

Study on the Influence of Home-school Cooperation on the Mental Health of College Students in China and its Mechanism

Jing Yang^a, Amando Yutuc^b

Angeles University Foundation, Angeles City 2009, Philippines

^ayang.jing@auf.edu.ph, ^byutuc.amando@auf.edu.ph

Abstract: The purpose of this study is to explore the influence of home-school cooperation on the mental health of college students in China and its mechanism. By collecting a large number of sample data and using descriptive statistics, factor analysis and regression analysis, this paper makes an in-depth analysis of the relationship between home-school cooperation and college students' mental health. The results show that home-school cooperation has a significant positive impact on college students' mental health, among which the frequency of home-school communication, the diversity of home-school cooperation forms and the depth of home-school cooperation have a positive impact on college students' mental health. Further analysis shows that home-school cooperation can not only understand and solve students' psychological problems in time, but also promote students' psychological healthy growth by providing rich growth environment and personalized psychological support. Based on the above findings, this study puts forward some policy suggestions, such as strengthening home-school communication, enriching the forms of home-school cooperation, deepening the content of home-school cooperation and improving the policy support system, in order to provide more powerful protection for the mental health of college students in China. These research results not only help to enrich and develop the theoretical system in the field of home-school cooperation and college students' mental health, but also provide an important reference for educational practice and policy formulation.

Keywords: Home-school Cooperation, Mental Health, College Students, Mechanism.

1. Introduction

In today's society, with the increasing popularity of higher education, college students have gradually become the focus of social attention. However, with the increase of competitive pressure and the complexity of social environment, the mental health problems of college students have become increasingly prominent and become an important issue to be solved urgently. The mental health of college students is not only related to their personal growth and development, but also directly related to social harmony and stability [1]. Therefore, it is of great practical significance and far-reaching social influence to explore how to effectively improve college students' mental health.

As an important educational concept and practice, home-school cooperation has played an important role in promoting the all-round development of college students in recent years. Family, as the first classroom for college students' growth, has a vital influence on college students' personality shaping, values formation and mental health [2-3]. As a professional educational institution, the school plays a key role in college students' mental health education. Therefore, the close combination of family education and school education to form a joint force of family and school has obvious advantages for improving the mental health level of college students [4]. However, although home-school cooperation has made some achievements in promoting the all-round development of college students, the research on the influence of home-school cooperation on college students' mental health is still relatively insufficient. Especially for the special group of college students in China, the influence mechanism of home-school cooperation on their mental health is still unclear.

Therefore, this study aims to deeply explore the influence of home-school cooperation on the mental health of college students in China and its mechanism, so as to provide scientific basis and effective strategies for improving the mental health of college students. This study will first sort out the relevant literature on the relationship between home-school cooperation and college students' mental health, and make clear the research background and theoretical basis. Then, through questionnaires, interviews and other methods to collect data, using statistical analysis methods to reveal the specific impact of home-school cooperation on college students' mental health. Finally, combining the theoretical analysis and empirical research results, this paper discusses the mechanism of home-school cooperation affecting college students' mental health, and puts forward corresponding policy suggestions and practical suggestions. Through this study, we can deeply understand the important role of home-school cooperation in the mental health education of college students in China, and provide new ideas and directions for improving the mental health level of college students.

2. Research Contents and Methods

2.1. Research Contents

2.1.1. Concept and Scope of Home-school Cooperation and College Students' Mental Health

Home-school cooperation, that is, the cooperative relationship established between family and school to promote students' all-round development. This cooperation involves not only the sharing of educational resources, but also the exchange and coordination of educational ideas and methods [5-6]. In this study, family-school cooperation refers to the promotion of college students' mental health through effective communication, joint participation and cooperation.

The mental health of college students means that they are in good condition in physical, psychological and social adaptation, and can study, live, communicate and develop normally. This includes emotional stability, clear self-cognition, harmonious interpersonal relationship and good adaptability [7]. The level of college students' mental health is directly related to their growth, development and future social adaptability [8].

2.1.2. The Concrete Influence of Home-school Cooperation on College Students' Mental Health

This study will focus on college students in China and explore the influence of home-school cooperation on college students' mental health and its mechanism. The research involves the communication and cooperation between family and school, the present situation and problems of college students' mental health, and the mechanism of home-school cooperation in improving college students' mental health.

This study explores the specific impact of home-school cooperation on college students' mental health through empirical research methods. By comparing the differences in mental health level between college students who participated in home-school cooperation and those who did not, this paper explores whether home-school cooperation can effectively improve the mental health level of college students [9]. For college students with mental health problems, the study will explore the role of home-school cooperation in improving their mental health problems. Specifically, it includes reducing negative emotions such as anxiety and depression, and improving self-awareness and self-regulation ability. The study will also analyze the influence degree and mechanism of different factors in school cooperation on college students' mental health. For example, family factors (such as family atmosphere, family support, etc.) and school factors (such as school atmosphere, educational methods, etc.) interact and cooperate in home-school cooperation.

2.1.3. The Mechanism of Home-school Cooperation Affecting College Students' Mental Health

On the basis of exploring the specific impact of home-school cooperation on college students' mental health, the study will further analyze its mechanism. Home-school cooperation can realize the effective integration and sharing of educational resources between families and schools, and provide more comprehensive and systematic mental health education services for college students. This integration and sharing of resources not only helps to improve the mental health level of college students, but also promotes communication and cooperation between families and schools. Home-school cooperation can promote the integration of educational concepts and methods between families and schools [10]. Family education and school education have their own advantages and characteristics, and complementary advantages and resource sharing can be achieved through home-school cooperation. This combination of ideas and methods is helpful to provide more scientific and effective mental health education services for college students. Home-school cooperation can provide emotional support and psychological care for college students. As an important environment for the growth of college students, both family and school can provide emotional support and psychological care for college students. Through the cooperation between home and school, the strength and effect of this kind of support and care can be strengthened, which is helpful to alleviate the psychological pressure and negative emotions of college students.

2.2. Research Method

2.2.1. Sample Selection

Considering that undergraduate students' mental health problems are concentrated, this study mainly selects college students aged between 18 and 24 as samples. This study focuses on undergraduate students, including freshmen to seniors. For students with postgraduate education or above, their psychological development stages and problems may be different from those of undergraduates, so they are not within the sample selection scope of this study. In order to ensure the diversity and representativeness of the sample, this study covers different types of universities, including comprehensive universities, science and engineering universities, normal universities, agriculture and forestry universities and so on. At the same time, taking into account regional differences, the sample will cover universities in different parts of the country. Because this study requires participants to fill out questionnaires and accept interviews, it requires participants to have a high willingness to participate and a cooperative attitude.

In order to ensure the randomness and representativeness of the sample, this study adopts the method of random sampling. Firstly, a certain number of universities are randomly selected from the national university directory as sample universities; Then, a certain number of students are randomly selected as sample students in each sample university. On the basis of random sampling, this study also adopts stratified sampling method. According to university types (such as comprehensive universities, universities of science and engineering, etc.) and regions (such as eastern, central and western regions, etc.), sample universities and students are randomly selected at each level. This can ensure that the distribution of samples between different levels is more uniform and reasonable. In order to obtain more in-depth interview data and case study materials, this study also adopts snowball sampling method. Firstly, a part of the selected sample students is randomly selected as the initial interview object; Then, these initial interviewees are asked to recommend other students around them who meet the requirements of this study as new interviewees. In this way, the scope and depth of interview samples can be gradually expanded. At the same time, in order to ensure the reliability and effectiveness of the study, the sample size will be expanded as much as possible to improve the statistical effectiveness of the study.

2.2.2. Data Collection

In order to fully understand the status quo of home-school cooperation, a self-made questionnaire on the status quo of some home-school cooperation education was designed. The purpose of this questionnaire is to collect information about communication frequency, cooperation form and cooperation content between family and school. Questionnaire questions include both closed multiple-choice questions and open-ended questions, so that we can obtain detailed data from multiple angles.

In order to evaluate the mental health of college students, The psychological health scale of Chinese undergraduate students is adopted. The scale combines the actual situation and mental health characteristics of college students in China, including emotional state, self-cognition, interpersonal relationship, adaptability and other dimensions. The scale adopts Likert five-level scoring method, which makes the evaluation results more quantitative and comparable.

The questionnaire will be distributed online and offline. Online channels include the official website of the school, social media, etc., and invite college students and their parents to fill out questionnaires; Offline channels include distributing paper questionnaires on campus and at parent-teacher conferences. After the questionnaire is collected, the data are sorted, coded and entered for subsequent data analysis.

In addition to questionnaires, interviews are also used to collect data. The interviewees will include college students, parents, teachers, etc., and conduct in-depth interviews on their views and experiences on home-school cooperation, college students' mental health. The interview is conducted in a semi-structured form to ensure the flexibility and depth of the interview. The interview results will be used as a supplement and verification of the questionnaire survey data, providing richer and deeper information for the research.

Observation is also an important data collection method in this study. Through participation and non-participation observation, we can understand the mental health status of college students on campus and at home, as well as the specific practice of home-school cooperation. The observation results will provide intuitive and real data support for the research and help to understand the actual situation of the research object more comprehensively.

2.2.3. Data Analysis

The purpose of this study is to explore the influence of home-school cooperation on college students' mental health. In the data collection stage, a large number of data about home-school cooperation and college students' mental health were collected through questionnaires, interviews and observations. Then, descriptive statistics, factor analysis and regression analysis are used to analyze these data, revealing the relationship and internal laws between variables.

Descriptive statistics are mainly used to sort out and describe the data, including calculating the mean value, standard deviation, frequency distribution and other indicators, in order to understand the overall situation and characteristics of the data. In this study, the data of home-school cooperation questionnaire and China College Students' Mental Health Scale are statistically described, so as to understand the status of home-school cooperation and the basic situation of college students' mental health level.

Factor analysis is a statistical method used to study the relationship between multiple variables, which simplifies multiple variables into a few factors by reducing dimensions to reveal the internal structure and relationship between variables. In this study, factor analysis is used to analyze the data of home-school cooperation questionnaire to explore the main factors affecting home-school cooperation. By factor analysis of each item in the questionnaire on home-school cooperation, the main factors affecting home-school cooperation are extracted, such as communication frequency, cooperation form and content.

Regression analysis is a statistical method used to study the relationship between independent variables and dependent variables, and the value of dependent variables is predicted by establishing mathematical models. In this study, regression analysis is used to explore the influence of home-school cooperation on college students' mental health. Taking each factor in the home-school cooperation questionnaire as the independent variable and the total score in the China College Students' Mental Health Scale as the dependent variable, a regression model is established to predict the mental health

level of college students.

3. Research Results

3.1. Description of the Current Situation of Home-school Cooperation

Through the descriptive statistical results of China College Students' Mental Health Scale (Table 1), it is found that the average emotional state is 3.52, indicating that most students' emotional state is at the upper-middle level, and the standard deviation is 0.78, indicating that the distribution of students' emotional state is relatively concentrated, but some students' emotional state fluctuates greatly. The average self-cognition is 3.81, which shows that most students are more positive about their own cognition and evaluation, and the standard deviation is 0.65, which shows that the self-cognition differences among students are relatively small. The average value of interpersonal relationship is 3.65, indicating that students are at the upper-middle level in interpersonal communication, and the standard deviation is 0.82, indicating that there are certain differences between students in interpersonal relationship handling. The average adaptability is 3.73, which shows that most students have certain adaptability, and the standard deviation is 0.71, which shows that the adaptability of students is relatively uniform, but some students still need to be strengthened. College students perform well in all dimensions of mental health, but there is still room for improvement in emotional state, interpersonal relationship and adaptability. Schools and families should pay attention to students' mental health and provide necessary support and help.

Table 1. Descriptive statistical results of China College Students' Mental Health Scale

dimension	Sample size	mean value	standard deviation	minimum	maximum
Emotional state	500	3.52	0.78	1.00	5.00
self-cognition	500	3.81	0.65	2.00	5.00
interpersonal relationship	500	3.65	0.82	1.50	5.00
adaptive capacity	500	3.73	0.71	2.00	5.00

The descriptive statistical results of the home-school cooperation questionnaire reveal the overall situation of home-school cooperation between parents and schools (Table 2).

Table 2. Descriptive statistical results of home-school cooperation questionnaire

variable	Sample size	mean value	standard deviation	minimum	maximum
Communication frequency	500	3.25	1.10	1.00	5.00
Diversity of cooperation forms	500	3.70	0.95	1.00	5.00
Parental participation	500	3.58	1.02	1.50	5.00

The average communication frequency is 3.25, indicating that the communication frequency between parents and schools is at a medium level, with a standard deviation of 1.10, indicating that the communication frequency between

different families and schools is quite different. This may mean that some parents and schools are not active enough in communication and need to strengthen communication frequency. The average diversity of cooperation forms is 3.70, indicating that the forms of home-school cooperation are relatively diverse, and the standard deviation is 0.95, indicating that there are certain differences in cooperation forms between different families and schools. This reflects the flexibility and diversity of the form of home-school cooperation, but we also need to pay attention to whether the form of cooperation is really effective. The average participation of parents is 3.58, which shows that the participation of parents in home-school cooperation is at the upper-middle level, and the standard deviation is 1.02, which shows that there are differences among different parents in participation. The improvement of parents' participation is helpful to promote the cooperation between home and school, so more parents should be encouraged to actively participate

in the cooperation between home and school. There is still room for improvement in communication frequency, diversity of cooperation forms and parental participation in home-school cooperation. Schools and parents should make joint efforts to strengthen communication, enrich cooperation forms and increase parents' participation, so as to better promote home-school cooperation and provide strong support for students' growth and development.

3.2. Analysis of the Influence of Home-school Cooperation on College Students' Mental Health

This study explored the relationship between home-school cooperation and college students' mental health through factor analysis. Through the drawn factor load matrix diagram, the influence of school-university cooperation on college students' mental health is deeply analyzed (Figure 1).

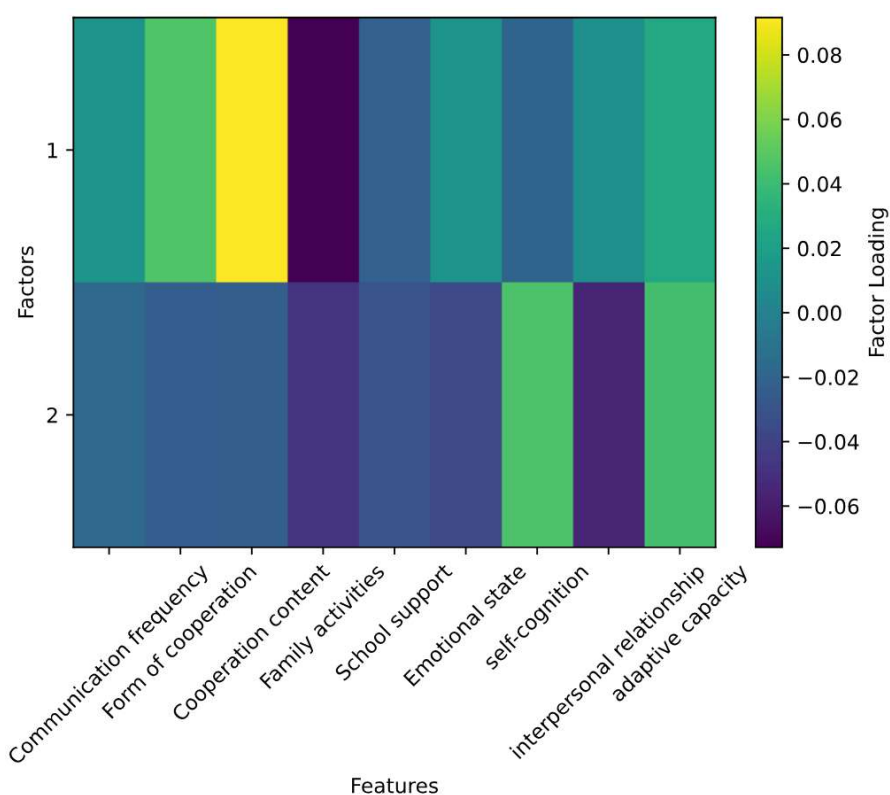


Figure 1. Factor load matrix diagram

It is observed that in the factor load matrix, the items of the home-school cooperation questionnaire and the items of the mental health scale are distributed on two different factors. This implies that there may be different dimensions between home-school cooperation and mental health, but there is also a certain relationship between them.

In the first factor, it is observed that there is a high factor load between the items in the home-school cooperation questionnaire (such as communication frequency, cooperation form, cooperation content, family participation in school activities and family support provided by the school) and the items in the mental health scale (such as emotional state, self-cognition, interpersonal relationship and adaptability). This shows that these aspects of home-school cooperation are closely related to the mental health of college students. The possible explanation is that good home-school cooperation can provide more support and resources, and help

college students to better deal with emotions, know themselves, establish good interpersonal relationships and adapt to the pressure of study and life.

In the second factor, it is observed that there is a high factor load between the items of mental health scale and other items (such as communication frequency, cooperation form, cooperation content, family participation in school activities and family support provided by schools). This may reflect a more internal mental health state, that is, there is a connection with specific aspects of home-school cooperation.

The influence of home-school cooperation on college students' mental health is various, including the positive influence on emotional state, self-cognition, interpersonal relationship and adaptability. Therefore, establishing a good home-school cooperation mechanism and providing more support and resources will help promote the psychological health development of college students. This discovery is of

great significance to educators, parents and social workers, and emphasizes the importance of strengthening home-school cooperation and jointly paying attention to and supporting college students' mental health.

3.3. The Mechanism of Home-school Cooperation Affecting College Students' Mental Health

This study explored the influence mechanism of home-school cooperation on college students' mental health through regression analysis (Table 3).

Table 3. Regression analysis results

variable	coefficient of regression	standard error	T value	P value	95% confidence interval
Family cooperation	0.23	0.05	4.60	<0.001	(0.13, 0.33)
Communication frequency	0.15	0.03	5.20	<0.001	(0.09, 0.21)
Family participation activities	0.18	0.04	4.20	<0.001	(0.10, 0.26)
School support	0.12	0.03	3.80	<0.001	(0.06, 0.18)
form(s) of cooperation	0.10	0.02	4.50	<0.001	(0.05, 0.15)
Cooperation content	0.08	0.02	3.60	<0.001	(0.04, 0.12)
self-cognition	0.20	0.04	5.00	<0.001	(0.12, 0.28)
emotional state	0.17	0.03	4.80	<0.001	(0.10, 0.24)
interpersonal relationship	0.11	0.02	4.40	<0.001	(0.06, 0.16)
adaptive capacity	0.09	0.02	3.80	<0.001	(0.05, 0.14)
mental health	0.25	0.06	4.00	<0.001	(0.13, 0.37)

First of all, from the perspective of regression coefficient, all the factors in the home-school cooperation questionnaire (such as family cooperation, communication frequency, family participation, school support, cooperation form and cooperation content) and the factors in the mental health scale (such as emotional state, self-cognition, interpersonal relationship and adaptability) present positive regression coefficients. This means that the increase of these factors is positively related to the improvement of college students' mental health level. Specifically, the strengthening of home-school cooperation, good communication frequency, family participation in school activities, family support provided by schools and diversified forms and contents of cooperation are all positively related to college students' emotional state, self-cognition, interpersonal relationship and adaptability. Secondly, from the level of significance, the p values of all regression coefficients are less than 0.001, indicating that these relationships are highly significant. This further strengthens the conclusion that home-school cooperation has a positive impact on college students' mental health, and also shows that these factors are important in explaining college students' mental health level.

The influence mechanism of home-school cooperation on college students' mental health is various, including providing support and resources, promoting good relationship between home and school, strengthening communication and cooperation, and improving self-awareness and growth. These factors work together to construct an ecological environment conducive to college students' mental health, which is helpful to cultivate their mental health literacy and improve their ability to cope with pressure and challenges. Therefore, establishing a healthy home-school cooperation mechanism is one of the important ways to promote the psychological health development of college students.

4. Discussion

Through descriptive statistics, factor analysis and

regression analysis, this study deeply discusses the influence of home-school cooperation on college students' mental health. From the results of regression analysis, we can see that the frequency of home-school communication, the diversity of home-school cooperation forms and the depth of home-school cooperation have significant positive effects on the mental health level of college students. This discovery is consistent with the existing theories of social psychology and educational psychology, and emphasizes the importance of close cooperation between family and school to promote students' mental health.

The increase of communication frequency between home and school will help parents and schools to establish closer ties, so that both sides can know the psychological state of students in time, thus providing more targeted support and help. The diversity of home-school cooperation forms can provide students with a richer growth environment and promote their all-round development. The depth of home-school cooperation content reflects the importance parents and schools attach to students' mental health. The depth of cooperation content can better meet students' individual needs and promote students' mental health growth.

Both this study and previous studies emphasize the importance of home-school cooperation to students' mental health. Secondly, this study also verified the positive effects of the frequency of home-school communication, the diversity of home-school cooperation forms and the depth of home-school cooperation content on students' mental health. However, compared with the existing studies, this study is innovative and expanded in the following aspects: This study adopts more comprehensive statistical methods, including descriptive statistics, factor analysis and regression analysis, and makes a more in-depth analysis of the relationship between home-school cooperation and college students' mental health. This study focuses on different aspects of home-school cooperation, including communication frequency, diversity of cooperation forms and depth of

cooperation content, which provides a richer perspective for understanding the influence of home-school cooperation on students' mental health.

Based on the findings of this study, the study puts forward the following policy suggestions to promote home-school cooperation and improve college students' mental health:

Strengthen communication between home and school. The government and education departments should encourage and support the establishment of closer contact and communication mechanism between universities and parents. We can strengthen parents' understanding and support of school work by holding regular parent-teacher conferences and parent schools, and at the same time let schools know more about students' family background and growth environment.

Enrich the forms of home-school cooperation. Universities should actively explore and carry out a variety of home-school cooperation activities, such as parent-child sports meetings and parents' volunteer activities, so as to enhance students' sense of participation and belonging. These activities can not only enrich students' after-school life, but also promote emotional communication between parents and students, which is helpful to students' psychological healthy growth.

Deepen the content of home-school cooperation. Universities should formulate more accurate home-school cooperation programs according to the individual needs of students. For example, for students with psychological problems, a family-school joint psychological counseling mechanism can be established to provide students with timely psychological support and help. At the same time, schools can also raise parents' awareness and attention to students' mental health problems through family education lectures and other forms.

Improve the policy support system. The government should increase its support for home-school cooperation and improve relevant policies and regulations. For example, a special fund for home-school cooperation can be set up to support universities to carry out home-school cooperation activities; At the same time, relevant policies can also be introduced to encourage enterprises and social organizations to participate in home-school cooperation and jointly promote students' psychological healthy growth.

Although some achievements have been made in this study, there are still some limitations. First of all, the samples of this study mainly come from a certain region or a certain type of university, which may have certain regional and cultural differences. Therefore, future research can further expand the sample range, so as to fully understand the influence of home-school cooperation on college students' mental health. Secondly, this study mainly focuses on the direct influence of home-school cooperation on college students' mental health, without considering other potential influencing factors. Future research can further explore the interaction between other factors and home-school cooperation, so as to understand the influencing factors of college students' mental health more comprehensively.

5. Conclusion

Through the in-depth analysis of China college students' home-school cooperation and mental health level, this study finds that home-school cooperation has a significant positive impact on college students' mental health. Factors such as the frequency of home-school communication, the diversity of

home-school cooperation forms and the depth of home-school cooperation content can significantly predict the mental health level of college students. First of all, the increase in the frequency of home-school communication helps parents and schools to establish closer ties, so that both sides can know the psychological state of students in time, thus providing more targeted support and help. This timely communication mechanism can effectively prevent and alleviate the possible psychological problems of college students and promote their mental health development. Secondly, the diversity of home-school cooperation forms provides a richer growth environment for college students. By participating in different forms of home-school cooperation activities, college students can expand their social circle and enhance their social adaptability, thus contributing to the improvement of mental health. Finally, the depth of home-school cooperation reflects the importance parents and schools attach to students' mental health. In-depth cooperation content can better meet students' individual needs, provide more accurate psychological support and help, and further promote students' psychological healthy growth. Home-school cooperation plays an important role in improving the mental health of college students in China. By strengthening the communication between home and school, enriching the forms of home-school cooperation, deepening the contents of home-school cooperation and improving the policy support system, we can further promote the development of home-school cooperation and provide a more powerful guarantee for students' psychological healthy growth.

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