	0.470	1.000	Strongly agree
C38. An Active Classroom Atmosphere.	4.706	0.470	1.000	Strongly agree
C39. Teachers Capable of Designing Teaching Segments Effectively.	4.765	0.437	0.500	Strongly agree
C40. Psychological assessments indicate significant improvements in overall psychological well-being.	4.765	0.437	0.500	Strongly agree
C41. Being Friendly to Classmates and Maintaining Harmonious Relationships.	2.588	0.618	1.000	Neutral
C42. Acquiring the Ability to Regulate and Control One's Emotions.	4.765	0.437	0.500	Strongly agree
C43. Developing the Skill to Objectively Self-Evaluate.	4.706	0.470	1.000	Strongly agree
C44. Significant Improvement in Class Cohesion.	4.706	0.588	0.500	
C45. Noticeable Enhancement of Collective Pride.	2.706	0.686	1.000	Neutral
C46. Cultivating an Optimistic, Harmonious, and Positive Psychological Health Culture.	4.647	0.493	1.000	Strongly agree
C47. Significant Improvement in Class Atmosphere and Learning Environment.	4.706	0.470	1.000	Strongly agree
C48. Teachers Reflect on Their Teaching Processes, Resulting in Enhanced Skills.	4.824	0.393	0.000	Strongly agree

Level 3 indicators	Average	SD	IQR	Opinion of experts
C49. Teachers Continuously Enhance Their Personal Qualities and Maintain a Positive and Optimistic Psychological State.	4.647	0.493	1.000	Strongly agree
C50. Percentage of Social "Satisfaction" Evaluation.	4.706	0.470	1.000	Strongly agree
C51. Percentage of Education Administration Department "Satisfaction" Evaluation.	2.588	0.618	1.000	Neutral
C52. Percentage of Parent and Student "Satisfaction" Evaluation.	4.588	0.507	1.000	Strongly agree
C53. Percentage of Teacher "Satisfaction" Evaluation.	4.647	0.493	1.000	Strongly agree
Total	4.336	0.513	0.830	

Table 4.3 demonstrates the opinions of 17 experts on 53 third-level indicators, showing an overall strongest agreement with a mean of 4.336, a standard deviation (SD) of 0.513, and an interquartile range (IQR) of 0.830. There is a unanimous overall consensus among the experts.From the opinions on the 53 third-level indicators, we observed that indicators C4, C7, C11, C15, C23, C28, C35, C41, C45, and C51 fell within the range of strongest agreement means between 2.50 and 3.49. This suggests a lower level of expert consensus. We decided to eliminate these 10 indicators. Therefore, the second round of the questionnaire consists of 43 third-level indicators while maintaining the first and second-level indicators unchanged.Simultaneously, it was observed that among the 17 experts, there was a lack of strong consensus regarding indicator C14. It is recommended to change the composition from 2 part-time psychological health teachers to 1, based on the guidelines outlined in the 'Special Action Plan for Comprehensive Strengthening and Improvement of Student Psychological Health Work in the New Era (2023-2025)' issued by the Chinese Ministry of Education and other departments in 2023.Overall, the remaining 42 indicators display a strongest agreement mean above 4.400, meeting the standards for SD and IQR as well. Hence, these indicators, along with

the revised indicator C14, are considered suitable for inclusion as questionnaire items in the next round.

4.1.3.2 Analysis of Results from Expert Interview Questionnaire II.

Descriptive statistics were computed using SPSS AU software to analyze the results from Expert Interview Questionnaire II. The analysis primarily focused on Mean, Standard Deviation, and Interquartile Range. Subsequently, the consistency of expert opinions was assessed, and indicators with low consensus were excluded. Additionally, recommendations from experts were considered for revisions to specific indicators. The expert opinions are presented in Tables 4.22 to 4.23.

Table 4.4 Results of expert input on tier-1 and two indicators.

Level 1 indicators	Level 2 indicators	Averange	SD	IQR	Opinion of experts
	B1. System building	4.824	0.393	0.000	Strongly agree
A1. Context evaluation	B2. Institution-building	4.706	0.470	1.000	Strongly agree
	B3. Curriculum development	4.706	0.470	1.000	Strongly agree
Total		**4.765**	**0.562**	**0.000**	**Strongly agree**
	B4. Teacher guarantees	4.824	0.393	0.000	Strongly agree
A2.Condition evaluation	B5. Student protection	4.765	0.437	0.500	Strongly agree
	B6. Financial security	4.882	0.332	0.000	Strongly agree
Total		**4.765**	**0.437**	**0.500**	**Strongly agree**

Level 1 indicators	Level 2 indicators	Averange	SD	IQR	Opinion of experts
A3.Intercollegiate Indexe valuation	B7. Teacher development	4.765	0.437	0.500	Strongly agree
	B8. Hardware resources	4.824	0.393	0.000	Strongly agree
	B9. Informatization level	4.882	0.332	0.000	Strongly agree
	B10. Classroom instruction	4.941	0.243	0.000	Strongly agree
Total		**4.882**	**0.332**	**0.000**	**Strongly agree**
A4.Product evaluation	B11. Individual student benefits	4.882	0.332	0.000	Strongly agree
	B12. Collective benefit for students	4.941	0.243	0.000	Strongly agree
	B13. Teacher growth	4.824	0.393	0.000	Strongly agree
	B14. Level of Recognition	4.765	0.437	0.500	Strongly agree
Total		**4.765**	**0.562**	**0.000**	**Strongly agree**

Table 4.4 presents the opinions of 17 experts regarding the results of the second-round questionnaire on 4 primary indicators and 14 secondary indicators.

Among these, the strongest agreement averange for A1 is 4.765, with a standard deviation (SD) of 0.562 and an interquartile range (IQR) of 0, indicating a unanimous consensus among the experts. Within A1, the averange values for the strongest agreement regarding the secondary indicators B1, B2, and B3 are 4.824, 4.706, and 4.706, respectively. Their corresponding standard deviations are 0.093, 0.470, and 0.470, with an IQR are 0.000、0.000 and 1.000 , signifying a unanimous consensus among the

experts.

The strongest agreement averange for A2 is 4.765, with a standard deviation (SD) of 0.437 and an interquartile range (IQR) of 0.500, indicating a unanimous consensus among the experts. Within A2, the averange values for the strongest agreement regarding the secondary indicators B4, B5, and B6 are 4.824, 4.765, and 4.882, respectively. Their corresponding standard deviations are 0.393, 0.437, and 0.332, with IQRs of 0.000, 1.000, and 0.000, respectively, signifying a unanimous consensus among the experts.

The strongest agreement averange for A3 is 4.882, with a standard deviation (SD) of 0.332 and an interquartile range (IQR) of 0.000, indicating a unanimous consensus among the experts. Within A3, the averange values for the strongest agreement regarding the secondary indicators B7, B8, B9, and B10 are 4.765, 4.824, 4.882, and 4.941, respectively. Their corresponding standard deviations are 0.437, 0.393, 0.332, and 0.243, with IQRs of 0.500, 0.000, 0.000, and 0.000, respectively, demonstrating a unanimous consensus among the experts.

The strongest agreement averange for A4 is 4.765, with a standard deviation (SD) of 0.562 and an interquartile range (IQR) of 0.000, indicating a unanimous consensus among the experts. Within A4, the averange values for the strongest agreement regarding the secondary indicators B11, B12, B13, and B14 are 4.882, 4.941, 4.824, and 4.765, respectively. Their corresponding standard deviations are 0.332, 0.243, 0.393, and 0.437, with IQRs of 0.000, 0.000, 0.000, and 0.500, respectively, demonstrating a unanimous consensus among the experts.

Table 4.5 Results of expert input on tier-3 indicators

Level 2 indicators	Level 3 indicators	Averange	SD	IQR□	Opinion of experts
B1. System building	C1. Develop a mental health education plan.	4.765	0.437	0.500	Strongly agree
	C2. Develop a mental health management system.	4.824	0.393	0.000	Strongly agree

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Level 2 indicators	Level 3 indicators	Averange	SD	IQR□	Opinion of experts
B2. Institution-building	C3. Establishment of a system for teaching and research in mental health education.	4.882	0.332	0.000	Strongly agree
	C4. Establishment of a teaching and research center for mental health education courses.	4.765	0.562	0.000	Strongly agree
	C5. Establishment of a psychological and psychosocial counseling room.	4.765	0.437	0.500	Strongly agree
	C6. Establishment of synergistic mechanisms such as schools and families.	4.824	0.393	0.000	Strongly agree
B3. Curriculum development	C7. The teaching program meets the requirements set by the Ministry of Education.	4.765	0.437	0.500	Strongly agree
	C8. The objectives and content of the curriculum meet the requirements set by the Ministry of Education.	4.824	0.393	0.000	Strongly agree
	C9. Specialized mental health education materials are available.	4.824	0.393	0.000	Strongly agree
	C10. Offer a second class in mental health education.	4.824	0.393	0.000	Strongly agree
B4. Teacher guarantees	C11. Schools have at least one full-time (part-time) mental health education teacher。	4.706	0.470	1.000	Strongly agree
	C12. Establishment of a separate appraisal system for the titles of mental health education teachers.	4.765	0.437	0.500	Strongly agree

Level 2 indicators	Level 3 indicators	Averange	SD	IQR□	Opinion of experts
B5. Student protection	C13. Treatment is not lower than teachers' average salary and income level in compulsory education schools.	4.765	0.437	0.500	Strongly agree
	C14. Establishment of a "lifelong" mental health profile	4.824	0.393	0.000	Strongly agree
	C15. Establishment of a student mental health website	4.706	0.470	1.000	Strongly agree
	C16. Establish a student mental health crisis intervention plan	4.824	0.393	0.000	Strongly agree
	C17. Establishing channels for student feedback in the classroom	4.706	0.588	0.500	Strongly agree
B6. Financial security	C18. County governments include funding for student mental health work in their budgets.	4.824	0.393	0.000	Strongly agree
	C19. Schools include funding for student mental health work in their budgets.	4.765	0.437	0.500	Strongly agree
	C20. There is special funding for professional skills training for mental health education teachers.	4.706	0.470	1.000	Strongly agree
B7. Teacher development	C21. 5-year 360-hour training completion rate for mental health teachers	4.824	0.393	0.000	Strongly agree
	C22. Percentage of mental health teachers exchanged for rotation each year countywide	4.765	0.437	0.500	Strongly agree

Level 2 indicators	Level 3 indicators	Averange	SD	IQR□	Opinion of experts
B8. Hardware resources	C23. Induction rate of full-time mental health teachers with a psychological teacher's license	4.765	0.437	0.500	Strongly agree
	C24. per pupil mental health teaching and support room space	4.824	0.393	0.000	Strongly agree
	C25. Area of sports venues per pupil	4.765	0.437	0.500	Strongly agree
	C26. Value of mental health teaching equipment per pupil	4.882	0.332	0.000	Strongly agree
	C27. Number of books and video materials needed for mental health per student	4.882	0.332	0.000	Strongly agree
B9. Informatization level	C28. Number of networked multimedia classrooms per 100 students	4.882	0.332	0.000	Strongly agree
	C29. Teachers can skillfully use information technology to organize instruction	4.765	0.437	0.500	Strongly agree
B10. Classroom instruction	C30. Rationalize the use of teaching methods such as case studies.	4.765	0.437	0.500	Strongly agree
	C31. The course has a lively atmosphere.	4.765	0.437	0.500	Strongly agree
	C32. The teacher can design teaching sessions rationally.	4.824	0.393	0.000	Strongly agree
B11. Individual student benefits	C33. Psychological tests show greater improvement in better mental health.	4.824	0.393	0.000	Strongly agree
	C34. Learn to regulate and control their emotions.	4.824	0.393	0.000	Strongly agree

Level 2 indicators	Level 3 indicators	Averange	SD	IQR□	Opinion of experts
	C35. Learn to evaluate yourself objectively.	4.824	0.393	0.000	Strongly agree
	C36. Class cohesion is significantly improved	4.765	0.562	0.000	Strongly agree
B12. Collective benefit for students	C37. Form an optimistic, harmonious, upwardly mobile mental health culture.	4.765	0.437	0.500	Strongly agree
	C38. The classroom and learning styles have improved significantly.	4.824	0.393	0.000	Strongly agree
B13. Teacher growth	C39. Teachers can reflect on the teaching and learning process, and their competence is enhanced.	4.824	0.393	0.000	Strongly agree
	C40. Teachers are constantly improving their personalities and are psychologically optimistic.	4.706	0.470	1.000	Strongly agree
	C41. Percentage of social "satisfaction" ratings	4.706	0.470	1.000	Strongly agree
B14. Level of Recognition	C42. Percentage of "satisfaction" ratings by parents and students	4.824	0.393	0.000	Strongly agree
	C43. Percentage of teacher "satisfaction" rating	4.706	0.470	1.000	Strongly agree

Table 4.5 illustrates the background assessment of the evaluation of the Chinese Junior High School Mental Health Education Training Program, encompassing a detailed and comprehensive description of 43 third-level indicators.

Among them, the strongest agreement mean values for C1, C2, and C3 within B1 are 4.765, 4.824, and 4.882, respectively. For B2, the strongest agreement mean values for C4, C5, and C6 are 4.765, 4.765, and 4.824, respectively.In B3, the strongest agreement mean values for C7, C8, C9, and C10 are 4.765, 4.824, 4.824, and 4.824,

respectively. For B4, the strongest agreement mean values for C11, C12, and C13 are 4.706, 4.765, and 4.765, respectively.In B5, the strongest agreement mean values for C14, C15, C16, and C17 are 4.824, 4.706, 4.824, and 4.706, respectively. For B6, the strongest agreement mean values for C18, C19, and C20 are 4.824, 4.765, and 4.706, respectively.In B7, the strongest agreement mean values for C21, C22, and C23 are 4.824, 4.765, and 4.765, respectively. For B8, the strongest agreement mean values for C24, C25, C26, and C27 are 4.824, 4.765, 4.882, and 4.882, respectively.In B9, the strongest agreement mean values for C28 and C29 are 4.882 and 4.765, respectively. For B10, the strongest agreement mean values for C30, C31, and C32 are 4.765, 4.765, and 4.824, respectively.In B11, the strongest agreement mean values for C33, C34, and C35 are 4.824, 4.824, and 4.824, respectively. For B12, the strongest agreement mean values for C36, C37, and C38 are 4.765, 4.765, and 4.824, respectively. In B13, the strongest agreement mean values for C36, C37, and C38 are 4.765, 4.765, and 4.824, respectively. Lastly, in B14, the strongest agreement mean values for C41, C42, and C43 are 4.706, 4.824, and 4.706, respectively.

It is evident that in the second round of the questionnaire, there was a high level of consensus among the experts, indicating the strongest agreement for all 43 third-level indicators. This suggests that these indicators can be used as evaluation criteria for junior high school mental health training.

4.1.3.3 Expert Interview Questionnaire III Results Analysis

Seventeen experts were required to respond with either 'yes' or 'no' to Questionnaire Three. The response outcomes are depicted in Tables 4.6 to 4.9.

Table 4.6 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China.

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
A1. Context evaluation	88.2	11.8	0
B1. System building	82.4	11.8	5.8

B2. Institution-building	76.5	17.7	5.8
B3. Curriculum development	82.4	5.8	11.8
A2.Condition evaluation	82.4	5.8	11.8
B4. Teacher guarantees	70.5	17.7	11.8
B5. Student protection	82.4	11.8	5.8
B6. Financial security	64.7	11.8	23.5
A3.Intercollegiate Indexe valuation	94.2	0	5.8
B7. Teacher development	76.5	17.7	5.8
B8. Hardware resources	82.4	5.8	11.8
B9. Informatization level	70.5	17.7	11.8
B10. Classroom instruction	76.5	5.8	17.7
A4.Product evaluation	88.2	0	11.8
B11. Individual student benefits	70.5	17.7	11.8
B12. Collective benefit for students	82.4	5.8	11.8
B13. Teacher growth	82.4	11.8	5.8
B14. Level of recognition	64.7	11.8	23.5

The table 4.6 presents the opinions of 17 experts on the primary and secondary indicators of the evaluation system for junior high school mental health quality training.Among the four primary indicators, the proportion of "yes" responses for A1 was 88.25%, "no" responses accounted for 11.8%, and there were no responses categorized as "undetermined".The proportion of "yes" responses for A2 was 82.4%, "no" responses accounted for 5.8%, and responses categorized as "undetermined" were at 11.8%.The proportion of "yes" responses for A3 was 94.2%, there were no "no" responses, and the proportion of responses categorized as "undetermined" was 5.8%.The proportion of "yes" responses for A4 was 88.2%, there were no "no" responses, and the proportion of responses categorized as "undetermined" was 11.8%.The proportion of "yes" responses for the 14 secondary indicators was 76.06%, "no" responses accounted for 12.19%, and the responses categorized as "undetermined" were at 11.75%.It is evident that the experts

expressed a high level of satisfaction with both the primary and secondary indicators, meeting the requirements necessary for the research.

Table 4.7 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China(Cont.).

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C1. Develop a mental health education plan.	82.4	5.8	11.8
C2. Develop a mental health management system.	70.5	17.7	11.8
C3. Establishment of a system for teaching and research in mental health education.	76.5	5.8	17.7
C4. Establishment of a teaching and research center for mental health education courses.	82.4	11.8	5.8
C5. Establishment of a psychological and psychosocial counseling room.	82.4	11.8	5.8
C6. Establishment of synergistic mechanisms such as schools and families.	64.7	11.8	23.5
C7. The teaching program meets the requirements set by the Ministry of Education.	70.5	17.7	11.8
C8. The objectives and content of the curriculum meet the	64.7	11.8	23.5

requirements set by the Ministry of Education.			
C9. Specialized mental health education materials are available.	82.4	5.8	11.8
C10. Offer a second class in mental health education.	76.5	5.8	17.7
C11. Schools have at least one full-time (part-time) mental health education teacher。	70.5	17.7	11.8
C12. Establishment of a separate appraisal system for the titles of mental health education teachers.	82.4	11.8	5.8
C13. Treatment is not lower than teachers' average salary and income level in compulsory education schools.	76.5	17.7	5.8
C14. Establishment of a "lifelong" mental health profile	64.7	11.8	23.5
C15. Establishment of a student mental health website	82.4	5.8	11.8
C16. Establish a student mental health crisis intervention plan	76.5	5.8	17.7

Table 4.8 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China(Cont.).

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C17. Establishing channels for student feedback in the classroom	76.5	5.8	17.7
C18. County governments include funding for student mental health work in their budgets.	82.4	11.8	5.8
C19. Schools include funding for student mental health work in their budgets.	88.2	11.8	0
C20. There is special funding for professional skills training for mental health education teachers.	70.5	17.7	11.8
C21. 5-year 360-hour training completion rate for mental health teachers	76.5	17.7	5.8
C22. Percentage of mental health teachers exchanged for rotation each year countywide	64.7	23.5	11.8
C23. Induction rate of full-time mental health teachers with a psychological teacher's license	76.5	5.8	17.7
C24. per pupil mental health teaching and support room space	82.4	11.8	5.8
C25. Area of sports venues per pupil	88.2	11.8	0

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C26. Value of mental health teaching equipment per pupil	82.4	5.8	11.8
C27. Number of books and video materials needed for mental health per student	64.7	11.8	23.5
C28. Number of networked multimedia classrooms per 100 students	94.2	0	5.8
C29. Teachers can skillfully use information technology to organize instruction	76.5	17.7	5.8
C30. Rationalize the use of teaching methods such as case studies.	82.4	11.8	5.8

Table 4.9 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China(Cont.).

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C31. The course has a lively atmosphere.	76.5	5.8	17.7
C32. The teacher can design teaching sessions rationally.	70.5	17.7	11.8
C33. Psychological tests show greater improvement in better mental health.	64.7	11.8	23.5
C34. Learn to regulate and control their emotions.	88.2	11.8	0

C35. Learn to evaluate yourself objectively.	76.5	17.7	5.8
C36. Class cohesion is significantly improved	82.4	11.8	5.8
C37. Form an optimistic, harmonious, upwardly mobile mental health culture.	76.5	5.8	17.7
C38. The classroom and learning styles have improved significantly.	94.2	0	5.8
C39. Teachers can reflect on the teaching and learning process, and their competence is enhanced.	88.2	11.8	0
C40. Teachers are constantly improving their personalities and are psychologically optimistic.	82.4	5.8	11.8
C41. Percentage of social "satisfaction" ratings	64.7	23.5	11.8
C42. Percentage of "satisfaction" ratings by parents and students	76.5	17.7	5.8
C43. Percentage of teacher "satisfaction" rating	82.4	5.8	11.8

Tables 4.7 to 4.9 present the opinions of 17 experts on the evaluation system of junior high school mental health quality training.Among the 43 third-level indicators, the proportion of expert responses indicating 'Yes' was 77.28%, 'No' was 11.77%, and 'Uncertain' was 10.96%.Among them, there is 1 third-level indicator with a 'Yes' response rate exceeding 90%, 17 indicators with a 'Yes' response rate above 80%, 18 indicators with a 'Yes' response rate between 70% to 80%, and only 7 indicators with a 'Yes' response rate between 60% to 70%.Only 2 third-level indicators had a 'No' response rate exceeding

20%, 27 indicators had a 'No' response rate between 10% to 20%, and 14 indicators had a 'No' response rate below 10%.Only 5 third-level indicators had an 'Uncertain' response rate exceeding 20%, 21 indicators had an 'Uncertain' response rate between 10% to 20%, and 17 indicators had an 'Uncertain' response rate below 10%.It is evident that the experts showed a high level of acceptance towards the 43 third-level indicators, indicating that these indicators can be used as evaluation criteria for junior high school mental health quality training, meeting the research requirements.

4.1.4 Preliminary Analysis
4.1.4.1 Reliability and Validity Analysis

In response to the index system proposed by experts, a targeted survey comprising 28 questionnaire items was designed. Questions 1 to 9 covered basic demographic information such as gender and educational background, while questions 10 to 28 pertained to the indicators and criteria of the Junior High School Mental Health Education Training Program in Zigong, Sichuan Province, China.In this study, a total of 422 survey questionnaires were distributed to participants in China using the Wenjuanxing survey software. Ultimately, 406 completed questionnaires were received, with 16 questionnaires being excluded from the study due to incomplete information. The final analysis was conducted on the 406 questionnaires, resulting in a response rate of 96.2% for this research.

Using SPSS version 22.0, a reliability and validity analysis of the questionnaire responses was conducted. The analysis yielded the following results:

Reliability: The Cronbach's alpha coefficient was 0.964, which exceeded 0.9, indicating a high level of data reliability for this study. Therefore, the data can be considered high quality and suitable for further analysis.

Validity: The validity analysis used the KMO (Kaiser-Meyer-Olkin) and Bartlett's tests. The KMO value obtained was 0.938, which exceeded the threshold of 0.8（For the KMO test, a KMO value above 0.9 is deemed highly suitable for factor analysis, between 0.8 and 0.9 is considered reasonably suitable, within the range of 0.7 to 0.8 is considered suitable, between 0.6 and 0.7 is deemed marginally acceptable, between 0.5 and 0.6 indicates poor suitability, and below 0.5 suggests the abandonment of factor

analysis.）, indicating that the research data was highly suitable for factor extraction, thus reflecting good validity. Additionally, Bartlett's test yielded a p-value of 0, which was less than 0.05, indicating a significant result and further confirming the reasonable validity of the data.

A higher KMO score indicates stronger correlations and more accurate results. The KMO value for the individual factor was 0.895, with a significance of 0.003, indicating suitability for conducting factor analysis.

4.1.4.2 The Factor Analysis

Factor analysis was conducted on the questionnaire results using principal component analysis, extracting four main component factors, as shown in Tables 4.10 and 4.11(Scientific et al. for Statistics Professionals, 2021).

Table 4.10 Explanation of Variance

	Total Variance Explained					
	Explanatory rate of variance before rotation			Post-rotation variance explained		
Ingredient	Characteristic root	Explanation of variance (%)	Cumulative variance explained (%)	Characteristic root	Explanation of variance (%)	Cumulative variance explained (%)
1	11.606	61.082	61.082	391.341	20.597	20.597
2	0.982	5.169	66.251	357.775	18.83	39.427
3	0.833	4.383	70.634	354.779	18.673	58.1
4	0.673	3.542	74.175	305.433	16.075	74.175
5	0.609	3.207	77.383			
6	0.556	2.926	80.308			
7	0.496	2.611	82.919			
8	0.443	2.333	85.252			
9	0.409	2.154	87.406			
10	0.391	2.055	89.461			

	Total Variance Explained					
	Explanatory rate of variance before rotation			Post-rotation variance explained		
Ingredient	Characteristic root	Explanation of variance (%)	Cumulative variance explained (%)	Characteristic root	Explanation of variance (%)	Cumulative variance explained (%)
11	0.371	1.953	91.414			
12	0.292	1.539	92.954			
13	0.281	1.477	94.431			
14	0.248	1.307	95.738			
15	0.23	1.211	96.948			
16	0.191	1.005	97.953			
17	0.141	0.743	98.697			
18	0.134	0.706	99.403			
19	0.113	0.597	100			

Table 4.10 shows that the contribution rate of the factors to the explanation of variables is 74.175%, exceeding 60%, which is considered ideal. The higher the variance explained, the more critical the principal component is, and its weight should be proportionally higher.

Table 4.11 The factor loading coefficients.

	Table of Rotated Factor Loading Factors				
Ingredient	Rotated Factor Loading Factor				Degree of commonality (common factor variance)
	Factor 1	Factor 2	Factor 3	Factor 4	
1	0.240	0.194	**0.615**	0.484	0.708
2	0.291	0.328	**0.654**	0.365	0.754
3	0.497	0.285	**0.593**	0.282	0.760
4	0.313	0.462	**0.625**	0.211	0.747
5	**0.650**	0.264	0.382	0.305	0.732
6	0.331	0.495	**0.549**	0.289	0.740

Table of Rotated Factor Loading Factors					
Ingredient	Rotated Factor Loading Factor				Degree of commonality (common factor variance)
	Factor 1	Factor 2	Factor 3	Factor 4	
7	0.490	0.329	**0.563**	0.072	0.670
8	**0.620**	0.328	0.244	0.361	0.682
9	0.413	**0.733**	0.217	0.102	0.765
10	0.346	0.149	0.306	**0.641**	0.646
11	**0.653**	0.375	0.326	0.237	0.730
12	0.289	**0.617**	0.510	0.155	0.748
13	**0.670**	0.155	0.436	0.333	0.774
14	0.262	**0.736**	0.240	0.350	0.791
15	0.336	0.159	0.410	**0.647**	0.724
16	0.162	**0.664**	0.435	0.316	0.756
17	0.444	**0.561**	0.126	0.468	0.787
18	0.155	0.295	0.126	**0.834**	0.822
19	**0.769**	0.305	0.175	0.207	0.758

Table 4.11 displays the analysis of common factor variance, with all common factor variances above 0.5, indicating that each variable can be adequately represented.

The reliability coefficient of this measurement system is 0.964, indicating high reliability and a well-established structure with strong internal consistency. The factor analysis demonstrates a high level of goodness-of-fit and reasonableness, suggesting that no modifications are necessary.

4.2 The result of applying the evaluation index system to junior high school mental health literacy training, thereby promoting the enhancement of educational quality

Validation of the Quality Training Indicators for Junior High School Mental Health in All Administrative Regions of Zigong City, Sichuan Province, China, including Ziliujing District, Da'an District, Yantan District, Gongjing District, Fushun County, and Rong County. Due to the relatively simple nature of average score calculations, we conducted testing and validation on indicators C24-C28, using foundational data sourced

from the official website of the Ministry of Education, China (China, 2018).

Using the CV calculation tool from section 3.4.6, the results are shown in Figure 4.2.
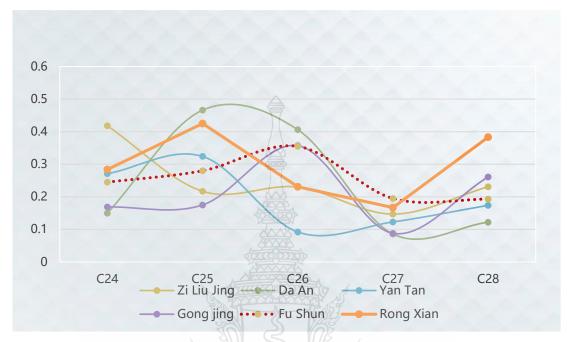
Figure 4.3 presents the inter-school dissimilarity assessment results for junior high school mental health quality training across six districts in Zigong City.

Figure 4.3 displays the coefficient of variation (CV) results for indicators C24-C28 in the inter-school dissimilarity assessment of junior high school mental health quality training across six districts in Zigong City. Referring to the Ministry of Education's requirement that CV should be less than or equal to 0.45, it can be observed that C24, C26, C27, and C28 meet the standard in all six districts, while C25 falls short of the standard only in Da'an District, with the other five districts meeting the requirement.

At the same time, we can also observe the degree of compliance with each indicator in the six districts. A smaller CV indicates a higher degree of compliance, while a larger CV implies a lower degree of compliance. The order of compliance levels in the six districts from highest to lowest is as follows:

C24：Da An,Gong Jing,Fu Shun,Yan Tan,Rong Xian,Zi Liu jing.

C25：Gong Jing,Zi Liu jing,Fu Shun,Yan Tan,Rong Xian,Da An

C26：Yan Tan,Zi Liu jing,Rong Xian,Fu Shun,Gong Jing,Da An

C27：Da An,Gong Jing,Yan Tan,Zi Liu jing,Rong Xian,Fu Shun

C28：Da An,Yan Tan,Fu Shun,Zi Liu jing,Gong Jing,Rong Xian

Through systematic testing, we can quickly and intuitively derive evaluation results. From these results, it is evident how each region fares in terms of meeting the relevant indicators. This information can be used to drive targeted improvements in each region, thereby promoting the enhancement of the quality of junior high school mental health quality training.

CHAPTER 5
CONCLUSION, DISCUSSION AND RECOMMENDATION

This chapter provides an overview of the study and draws certain conclusions pertaining to the research. The chapter begins by outlining the objectives and responding to their achievement, with a particular focus on summarizing the evaluation index system for junior high school students' mental health quality training developed using the CCIP-PF model in Zigong City, Sichuan Province, China. The details covered here also encompass the implications and recommendations for future research, as well as concluding remarks outlining the limitations of the study. This mainly comprises the following sections:

5.1 Conclusion

5.2 Discussions of Research Findings

5.3 Limitations

5.4 Suggestion

5.5 Contributions

5.1 Conclusion

The results of this study are summarized according to the research objectives, which are divided into two main sections.

5.1.1 To develop the CCIP-PF model and establish an assessment index system for mental health literacy training in junior high schools.

5.1.2 To apply the evaluation index system to junior high school mental health literacy training, thereby promoting the enhancement of educational quality.

5.1.1 Construction of the CCIP-PF Model and Indicator System
5.1.1.1 Construction of the CCIP-PF Model

This thesis conducts a mixed study of the Tyler Mode and the CIPP model, drawing upon their strengths while avoiding their weaknesses. Taking a third-party evaluation perspective, it follows a closed-loop approach of 'evaluation system—practice validation—feedback recommendations.' This approach not only emphasizes the

evaluation of the educational process but also places significance on evaluating educational outcomes. Additionally, it includes practical application and feedback recommendations, resulting in the establishment of the CCIP-PF model. This model is used to analyze the index standard system of the mental health education and training project in junior high schools in Zigong City, Sichuan Province, China.

Since the CCIP-PF model has already been introduced in Section 1.1, and its strengths and weaknesses have been extensively discussed in Section 2.7.2.2, there is no need to provide further description of the CCIP-PF model and its pros and cons in this section.

5.1.1.2 Evaluation Index System Developed Using the CCIP-PF Model

In this study, the evaluation index system for mental health quality training in Zigong City, Sichuan Province, China, developed using the CCIP-PF model, comprises a total of 4 primary indicators, 14 secondary indicators, and 43 tertiary indicators. The corresponding relationships between the primary, secondary, and tertiary indicators are presented in Tables 5.1 to 5.4.

Table 5.1 Secondary and Tertiary Indicator System Corresponding to Context Evaluation

Level 1 indicators	Level 2 indicators	Level 2 indicators
A1. Context evaluation	B1. System building	C1. Develop a mental health education plan.
		C2. Develop a mental health management system.
		C3. Establishment of a system for teaching and research in mental health education.
	B2. Institution-building	C4. Establishment of a teaching and research center for mental health education courses.
		C5. Establishment of a psychological and psychosocial counseling room.

Level 1 indicators	Level 2 indicators	Level 2 indicators
		C6. Establishment of synergistic mechanisms such as schools and families.
		C7. The teaching program meets the requirements set by the Ministry of Education.
	B3. Curriculum development	C8. The objectives and content of the curriculum meet the requirements set by the Ministry of Education.
		C9. Specialized mental health education materials are available.
		C10. Offer a second class in mental health education.

Table 5.1 illustrates the evaluation indicator system for mental health quality training in Chinese junior high schools. Specifically, A1. Context evaluation, corresponding to 'C' in CCIP-PF, comprises 3 secondary indicators and their corresponding 10 tertiary indicators.These indicators are primarily designed to assess the necessary background elements for mental health quality training in Chinese junior high schools.This research outcome bears similarities with the background evaluation conducted by Yan, Linfeng, & Yao, Dewen (2019), encompassing institutional establishment and organizational framework. However, the latter lacks curriculum development, rendering it less comprehensive.The secondary indicators of background evaluation in this study closely align with those of Wang, Jingqun et al. (2018). However, the latter research only delved into primary and secondary indicators, lacking tertiary indicators, which makes the evaluation implementation more challenging.

Table 5.2 Secondary and Tertiary Indicator System Corresponding to Condition Evaluation

Level 1 indicators	Level 2 indicators	Level 2 indicators
		C11. Schools have at least one full-time (part-time) mental health education teacher。
	B4. Teacher guarantees	C12. Establishment of a separate appraisal system for the titles of mental health education teachers.
		C13. Treatment is not lower than teachers' average salary and income level in compulsory education schools.
A2.Condition evaluation		C14. Establishment of a "lifelong" mental health profile
		C15. Establishment of a student mental health website
	B5. Student protection	C16. Establish a student mental health crisis intervention plan
		C17. Establishing channels for student feedback in the classroom
		C18. County governments include funding for student mental health work in their budgets.
	B6. Financial security	C19. Schools include funding for student mental health work in their budgets.
		C20. There is special funding for professional skills training for mental health education teachers.

Table 5.2 demonstrates the Assessment Indicator System for Quality Training in Chinese Junior High School Psychological Health, specifically focusing on A2: Condition

Evaluation, which corresponds to the second "C" in CCIP-PF. This category comprises three secondary indicators along with their respective ten tertiary indicators.These indicators are primarily designed to assess the essential software and hardware conditions necessary for quality training in junior high school psychological health in China.The research findings differ from those of Wang Ying (2017) and Zhao Xingwan (2012) regarding infrastructure facilities. The contextual evaluation not only encompasses the hardware facilities identified in both studies but also includes teacher guarantees, student guarantees, and financial security, rendering it more comprehensive.However, this study aligns closely with Lan Yanling et al. (2023) regarding input evaluation within the assessment framework. Simultaneously, it corresponds to the content of resource security evaluation in Zhang Jian's doctoral dissertation (2019).

Table 5.3 Second and Third-Level Indicator System Corresponding to Intercollegiate Index Evaluation

Level 1 indicators	Level 2 indicators	Level 2 indicators
A3.Intercollegiate Indexe valuation	B7. Teacher development	C21. 5-year 360-hour training completion rate for mental health teachers
		C22. Percentage of mental health teachers exchanged for rotation each year countywide
		C23. Induction rate of full-time mental health teachers with a psychological teacher's license
	B8. Hardware resources	C24. per pupil mental health teaching and support room space
		C25. Area of sports venues per pupil
		C26. Value of mental health teaching equipment per pupil
		C27. Number of books and video materials needed for mental health per student

Level 1 indicators	Level 2 indicators	Level 2 indicators
	B9. Informatization level	C28. Number of networked multimedia classrooms per 100 students
		C29. Teachers can skillfully use information technology to organize instruction
	B10. Classroom instruction	C30. Rationalize the use of teaching methods such as case studies.
		C31. The course has a lively atmosphere.
		C32. The teacher can design teaching sessions rationally.

Table 5.3 illustrates the Evaluation Indicator System for Quality Training in Chinese Junior High School Psychological Health, specifically focusing on A3: Intercollegiate Index Evaluation, which corresponds to the second "I" in CCIP-PF. This category comprises four secondary indicators along with their corresponding twelve tertiary indicators.These indicators are primarily designed to assess the disparities between schools in China when it comes to the quality of training in junior high school psychological health.The research findings mention inter-school differences within the process evaluation indicators in Zhao Xiaosheng's (2018) evaluation indicator system, albeit lacking comprehensiveness.However, the research findings align with the inter-school difference evaluation requirements outlined in the 'County Compulsory Education Quality Balanced Development Supervision and Evaluation Measures' issued by the Chinese Ministry of Education (China, 2017).

Referring to the relevant regulations in the "Supervision and Evaluation Measures for Quality and Balanced Development of Compulsory Education at the County Level" by the Chinese Ministry of Education (China, 2017), C22 stipulates that the proportion of teachers participating in annual teacher exchange and rotation at the county level should not be less than 10% of the total number of teachers eligible for such exchanges.In accordance with C23, the on-duty rate of full-time psychological health

Table 5.4 Second and Third-Level Indicator System Corresponding to Product Evaluation

Level 1 indicators	Level 2 indicators	Level 2 indicators
A4.Product evaluation	B11. Individual student benefits	C33. Psychological tests show greater improvement in better mental health. C34. Learn to regulate and control their emotions. C35. Learn to evaluate yourself objectively.
	B12. Collective benefit for students	C36. Class cohesion is significantly improved C37. Form an optimistic, harmonious, upwardly mobile mental health culture. C38. The classroom and learning styles have improved significantly.
	B13. Teacher growth	C39. Teachers can reflect on the teaching and learning process, and their competence is enhanced. C40. Teachers are constantly improving their personalities and are psychologically optimistic.
	B14. Level of Recognition	C41. Percentage of social "satisfaction" ratings C42. Percentage of "satisfaction" ratings by parents and students C43. Percentage of teacher "satisfaction" rating

teachers holding a psychological teacher qualification certificate should reach 100%.As per C24, the per capita area for psychological health teaching and auxiliary facilities should be no less than 2.5 square meters.Under C25, the per capita area for sports facilities should reach at least 10.2 square meters.In accordance with C26, the per capita value of psychological health teaching equipment should exceed 500 yuan.As per C27, the per capita quantity of required books and audiovisual materials for psychological health should reach a minimum of 5 sets.In accordance with C28, there should be a minimum of 2.4 network multimedia classrooms for every one hundred students.

Table 5.4 illustrates the Evaluation Indicator System for Quality Training in Chinese Junior High School Psychological Health, specifically focusing on A4: Product Evaluation, which corresponds to the second "P" in CCIP-PF. This category comprises four secondary indicators along with their corresponding eleven tertiary indicators.These indicators are primarily designed to assess the effectiveness of quality training in junior high school psychological health in China.The research findings align with those of You Yinghui (2017), Li Dongyuan (2020), and Wang Yong et al. (2022) regarding the outcome evaluation within the evaluation indicator system, all involving student benefits and teacher benefits. However, this study, building upon their work, incorporates societal evaluation and parental evaluation, rendering it more scientific and objective.

5.1.2 Empirical Research Validates the Evaluation Criteria System as Planned

This study will apply the evaluation criteria system for junior high school mental health quality training programs developed using the CCIP-PF model to all junior high schools within the six administrative regions of Zigong City, Sichuan Province, namely, Ziliujing, Da'an, Yantan, Gongjing, Fushun, and Rongxian.The test results clearly indicate the levels of mental health quality training and the issues present in junior high schools across the six regions. This outcome aligns with the anticipated expectations.

It is worth noting that in this study, we developed a small program for calculating the coefficient of variation (CV) using software such as Excel. This streamlined data processing, making it quicker and more convenient, resulting in greater accuracy, and ultimately saving a significant amount of manpower and resources.

From empirical research, it is evident that the index system developed for junior high school mental health literacy training in Zigong City, Sichuan Province, China, using the CCIP-PF evaluation model, aids in assessing the quality and level of mental health education programs in various administrative regions within Zigong City. This assessment allows for timely identification of existing issues. The discovery of these issues can provide targeted practical guidelines for the government and schools, prompting the enhancement of educational training quality. Its application, innovation, and generalizability are notable.

5.2 Discussions of Research Findings

5.2.1 The Innovative Construction of the CCIP-PF Evaluation Model

The innovation of this study lies in the comprehensive exploration and synthesis of the Tyler Mode and the CIPP Model, drawing upon their respective strengths while mitigating their limitations. By integrating policy regulations, existing literature, and practical experiences from mental health quality training in Chinese junior high schools, we have innovatively developed the CCIP-PF Evaluation Model.Simultaneously, a comparative analysis of the strengths and weaknesses of the Tyler Mode, CIPP Model, and CCIP-PF Model was conducted. From the comparative results, it is evident that the CCIP-PF Evaluation Model is better suited for evaluating mental health quality training programs in Chinese junior high schools.

The CCIP-PF model developed in this study effectively circumvents the shortcomings of the Tyler Mode, such as the lack of evaluating reasonable objectives, minimal consideration of students' needs in goal setting, relatively arbitrary and mechanical evaluation criteria, and the tendency to prioritize outcomes over processes (Mei Yang , 2021; Zhengquan Xing & Zhong Zhao , 2017; Xinhao Gaoet al., 2015; Fan Yi , 2012).Simultaneously, it also avoids the drawbacks of the CIPP model, including administrative orientation, lack of value judgment, absence of rigorous evaluation procedures, and complexity in implementation processes (Yanling Lan et al., 2023; Deming Liu, 2022; Shifeng Wu, 2021; Ang Ma, 2021; Jian Zhang, 2019).

It is worth mentioning that the evaluation model incorporates the PF components, namely the assessment and feedback advisory stages, thereby establishing a

complete closed-loop evaluation system. This enhancement ensures a more scientifically robust and comprehensive evaluation process.Within the testing phase, the evaluation criteria system is applied across all junior high schools in the Self-Chongqing region of Sichuan Province, China. This step is aimed at verifying the scientific and effective nature of the CCIP-PF evaluation criteria system.The feedback advisory stage involves summarizing and providing feedback based on practical testing, which helps identify shortcomings in the evaluation criteria system and thereby promotes further refinement of the evaluation system. This finding aligns with the viewpoint articulated by Issara (2022) and Xiaoli Shi(2021), which suggests the addition of a prompt-action variable in Model 3 to ascertain recommendations from others, thereby rendering it more scientifically sound and rational.

5.2.2 Application of the Delphi Method Enhances the Scientific Construction of the Evaluation Criteria System

In this study, the Delphi method was employed, and an open-ended approach was utilized to gather a total of 162 viewpoints from a panel of 17 experts through brainstorming sessions. Subsequently, based on these viewpoints and incorporating Chinese policies, regulations, and existing literature, the content for the first-round interview questionnaire was developed.

The first-round interview questionnaire was administered to the panel of 17 experts. Subsequently, the results from the first-round interview questionnaire were subjected to statistical analysis using SPSSAU software. Based on this analysis, indicators with low expert satisfaction and those recommended for modification by the experts were either removed or modified to create the second-round questionnaire.A second round of questionnaires was conducted, and the results from the second-round interview questionnaire were subjected to statistical analysis using SPSSAU software. Based on this analysis, further refinements were made to the criteria system, leading to the development of the third-round questionnaire.In the third round of the interview questionnaire, experts were asked to provide "yes" or "no" responses, and the statistical analysis of the results met the data analysis standards.

Ultimately, a scientifically valid junior high school mental health quality

training program evaluation criteria system was successfully developed.

5.2.3 Combining Quantitative and Qualitative Approaches for Enhanced Scientific Evaluation

In the evaluation criteria system developed for junior high school mental health quality training in Zigong City, Sichuan Province, China, this study incorporates both qualitative and quantitative assessment indicators. This approach helps ensure a more comprehensive and well-rounded evaluation perspective, mitigating potential shortcomings.

Within the A3. Intercollegiate Index Evaluation, the following indicators fall under the category of quantitative metrics:

C22. Percentage of mental health teachers exchanged or rotated annually at the county level.

C23. Induction rate of full-time mental health teachers holding a psychological teacher's license.

C24. Per pupil mental health teaching and support room space.

C25. Area of sports venues per pupil.

C26. Value of mental health teaching equipment per pupil.

C27. Number of books and video materials required for mental health education per student.

C28. Number of networked multimedia classrooms per 100 students.

In the A4. Product Evaluation category, the following indicators are considered quantitative metrics:

C41. Percentage of social "satisfaction" ratings.

C42. Percentage of "satisfaction" ratings by parents and students.

C43. Percentage of teacher "satisfaction" ratings.

Furthermore, the indicator C11, which pertains to schools having at least one full-time (or part-time) mental health education teacher, is also categorized as a quantitative metric. All other indicators, aside from those mentioned, fall under the category of qualitative metrics.

5.3 Contributions of the Study

5.3.1 Theoretical Contributions

This study conducted a comprehensive review of literature on mental health quality training for junior high schools in China and abroad. It extensively analyzed the current status of mental health quality training in Chinese junior high schools. Additionally, it conducted an integrated examination of the Tyler Mode and the CIPP model, analyzing their respective strengths and weaknesses. As a result, this study developed a targeted and contextually suitable CCIP-PF model and a three-tier evaluation index system tailored to the realities of China. The theoretical contributions are as follows:

5.3.1.1 This research identified the existing issues within the mental health quality training for junior high schools in China, providing theoretical support for other researchers.The main manifestation is the inadequate emphasis placed by schools on mental health education, primarily due to the pressure from entrance examinations for further education, leading to insufficient attention to psychological well-being education.There is a lack of institutional support, as the system for mental health quality training is not yet sufficiently robust or comprehensive.There is a shortage of teaching staff, with the majority of Chinese junior high schools lacking professional mental health educators.There is a lack of a scientific evaluation system, as formal mental health quality training evaluation criteria are yet to be established in Chinese junior high schools.

5.3.1.2 The research on evaluation content is more scientifically comprehensive.In the existing research, regarding the content of evaluation indicators, there is a general similarity in the composition of indicators across primary, secondary, and high schools, lacking distinct differences. In terms of practicality, most studies primarily dwell on the theoretical research aspect, with minimal mention of practical implementation and feedback loops. This thesis addresses the shortcomings by providing an argument and description of the time feedback loop within the evaluation indicators. It offers guidance and theoretical justification for other researchers to follow.

5.3.1.3 It provides a theoretical basis for the construction of an educational evaluation index system.This study conducted a comparative analysis of the Tyler Mode and the CIPP model, summarizing their respective strengths and weaknesses. Moreover,

it assimilated the advantages of both the Tyler Mode and the CIPP model while avoiding their shortcomings. Through the perspective of third-party evaluation, this study constructed the CCIP-PF evaluation model and its relevant indicator system. Consequently, it effectively addressed the previous inadequacies in innovating evaluation models within research.

5.3.2 Practical Contributions

5.3.2.1 The research findings reveal that the CCIP-PF evaluation system, tailored to the actual conditions of mental health quality training in Chinese junior high schools, establishes an indicator system across four dimensions: context, conditions, inter-school differences, and effects. Additionally, it incorporates practical implementation and feedback loops, enabling targeted evaluations concerning the content, objectives, implementation methods, and actual outcomes of training programs designed for junior high schools.The research demonstrates that the mental health quality training in Chinese junior high schools exhibits a high level of consistency in training design, implementation, and quality outcomes, thereby achieving the intended objectives and expectations of school education and training.

5.3.2.2 This study designed the CCIP-PF evaluation system to investigate the impact of mental health education quality training programs on the overall performance and expectations of schools. It includes various relevant aspects concerning students, teachers, parents, and society. The research demonstrates that the Chinese junior high school mental health education quality training program exhibits a strong correlation with the educational objectives of schools, academic needs, societal demands, and aligns well with the country's requirements for junior high school mental health quality training.

5.3.2.3 This study conducted research on the relevant indicators of junior high schools across all regions in Zigong City. The research demonstrates that the CCIP-PF evaluation system effectively promotes the level of mental health literacy training in junior high schools. It accurately identifies educational issues and implements targeted reforms, thereby enhancing the teaching proficiency of educators. This, in turn, positively impacts the overall educational atmosphere and teaching quality within schools.

5.3.2.4 The CCIP-PF assessment system, in its indicator design, includes specific criteria for curriculum design and content pertaining to mental health education

quality training at the junior high school level. These indicators serve to scrutinize the integrity, practicality, and adaptability of the current curriculum in Chinese junior high schools' mental health education. They ensure that the curriculum aligns with the training objectives for junior high school mental health literacy.

5.3.2.5 The CCIP-PF assessment system incorporates specific indicators concerning students' mental health issues, quality training requirements, and training satisfaction. This ensures that the mental health quality training program effectively meets and enhances students' actual needs. It positively impacts the improvement of students' mental health literacy and facilitates the advancement of teacher education levels and quality.

5.3.2.6 The CCIP-PF assessment system incorporates multi-dimensional evaluation indicators in outcome assessment to gauge the successful achievement of established objectives within the mental health education quality training program. Simultaneously, it integrates practical implementation and feedback loops to thoroughly examine the realization of training objectives. This effectively drives the enhancement of junior high school students' mental health literacy and fosters the development of awareness and skills in mental health.

5.4 Limitation and Future Research

This study still has some limitations that will necessitate further investigation.

5.4.1 Limitations

5.4.1.1 The evaluation index system of the mental health quality training program for junior high schools in Zigong City, Sichuan Province, developed using the CCIP-PF model, encompasses numerous projects. This necessitates a substantial amount of data for assessment, requiring considerable effort for both data collection and statistical analysis. During data collection, it involves a significant workload encompassing numerous students, parents, teachers, government officials, and other related personnel.

5.4.1.2 This study employed the Delphi method to interview 17 experts, all from China, with a majority from Sichuan. The experts were not diversified to include representatives from other regions of China, thereby imposing certain limitations on the expert group's representativeness, which could be strengthened.

5.4.1.3 The empirical research was limited to selecting junior high schools in Zigong for the study, without conducting empirical research on junior high schools in other cities such as developed coastal cities in China. This lack of empirical research on schools in other areas weakens the representativeness of the empirical research subjects.

5.4.2 Future Research

5.4.2.1 It is recommended to enhance the diversity within the expert panel. For future research endeavors, the inclusion of experts from a broader geographical and cultural spectrum is advised. This may involve incorporating experts from regions outside Sichuan in China and relevant experts from foreign countries. Such an approach would bolster the credibility and representativeness of the panel, enriching the diversity of perspectives and potentially uncovering more scientifically grounded evaluation criteria.

5.4.2.2 It is recommended to establish a sustainable monitoring mechanism. A suggestion would be to implement a long-term monitoring system that continuously evaluates the effectiveness of the evaluation criteria system developed in this study. Based on practical feedback, this would involve updating, refining, and revising the indicator system to enhance its effectiveness. This measure aims to further advance the governance of mental health quality training in Chinese junior high schools, ultimately benefiting the students.

5.4.2.3 It is recommended to conduct comparative studies. As this study predominantly focuses on Chinese junior high schools, its international representation is relatively limited. As a next step, it is advisable to engage in comparative studies with evaluation criteria systems from other regions or countries to gain insights into best practices and potential improvements.

5.4.2.4 Establish an information system for data collection and processing. In subsequent research, to address the limitation of extensive data collection in this study, it would be beneficial to develop tailored software for data collection and processing. This would streamline the processes of data collection and analysis, reducing the human, material, and financial resources invested, thereby achieving resource conservation and enhancing work efficiency.

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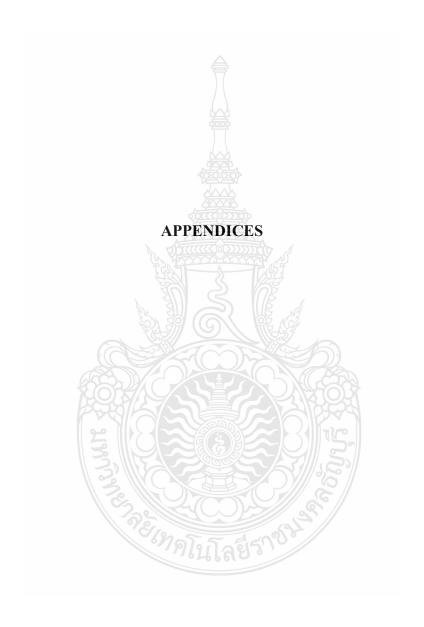
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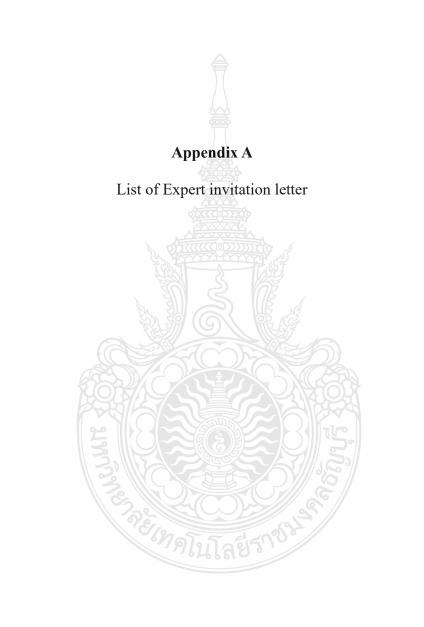
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APPENDICES

Appendix A

List of Expert invitation letter

The experts were:

1. Qinghua Wu ,Managers of the Compulsory Education Division of the Ministry of Education's Supervision Bureau.

2. Anyuan Nie, National Institute of Education Administration, Experts in Education Assessment and Supervision.

3. Wenqiu Zhang,Managers of the Education Bureau of Zigong City.

4. Yu Zeng, Zigong Huinan Experimental School.

5. Caixia Wu, Zigong Huidong Experimental South Lake Campus.

6. Youcai Chen,Zigong Huidong Experimental South Lake Campus.

7. Rui Chen, Zigong Jiefang High School.

8. Xiujia Zhong,Zigong Longhu Middle School.

9. Xingzheng Xiao,Vice President of Sichuan University of Science & Engineering,Professor.

10. Hua Xie,Sichuan University of Science & Engineering, School of Education Dean, Professor.

11. Wanchun Yan,Sichuan University of Science & Engineering, psychological counselor.

12. Jing Fan, Sichuan University of Science & Engineering, Psychological Counselor.

13. Yao Peng,Sichuan University of Science & Engineering, Psychological Counselor.

14. Youli Wen, Doctor at Zigong First People's Hospital.

15. Weiyang Shi,Zigong Fourth People's Hospital.

16. Qian Wu,Junior high school teacher at Zigong Education and Training Institution.

17. Xin Zeng,Junior high school teacher at Zigong Education and Training Institution.

MHESI 1038/2023

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17 August 2023

Dear Mr.Qinghua Wu.
Compulsory Education Management Office of the Ministry of Education of China

Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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     If you have any questions or need further information, please feel free to contact Mr.Junhua Zhong on the e-mail: zhipei_x@mail.rmutt.ac.th

Yours sincerely,

(Assistant Professor Arnon Niyomphol)
Dean of Faculty of Technical Education

MHESI 1038.1/2023

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17 August 2023

Dear Mr.Anyuan Nie.
National Institute of Education Administration, Experts in Education Assessment and Supervision
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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Dean of Faculty of Technical Education

MHESI 1038.2/2023

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17 August 2023

Dear Ms. Wenqiu Zhang
The Education Bureau of Zigong City
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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MHESI 1038.3/2023

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17 August 2023

Dear Ms. Yu Zeng
Zigong Huinan Experimental School
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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Dean of Faculty of Technical Education

MHESI 1038.4/2023

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17 August 2023

Dear Ms. Caixia Wu
Zigong Huinan Experimental School
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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Dean of Faculty of Technical Education

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17 August 2023

Dear Mr. Youcai Chen
Zigong Huidong Experimental South Lake Campus
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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17 August 2023

Dear Mr. Rui Chen
Zigong Jiefang High School
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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MHESI 1038.7/2023

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17 August 2023

Dear Ms. Xiujia Zhong
Zigong Longhu Middle School
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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17 August 2023

Dear Professor Xingzheng Xiao
Sichuan University of Science & Engineering
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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Dean of Faculty of Technical Education

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MHESI 1038.9/2023

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Sichuan University of Science & Engineering
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Dean of Faculty of Technical Education

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MHESI 1038.10/2023

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17 August 2023

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Sichuan University of Science & Engineering
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Sichuan University of Science & Engineering
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Doctor at Zigong First People's Hospital
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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17 August 2023

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Junior high school teacher at Zigong Education and Training Institution
Subject: Respectfully requesting a letter of invitation of experts for Ph.D. Dissertation

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17 August 2023

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Dean of Faculty of Technical Education

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APPENDIX B
First step: Brainstorming

Semi-structured Interview

The semi-structured interview questions cover four sections related to the evaluation criteria of the junior high school mental health quality training program, as follows:Experts will provide feedback on these four sections: （1）Context evaluation；（2）Condition evaluation；（3）Intercollegiate Indexe valuation, and（4）Product evaluation. They will offer specific suggestions through comment boxes or by sharing their thoughts.

Table 1 Expert Feedback on Semi-Structured Interview Questions.

1. Context evaluation

What elements do you consider in the **"Context evaluation"** criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

1.1   Institutional Development

1) Development of a School Mental Health Education Plan.

……..   2) Incorporating the Mental Health Education Plan into the overall school reform and development plan.

……..   3) Integrating the Mental Health Education Plan into the school's talent development system.

……..   4) Establishing a school mental health management system.

……..   5) Clear division of responsibilities and effective measures for school mental health quality training.

……..   6) A specialized examination system for mental health quality training in schools.

……..   7) County-level educational research institutions should be equipped with psychological research officers.

……..   8) Establishing a reward and penalty system for mental health quality training.

1.2   Organizational Structure

.... 9) Establishing a school mental health education curriculum research office or research group.

.... 10) Establishing a school counseling center to carry out early warning and intervention activities.

.... 11) Establishing a collaborative mechanism for school and family mental health quality training.

Table 2 Expert Feedback on Semi-Structured Interview Questions(Cont.).

1. Context evaluation(Cont.)

1.1   What elements do you consider in the "**Context evaluation**" criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

.... 12) Establishing a collaborative mechanism between schools and mental health medical institutions for mental health quality training.

13) Comprehensive infrastructure for mental health quality training.

.... 14) Establishing a collaborative mechanism for mental health quality training between schools and the community.

.... 15) Establishing a collaborative mechanism for mental health quality training between schools and charitable organizations.

.... 16) Establishing a collaborative mechanism for mental health quality training between schools and the community." (Note: This is a repetition of point 14, please confirm if it's a duplicate or if there's a different point you'd like to translate.

.... 17) Establishing a leadership group for school mental health quality training.

1.3   Curriculum Development

.... 18) The teaching plan meets the requirements set by the Ministry of Education.

.... 19) Conducting online mental health quality training.

.... 20) The teaching hours meet the requirements set by the Ministry of Education.

.... 21) The curriculum objectives align with the requirements set by the Ministry

of Education.

…….. 22) Mastery of the necessary components for students' mental health quality training.

…….. 23) The curriculum content conforms to the requirements set by the Ministry of Education.

…….. 24) The curriculum content aligns with the actual needs of local students.

…….. 25) The education administration department places high importance on mental health quality training.

…….. 26) Specialized mental health education materials are available.

…….. 27) Offering a course on the psychology of love.

…….. 28) Establishing extracurricular mental health education activities, such as mental health education lectures.

…….. 29) Strict enforcement of national policies and regulations related to mental health quality training.

30) Regularly screening educational psychology films.

31) The education administration department conducts classroom observations and inspections for mental health quality training.
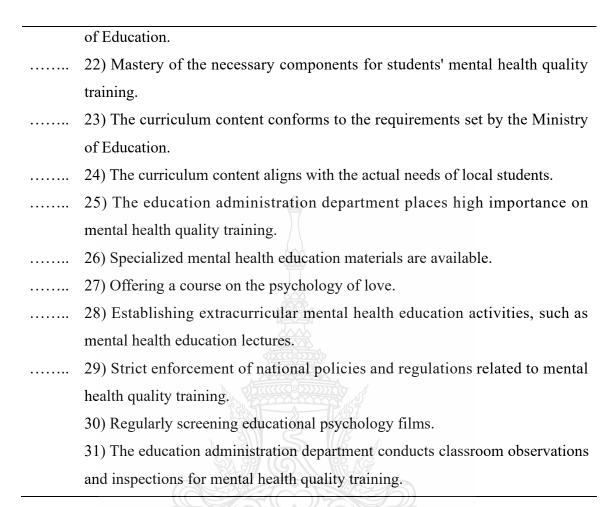
Table 3 Expert Feedback on Semi-Structured Interview Questions(Cont.).

2. Condition evaluation

What elements do you consider in the "**Condition**" criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

2.1 Teacher Support

32) The school is equipped with at least two full-time or part-time mental health education teachers.

…….. 33) Establishing assistant teachers for mental health quality training to assist with teaching.

…….. 34) Establishing a separate title evaluation system for mental health education teachers.

…….. 35) Promotion of mental health education teacher titles is based on years of service without the requirement to publish articles.

…….. 36) Compensation is no lower than the average salary income of teachers in compulsory education schools in the entire county.

…….. 37) Establishing a mental health therapy room for teachers.

…….. 38) Establishing special incentives for mental health quality training teachers.

…….. 39) Establishing teacher dormitories.

…….. 40) Establishing a teacher's lounge.

…….. 41) Establishing a coffee shop-style counseling room to create a relaxed environment.

…….. 42) Establishing a separate pathway for the promotion of mental health education teacher ranks.

2.2 Student Support

…….. 43) Establishing a 'One Life, One Plan' mental health record for students.

…….. 44) Centralized management of students with mental health issues.

…….. 45) Establishing a relaxation room for students with mental health issues in the educational area.

…….. 46) Establishing a student mental health website, with regular updates and interactive features.

…….. 47) Establishing class committee leadership support groups.

…….. 48) Establishing a crisis intervention plan for student mental health.

49) Establishing a feedback channel for student classroom experiences.

50) Providing students with opportunities for active participation in teaching.

51) Providing separate dormitory arrangements for students with mental health issues.

52) Scheduling mental health quality training films or videos for students on a weekly basis.

53) Conducting regular mental health assessments for students.

54) Implementing a system that allows students with mental health issues to change homeroom teachers if needed.

55) Providing convenient leave options for students with mental health issues.

Table 4 Expert Feedback on Semi-Structured Interview Questions(Cont.).

2. Condition evaluation(Cont.)

What elements do you consider in the "**Condition**" criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

   2.3   **Financial Support**

       56) The county-level government includes funding for student mental health initiatives in the fiscal budget.

       57) The county-level government should allocate funding to schools based on the number of students.

       58) Schools include funding for student mental health initiatives in their budgets.

       59) Adequate funding is provided for student mental health quality training.

       60) Providing special allowances to mental health quality training teachers.

       61) Allocating special funds for the professional skill training of mental health education teachers.

       62) Establishing special funds for the treatment of student mental health issues.

       63) Establishing special funds for student mental health counseling services.

       64) Establishing special funds for county-level government mental health management personnel.

       65) Establishing special funds for part-time teachers engaged in mental health work.

       66) Establishing special funds for research projects on student mental health quality training.

       67) Providing funding incentives for research achievements in student mental health quality training.

       68) Providing funding rewards for research achievements in student mental health quality training.

       69) Establishing emergency funds for mental health issues.

70) Establishing special funds for teacher mental health support.

Table 5 Expert Feedback on Semi-Structured Interview Questions(Cont.).

3. Intercollegiate Indexe valuation

What elements do you consider in the "**Intercollegiate Indexe valuation**" criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

3.1 Teacher Management

72) Training for mental health education teachers.

73) Completion rate of 360 hours of training over 5 years.

74) Rotation of mental health quality training teachers.

75) The annual proportion of teachers participating in inter-county exchange and rotation.

76) The gender ratio of mental health quality training teachers.

77) Full-time mental health education teachers hold a qualification certificate in psychology teaching.

78) The rate of full-time mental health education teachers holding a qualification certificate in psychology when assuming their positions.

79) Mental health education teachers holding a counseling psychologist certificate.

80) The rate of part-time mental health education teachers being equipped.

3.2 Hardware Resources

81) Per capita area of mental health teaching facilities.

82) Per capita area of mental health support facilities.

83) Per capita area of sports and athletic facilities.

84) Per capita dormitory area.

85) Per capita value of mental health teaching instruments and equipment.

86) Per capita library area.

87) Per capita number of books and audiovisual materials required for mental health.

88) Per capita number of audiovisual materials required for mental health.

89) Per capita area of recreational rooms.

90) Per capita cafeteria area.

91) Per capita area of emotional release rooms.

92) Per capita area of mental health laboratories.

3.3 Level of Informatization

93) The number of network multimedia classrooms per one hundred students.

94) The number of computers per one hundred students.

95) Establishing a mental health education website.

96) Establishing a WeChat official account for mental health quality training.

97) Teachers proficiently use information technology for organizing teaching, resulting in a high utilization rate of facilities and equipment.

98) Establishing an electronic information platform for mental health.

99) Utilizing platforms such as Tencent Meeting and VOOV Meeting for conducting online teaching activities.

Table 6 Expert Feedback on Semi-Structured Interview Questions(Cont.).

3. Intercollegiate Indexe valuation(Cont.)

What elements do you consider in the **"Intercollegiate Indexe valuation"** criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

100) Establishing an online platform for communication between parents and teachers.

101) Establishing an online forum for mental health education.

3.3 Classroom Teaching

102) Employing teaching methods such as case studies, role-playing, and psychological games effectively.

103) The curriculum engages students to participate actively, respond to questions, and creates an enthusiastic atmosphere.

104) Teachers maintain a calm demeanor and do not bring negative emotions into the classroom.

105) Teachers are good at guiding students.

106) Teachers are able to handle classroom emergencies appropriately.

107) Teachers are able to rationalize the design of teaching sessions.

108) Students are able to complete assignments on time.

109) Teachers and students can treat each other equally in the classroom.

110) Students are able to get to and from class on time.

111) Students showed interest in the mental health quality training program.

Table 7 Expert Feedback on Semi-Structured Interview Questions(Cont.).

4. Product evaluation

What elements do you consider in the **"Product evaluation"** criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

4.1 Individual student benefits

112) Psychological tests show greater improvement in better mental health.

113) Percentage of students with psychological testing problems.

114) Student participation in mental health quality training.

115) Student motivation for quality mental health training.

116) Student performance on mental health quality training.

117) Learn to regulate and control your emotions.

118) Learn to evaluate yourself objectively.

119) Learn to face setbacks properly.

120) Learn to make objective judgments about problems in academic life.

121) Respect for teachers.

122) Be friendly to classmates and be able to get along.

123) Treat parents and elders with respect and are not rebellious.

124) Have your own circle of friends among your classmates.

125) Not to be addicted to the Internet.

126) No aversion to learning.

127) Do not arrive late or leave early for class.

128) No propensity for violence.

129) Correct treatment of love, no early love behavior.

130) To be able to analyze and solve problems facing him/her independently.

4.2   **Collective benefit to students**

131) Class cohesion has improved significantly

132) The classroom culture has improved significantly.

133) The classroom culture has improved significantly.

134) Higher participation in classroom activities.

135) The sense of collective honor has increased significantly.

136) Overall academic performance in the classroom has increased significantly.

138) The impact of the class has increased significantly.

139) To develop an optimistic, harmonious and upwardly mobile mental health culture.

140) Teachers are more likely to recognize the class.

141) The class has a cordial relationship with other classes.

4.3   **Teacher Growth**

142) Teachers are able to reflect on the process of teaching and learning and their capacity is enhanced.

Table 8 Expert Feedback on Semi-Structured Interview Questions(Cont.).

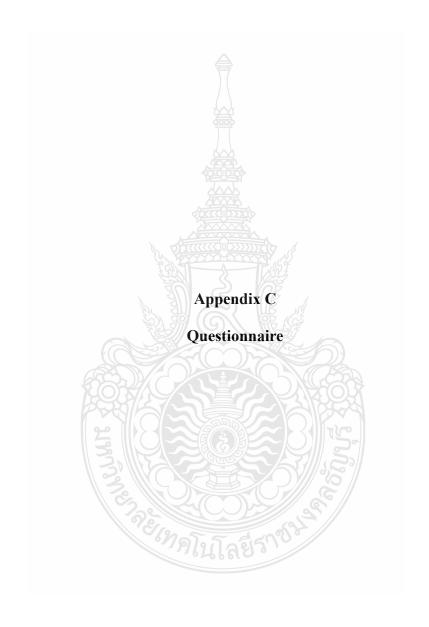**4. Product evaluation(Cont.)**

What elements do you consider in the **"Product evaluation"** criteria for the junior high school mental health quality training program? For example:

Please selects your specify any suggestion in blank

143) Teachers have no mental health problems.

144) Teachers' titles have been upgraded.

145) Schools rate teachers' teaching highly.

146) Student recognition of teachers is high.

147) Parental approval of teachers is high.

148) Higher social recognition of teachers.

149) Teachers' skills in mental health quality training have been improved.

150) Teachers are constantly improving their personalities and are psychologically positive.

151) The number of teachers trained in the quality of mental health has been strengthene

152) Teachers reflect on the annual summary of the mental health quality training program.

153) Teachers update and improve the mental health quality training curriculum annually.

4.3   Recognition

154) Percentage of social "satisfaction" ratings.

155) Percentage of parental "satisfaction" ratings.

156) Percentage of student "satisfaction" ratings.

157) Percentage of teachers' "satisfaction" ratings.

158) Percentage of "satisfaction" ratings from education administrations.

159) Percentage of "satisfaction" ratings by experts in the field of mental health.

160) Percentage of "satisfaction" ratings between sc

161) Mental health quality training programs are actionable.

162) Mental health quality training programs are scalable.

Appendix C

Questionnaire

Second step : Questionnaire 1

Instructions:

1）Please check (/) each box according to your level of opinion.

2）Based on expert opinions gathered during the brainstorming phase, along with relevant Chinese policies and regulations, as well as existing literature, a preliminary framework for the interview questionnaire content has been developed, structured according to first, second, and third-level indicators.If you believe that revisions are necessary for the first-level indicators (A), second-level indicators (B), and third-level indicators (C) system, the researcher would greatly appreciate your input to refine this questionnaire.

Table 9 Interview Questionnaire Table for Level 1 and Level 2 Indicators Systems.

Level 1 indicators	Opinion 5 4 3 2 1	Level 2 indicators	Opinion 5 4 3 2 1
A1. Context evaluation		B1. System building	
		B2. Institution-building	
		B3. Curriculum development	
		B4. Teacher guarantees	
A2.Condition evaluation		B5. Student protection	
		B6. Financial security	
		B7. Teacher development	
A3.Intercollegiate Indexe valuation		B8. Hardware resources	
		B9. Informatization level	
		B10. Classroom instruction	
		B11. Individual student benefits	
		B12. Collective benefit for students	
A4.Product evaluation		B13. Teacher growth	
		B14. Level of recognition	

Level 1 indicators	Opinion		Level 2 indicators	Opinion	
	5 4 3 2 1			5 4 3 2 1	
Other suggestion					

Table 10 Interview Questionnaire Table for Level 3 Indicators Systems (Cont.).

Level 3 indicators	Opinion
	5 4 3 2 1

C1. Develop a mental health education plan.

C2. Establishment of a Psychological Health Management Policy.

C3. Establishment of a Psychological Health Education and Research System.

C4. Establishment of a Psychological Health Competency Training and Examination System.

C5. Establishment of a Psychological Health Education Curriculum Research Office.

C6. Establishment of a Psychological Counseling Office.

C7. Establishment of a School Psychological Health Competency Training Leadership Team.

C8. Establishment of Collaborative Mechanisms Between Schools and Families, among Others.

C9. Ensuring that the Teaching Plans Meet the Requirements Set by the Ministry of Education.

C10. Ensuring that the Curriculum Objectives and Content Align with the Requirements Set by the Ministry of Education.

C11. Conducting Online Psychological Health Competency Training.

C12. Availability of Specialized Psychological Health Education Materials.

C13. Offering Extracurricular Psychological Health Education.

C14. The School is Staffed with at Least 2 Full-time or Part-time Psychological Health Education Teachers.

Level 3 indicators	Opinion
	5 4 3 2 1

C15. Establishing a Café-style Psychological Counseling Room to Create a Relaxing Environment.

C16. Establishment of a Separate Title Evaluation System for Psychological Health Education Teachers.

C17. Compensation Not Lower Than the Average Salary Income Level of Teachers in Compulsory Education Schools.

C18. Establishment of a "One Life, One Plan" Psychological Health Record System.

C19. Establishment of a Student Psychological Health Website.

C20. Establishment of a Crisis Intervention Plan for Student Psychological Health.

C21. Establishment of Student Classroom Feedback Channels.

C22. County-level Government Includes Funding for Student Psychological Health Work in the Fiscal Budget.

C23. Establishment of a Special Fund for Student Psychological Health Counseling.

C24. The School Includes Funding for Student Psychological Health Work in the Budget.

C25. There is a Special Fund for Professional Skills Training for Psychological Health Education Teachers.
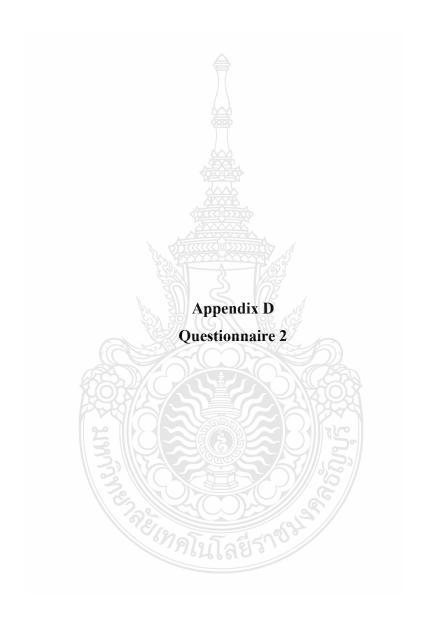
Level 3 indicators	Opinion
	5 4 3 2 1

C26. Completion Rate of 360 Hours of Training for Psychological Health Education Teachers over a 5-Year Period.

C27. The Annual Proportion of County-wide Rotation and Exchange of Psychological Health Education Teachers.

C28. The Gender Ratio of Teachers in Psychological Health Competency Training.

C29. The Rate of Full-time Psychological Health Education Teachers Holding a Qualification Certificate for Psychological Teachers When Taking Up Their Positions.

C30. Per Capita Area for Psychological Health Teaching and Auxiliary Facilities.

C31. Per Capita Area of Sports Facilities.

C32. Per Capita Value of Psychological Health Teaching Instruments and Equipment.

C33. Per Capita Number of Required Books and Visual Materials for Psychological Health.

C34. The Number of Network Multimedia Classrooms per One Hundred Students.

C35. Establishment of a WeChat Official Account for Psychological Health Competency Training.

C36. Teachers Proficiently Utilizing Information Technology to Organize Teaching.

C37. Effective Use of Teaching Methods, Such as Case-Based Instruction.

C38. An Active Classroom Atmosphere.

C39. Teachers Capable of Designing Teaching Segments Effectively.

C40. Psychological assessments indicate significant improvements in overall psychological well-being.

Level 3 indicators	Opinion
	5 4 3 2 1

C41. Being Friendly to Classmates and Maintaining Harmonious Relationships.

C42. Acquiring the Ability to Regulate and Control One's Emotions.

C43. Developing the Skill to Objectively Self-Evaluate.

C44. Significant Improvement in Class Cohesion.

C45. Noticeable Enhancement of Collective Pride.

C46. Cultivating an Optimistic, Harmonious, and Positive Psychological Health Culture.

C47. Significant Improvement in Class Atmosphere and Learning Environment.

C48. Teachers Reflect on Their Teaching Processes, Resulting in Enhanced Skills.

C49. Teachers Continuously Enhance Their Personal Qualities and Maintain a Positive and Optimistic Psychological State.

C50. Percentage of Social "Satisfaction" Evaluation.

C51. Percentage of Education Administration Department "Satisfaction" Evaluation.

C52. Percentage of Parent and Student "Satisfaction" Evaluation.

C53. Percentage of Teacher "Satisfaction" Evaluation.

Appendix D
Questionnaire 2

Second step : Questionnaire 2

Instructions:

1）Please check (/) each box according to your level of opinion.

2）Based on expert opinions gathered during the brainstorming phase, along with relevant Chinese policies and regulations, as well as existing literature, a preliminary framework for the interview questionnaire content has been developed, structured according to first, second, and third-level indicators.If you believe that revisions are necessary for the first-level indicators (A), second-level indicators (B), and third-level indicators (C) system, the researcher would greatly appreciate your input to refine this questionnaire.

Table 12 Interview Questionnaire Table for Level 1 and Level 2 Indicators Systems.

Level 1 indicators	Opinion 5 4 3 2 1	Level 2 indicators	Opinion 5 4 3 2 1
A1. Context evaluation		B1. System building	
		B2. Institution-building	
		B3. Curriculum development	
		B4. Teacher guarantees	
A2.Condition evaluation		B5. Student protection	
		B6. Financial security	
		B7. Teacher development	
A3.Intercollegiate Indexe valuation		B8. Hardware resources	
		B9. Informatization level	
		B10. Classroom instruction	
		B11. Individual student benefits	
A4.Product evaluation		B12. Collective benefit for students	
Other suggestion		B13. Teacher growth	
		B14. Level of recognition	

Table 13 Interview Questionnaire Table for Level 3 Indicators Systems (Cont.).

Level 3 indicators	Opinion 5 4 3 2 1
C1. Develop a mental health education plan.	
C2. Establishment of a Psychological Health Management Policy.	
C3. Establishment of a Psychological Health Education and Research System.	
C4. Establishment of a Psychological Health Education Curriculum Research Office.	
C5. Establishment of a Psychological Counseling Office.	
C6. Establishment of Collaborative Mechanisms Between Schools and Families, among Others.	
C7. Ensuring that the Teaching Plans Meet the Requirements Set by the Ministry of Education.	
C8. Ensuring that the Curriculum Objectives and Content Align with the Requirements Set by the Ministry of Education.	
C9. Availability of Specialized Psychological Health Education Materials.	
C10. Offering Extracurricular Psychological Health Education.	
C11. The School is Staffed with at Least 2 Full-time or Part-time Psychological Health Education Teachers.	
C12. Establishment of a Separate Title Evaluation System for Psychological Health Education Teachers.	
C13. Compensation Not Lower Than the Average Salary Income Level of Teachers in Compulsory Education Schools.	
C14. Establishment of a "One Life, One Plan" Psychological Health Record System.	
C15. Establishment of a Student Psychological Health Website.	
C16. Establishment of a Crisis Intervention Plan for Student Psychological Health.	

Level 3 indicators	Opinion
	5 4 3 2 1

C17. Establishment of Student Classroom Feedback Channels.

C18. County-level Government Includes Funding for Student Psychological Health Work in the Fiscal Budget.

C19. The School Includes Funding for Student Psychological Health Work in the Budget.

C20. There is a Special Fund for Professional Skills Training for Psychological Health Education Teachers.

Table 14 Interview Questionnaire Table for Level 3 Indicators Systems (Cont.).

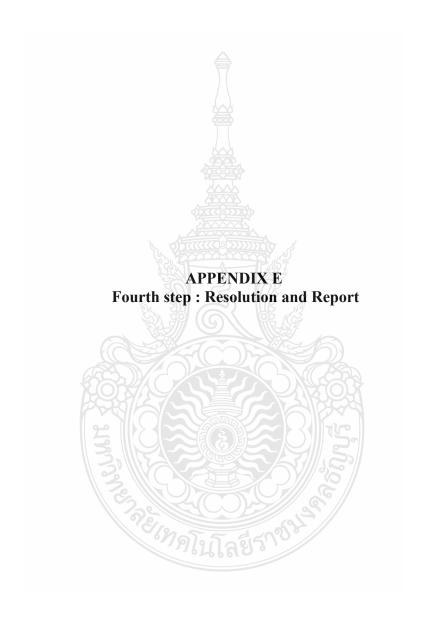| Level 3 indicators	Opinion
	5 4 3 2 1

C21. Completion Rate of 360 Hours of Training for Psychological Health Education Teachers over a 5-Year Period.

C22. The Annual Proportion of County-wide Rotation and Exchange of Psychological Health Education Teachers.

C23. The Rate of Full-time Psychological Health Education Teachers Holding a Qualification Certificate for Psychological Teachers When Taking Up Their Positions.

C24. Per Capita Area for Psychological Health Teaching and Auxiliary Facilities.

C25. Per Capita Area of Sports Facilities.

C26. Per Capita Value of Psychological Health Teaching Instruments and Equipment.

C27. Per Capita Number of Required Books and Visual Materials for Psychological Health.

C28. The Number of Network Multimedia Classrooms per One Hundred Students.

Level 3 indicators	Opinion
	5 4 3 2 1

C29. Teachers Proficiently Utilizing Information Technology to Organize Teaching.

C30. Effective Use of Teaching Methods, Such as Case-Based Instruction.

C31. An Active Classroom Atmosphere.

C32. Teachers Capable of Designing Teaching Segments Effectively.

C33. Psychological assessments indicate significant improvements in overall psychological well-being.

C34. Acquiring the Ability to Regulate and Control One's Emotions.

C35. Developing the Skill to Objectively Self-Evaluate.

C36. Significant Improvement in Class Cohesion.

C37. Cultivating an Optimistic, Harmonious, and Positive Psychological Health Culture.

C38. Significant Improvement in Class Atmosphere and Learning Environment.

C39. Teachers Reflect on Their Teaching Processes, Resulting in Enhanced Skills.

C40. Teachers Continuously Enhance Their Personal Qualities and Maintain a Positive and Optimistic Psychological State.

C41. Percentage of Social "Satisfaction" Evaluation.

C42. Percentage of Parent and Student "Satisfaction" Evaluation.

C43. Percentage of Teacher "Satisfaction" Evaluation.

APPENDIX E
Fourth step : Resolution and Report

Questionnaire 3

Table 15 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China.

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
A1. Context evaluation			
B1. System building			
B2. Institution-building			
B3. Curriculum development			
A2.Condition evaluation			
B4. Teacher guarantees			
B5. Student protection			
B6. Financial security			
A3.Intercollegiate Indexe valuation			
B7. Teacher development			
B8. Hardware resources			
B9. Informatization level			
B10. Classroom instruction			
A4.Product evaluation			
B11. Individual student benefits			
B12. Collective benefit for students			
B13. Teacher growth			
B14. Level of recognition			

Table 16 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China(Cont.).

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C1. Develop a mental health education plan.			
C2. Establishment of a Psychological Health Management Policy.			
C3. Establishment of a Psychological Health Education and Research System.			
C4. Establishment of a Psychological Health Education Curriculum Research Office.			
C5. Establishment of a Psychological Counseling Office.			
C6. Establishment of Collaborative Mechanisms Between Schools and Families, among Others.			
C7. Ensuring that the Teaching Plans Meet the Requirements Set by the Ministry of Education.			
C8. Ensuring that the Curriculum Objectives and Content Align with the Requirements Set by the Ministry of Education.			

C9. Availability of Specialized Psychological Health Education Materials.

C10. Offering Extracurricular Psychological Health Education.

C11. The School is Staffed with at Least 1 Full-time or Part-time Psychological Health Education Teachers.

C12. Establishment of a Separate Title Evaluation System for Psychological Health Education Teachers.

C13. Compensation Not Lower Than the Average Salary Income Level of Teachers in Compulsory Education Schools.

C14. Establishment of a "One Life, One Plan" Psychological Health Record System.

C15. Establishment of a Student Psychological Health Website.

C16. Establishment of a Crisis Intervention Plan for Student Psychological Health.

Table 17 The results of the assessment conducted by 17 experts on the relevance of the evaluation index system for psychological health quality training in Sichuan Province, China(Cont.).

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C17. Establishment of Student Classroom Feedback Channels.			
C18. County-level Government Includes Funding for Student Psychological Health Work in the Fiscal Budget.			
C19. The School Includes Funding for Student Psychological Health Work in the Budget.			
C20. There is a Special Fund for Professional Skills Training for Psychological Health Education Teachers.			
C21. Completion Rate of 360 Hours of Training for Psychological Health Education Teachers over a 5-Year Period.			
C22. The Annual Proportion of County-wide Rotation and Exchange of Psychological Health Education Teachers.			
C23. The Rate of Full-time Psychological Health Education Teachers Holding a Qualification Certificate for Psychological			

Teachers When Taking Up Their

Positions.

C24. Per Capita Area for

Psychological Health Teaching

and Auxiliary Facilities.

C25. Per Capita Area of Sports

Facilities.

C26. Per Capita Value of

Psychological Health Teaching

Instruments and Equipment.

C27. Per Capita Number of

Required Books and Visual

Materials for Psychological

Health.

C28. The Number of Network

Multimedia Classrooms per One

Hundred Students.

C29. Teachers Proficiently

Utilizing Information Technology

to Organize Teaching.

Table 18 The results of the assessment conducted by 17 experts on the relevance of the
evaluation index system for psychological health quality training in Sichuan Province,
China(Cont.).

Domains	Confirmation (Percentage)	Disconfirmation (Percentage)	Reject (Percentage)
C30. Effective Use of Teaching Methods, Such as Case-Based Instruction.			

C31. An Active Classroom
Atmosphere.
C32. Teachers Capable of Designing
Teaching Segments Effectively.

C33. Psychological assessments
indicate significant improvements in
overall psychological well-being.

C34. Acquiring the Ability to
Regulate and Control One's
Emotions.
C35. Developing the Skill to
Objectively Self-Evaluate.
C36. Significant Improvement in
Class Cohesion.
C37. Cultivating an Optimistic,
Harmonious, and Positive
Psychological Health Culture.
C38. Significant Improvement in
Class Atmosphere and Learning
Environment.
C39. Teachers Reflect on Their
Teaching Processes, Resulting in
Enhanced Skills.
C40. Teachers Continuously Enhance
Their Personal Qualities and
Maintain a Positive and Optimistic
Psychological State.
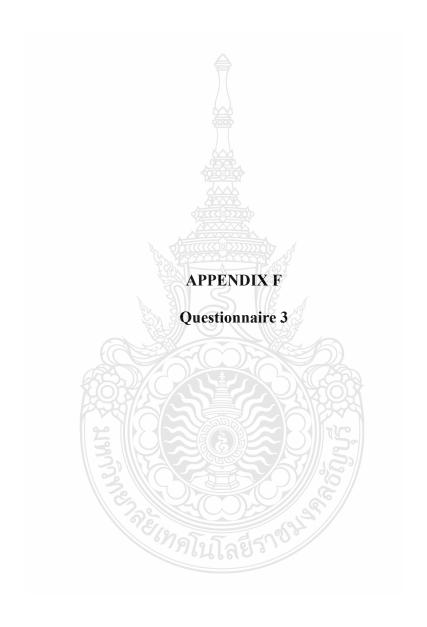C41. Percentage of Social
"Satisfaction" Evaluation.

C42. Percentage of Parent and
Student "Satisfaction" Evaluation.
C43. Percentage of Teacher
"Satisfaction" Evaluation.

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APPENDIX F

Questionnaire 3

Questionnaire 3

Dear interviewees :

Hello !Thank you very much for participating in the questionnaire survey of my doctoral thesis. This questionnaire is filled out anonymously. The survey results are only used for academic research and data analysis, and your personal information will not be leaked. Please objectively and truly select and feedback the questions involved in the questionnaire according to your professional background, research field or personal cognition. Thank you for your participation, thank you !

Part I. Basic Information

1. Your gender :

（ ） 1. Male   （ ） 2. Female

2. Your age :

（ ） 1. 10-20 years old   （ ） 2. 21-30 years old

（ ） 3. 31-40 years old   （ ） 4. 41 years old and above

3. Do you volunteer to participate in the questionnaire :

（ ） 1. Yes   （ ） 2. No

4. Categories of your organization :

（ ） 1. Junior high school   （ ） 2. University

（ ） 3. Education Administration   （ ） 4. Hospital

5. Your profession :

（ ） 1. Educational administrative department managers

（ ） 2. Junior high school mental health education teachers and class teachers

（ ） 3. Lecturer and Professor of Mental Health Education in Colleges and Universities

（ ） 4. Psychological Consultant

（ ） 5. Mental health doctor

（　）6. Junior high school students

（　）7.Training Institution Teachers H.College Students Psychological Association

6. Your time engaged in mental health education or mental health work :

（　）1. 3 years and below　（　）2. 4-7 years

（　）3. 8 years or above　　（　）4. No mental health education and related work experience

7. Your professional title :

（　）1. Primary　　　　（　）2. Intermediate

（　）3. Deputy senior　　（　）4. Senior E. No title

8. Your education :

（　）1. Bachelor and below　（　）2. Master

（　）3. Doctor　　　　　　（　）4. Junior high school students

9. Your professional background :

（　）1. Have mental health education background

（　）2. No mental health education background

Part II.Questionnaire Content

10. Do you think it is scientific to evaluate the mental health education in junior middle school from four aspects : background elements such as system, conditional elements such as fund input, inter-school differences such as classroom teaching, and educational effects such as students ' benefit ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

11. Do you think that the background factors of mental health education in junior high school include system construction, institution construction and curriculum construction ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

12. Do you think that the system construction of mental health education in junior high school mainly includes the formulation of school mental health education planning, school mental health management system and mental health education teacher teaching and research system, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

13. Do you think that the institutional construction of junior high school mental health education mainly includes the establishment of mental health education curriculum teaching and research section or teaching and research group, psychological counseling room construction, mental health education home school and other collaborative mechanisms, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

14. Do you think that the curriculum construction of mental health education in junior high school mainly includes the teaching plan and curriculum objectives in line with the requirements of the Ministry of Education, the special mental health education teaching materials, the second classroom of mental health education, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

15. Do you think that the condition factors of mental health education in junior middle school include teacher allocation and treatment, student management, financial security, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

16. Do you think that the allocation and treatment of teachers in junior high school mental health education mainly include at least one full-time (part-time) mental health education teacher, the establishment of a separate evaluation system for the professional title of mental health education teachers, and the treatment is not lower than the average wage income level of teachers in compulsory education schools in the county ? Is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

17. Do you think that the student management of junior high school mental health education mainly includes the establishment of ' one policy for a lifetime ' mental health file, students ' mental health website, mental health crisis intervention plan, students ' classroom feedback channel, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

18. Do you think that the inter-school differences in junior high school mental health education mainly include teacher management, hardware resources, information level, classroom teaching, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

19. Do you think that the teacher management of mental health education in junior high school mainly includes the completion rate of 360 hours training for mental health teachers in 5 years, the proportion of mental health teachers in the county each year, the proportion of full-time mental health teachers holding psychological teachers ' qualification certificates, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

20. Do you think that the hardware resources of junior high school mental health education mainly include the area of mental health teaching and auxiliary housing per student, the area of sports venues per student, the value of mental health teaching instruments and equipment per student, and the number of books and images required for mental health per student ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

21. Do you think that the informatization level of mental health education in junior high school mainly includes the number of network multimedia classrooms per hundred students, teachers can skillfully use information technology to organize teaching, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

22. Do you think that the classroom teaching of mental health education in junior high school mainly includes the rational use of case teaching and other teaching methods, can cause students to actively participate in and actively answer questions, and can teachers reasonably design teaching links ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

23. Do you think that the evaluation of the effectiveness of mental health education in junior high school mainly includes the individual benefit of students, the collective benefit of students, the growth of teachers, the degree of recognition, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

24. Do you think that the individual benefit of junior high school students in mental health education mainly includes the psychological test shows that the level of mental health has been greatly improved, the students can inhibit their impulsive behavior and objectively evaluate themselves, and the ability to resist setbacks has been enhanced, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

25. Do you think that the collective benefit of students in junior high school mental health education mainly includes the obvious improvement of class cohesion, the formation of an optimistic and harmonious mental health culture atmosphere, the obvious improvement of class style and style of study, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

26. Do you think that the growth of teachers in junior high school mental health education mainly includes that teachers can reflect on and constantly improve their personality and psychology in the teaching process ? Is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

27. Do you think that the degree of recognition of junior high school mental health education mainly includes the percentage of social ' satisfaction ' evaluation, the percentage of parents and students ' satisfaction ' evaluation, and the percentage of teachers ' satisfaction ' evaluation, is it scientific ?

☐ very important ☐ important ☐ general ☐ not important ☐ very unimportant

BIOGRAPHY

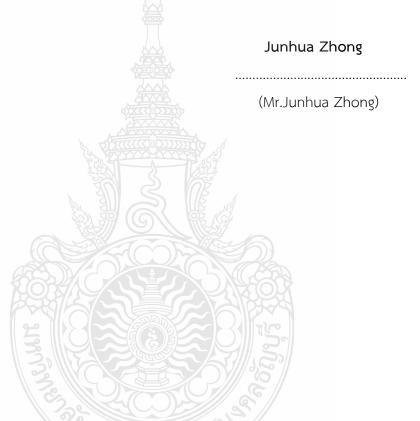|	
Name - Surname	Mr. Junhua Zhong
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Address	No. 519 Huixing Road, Ziliujing District, Zigong City, Sichuan Province.China
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วิทยานิพนธ์ฉบับนี้เป็นงานวิจัยที่เกิดจากการค้นคว้าและวิจัย ขณะที่ข้าพเจ้าศึกษาอยู่ใน คณะครุศาสตร์อุตสาหกรรม มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี ดังนั้น งานวิจัยในวิทยานิพนธ์ ฉบับนี้ถือเป็นลิขสิทธิ์ของมหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี และข้อความต่าง ๆ ในวิทยานิพนธ์ ฉบับนี้ ข้าพเจ้าขอรับรองว่าไม่มีการคัดลอกหรือนำงานวิจัยของผู้อื่นมานำเสนอในชื่อของข้าพเจ้า

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