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A Survey on the Current Status of Undergraduates' Psychological Capital in Agricultural Vocational Undergraduate Institutions of Higher Learning

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Abstract

Agricultural undergraduate vocational colleges and universities, as the main position for cultivating agricultural technology and skill talents, bear the important responsibility of providing high-quality talents for the countryside, which can be used and retained.Investigating the current status of psychological capital of college students in agricultural vocational undergraduate colleges and exploring strategies for improving the psychological capital of students in agriculture-related colleges and universities is not only a need for personal development, but also an important support for serving the strategy of rural revitalization.Methods: A psychological capital questionnaire employed to measure 826 college students and with subsequent statistical analysis of the collected data.Results: ① The psychological capital of college students is generally in the middle-upper level; ② There are significant differences in the total psychological capital scores and sub-dimensions of college students of different genders ($p < 0.05$); ③ There are no significant differences in the total psychological capital scores of college students of different origins, and there are significant differences in the dimensions of self-efficacy and resilience ($p < 0.05$); ④ There is a significant difference in the psychological capital scores and sub-dimensions between college students of different genders ($p < 0.05$); ⑤ There is a significant difference in the total psychological capital score and sub-dimensions ($p<0.05$) among college students with different academic performance."

Keywords

Psychological capital,Agricultural college students,Mental health,Rural revitalization

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1 Introduction

Psychological capital is the sum of positive capabilities acquired by an individual, and refers to the positive mental state that an individual exhibits in the process of growth and development. Scholars have found that psychological capital affects an individual's state when facing setbacks. Students with a high level of psychological capital will generally interpret problems in a positive manner and adopt positive ways to cope with problems when facing pressure. On the contrary, students with a low level of psychological capital tend to choose a negative attitude or even stagnate when facing pressure. Therefore, it is very necessary to understand the current situation of psychological capital of college students and to improve their psychological capital to improve the mental health of agriculture-related students and to foster a sense of professional pride among agriculture-related students.

2 Overview of psychological capital

In 1997, Seligman put forward the concept of “Positive Psychology”.I Since then, many psychologists began to take the individual's positive psychological qualities as a field of study, the concept of psychological capital is generated in such a background. In 1997,the American economist Goldsmith first put forward the term “psychological capital”, that psychological capital is a relatively stable psychological tendency or characteristic formed in the early life of an individual, which can affect the productivity of an individual, and is a determinant of personal productivity.In 2005, Luthans et al. clearly formally defined psychological capital, arguing that psychological capital refers to an individual's generally positive core psychological qualities, which go beyond human and social capital, enabling individuals to gain sustainable competitive advantages. Positive core psychological qualities, which are beyond human capital and social capital and can enable individuals to obtain sustainable competitive advantage. In general, psychological capital is the sum of positive abilities acquired by an individual, and it is the positive psychological state shown in the process of growth of an individual.

Different researchers have given different definitions of the concept of psychological capital based on different research perspectives, and these definitions are divided into three main categories.The first is the trait theory, which holds that psychological capital is a stable internal trait that cannot be changed or developed. Hosen et al. (2003) argues that psychological capital is a relatively stable and durable internal psychological trait acquired by individuals through learning, including personality qualities, cognitive abilities, self-monitoring, and emotional communication.Letcher (2004) argues that psychological capital is basically the same as the “Big Five personality”, that psychological capital is an important influence on individual behavior, and that psychological capital is personality traits.The second is the state theory, which argues that psychological capital is similar to a psychological state that can be developed and measured, invested in and effectively managed.Luthans and Avolio (2007) argued that psychological capital is a relatively stable and positive state maintained by an individual in the midst of constant change and development, which predicts an individual's future development, and consists of four dimensions, self-efficacy; optimism; hope; and resilience.The third is the synthesis theory, where researchers holding this view argue that psychological capital is more than simply a personality trait or a psychological state, but rather a combination of the two, with

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both the relative durability and stability of personality traits as well as the state of being.Newman et al. (2014) suggest that psychological capital is something that can be developed through training interventions, further validating that psychological capital is a developmental state.

With the ever-deepening research on psychological capital, China's research on psychological capital has also been developing. Ye Hongchun (2004) introduced the concept of psychological capital in China and believed that psychological capital includes confidence, hope, optimism and resilience. Wu Weijiong et al. (2012) argued that psychological capital is a comprehensive positive psychological quality, an ability that can be acquired in a specific way. Zhao Xuan (2019) specified that self-efficacy is what we usually understand as self-confidence; optimism refers to making positive attributions to different situations; hope refers to being hopeful about the future; and resilience refers to being able to take different ways to achieve success.

Based on the research of scholars at home and abroad, we find that although the research perspectives are different and the explanations of psychological capital are focused, these definitions all consider psychological capital as a positive psychological state, specifically including self-efficacy, optimism, hope, and resilience; and this dynamic and ever-changing psychological state plays an important role in the development of an individual. Taken together, this study considers psychological capital as the sum of positive capabilities acquired by an individual, which can be measured and developed to help the individual achieve self-affirmation and fulfillment. On this basis, this study conducted a survey on the current status of psychological capital of college students in agricultural colleges and universities and intervened through group counseling and other means.

3 Research

3.1 Objects of study

The object of this study is the students of Guangxi Agricultural Vocational and Technical University, using convenience sampling method, we collected 826 questionnaires, which meet the requirements of the study. The basic situation of the survey respondents is detailed in Table 1.

Table 1. Composition of survey respondents

Demographic variables	form	number of people	percentage
Gender	male	232	28.1%
	female	594	71.9%
birthplace	Cities	93	11.3%
	towns	130	15.7%
	countryside	603	73%
Only child or not	yes	94	11.4%
	No	732	88.6%
academic performance	Excellent	57	6.9%
	Good	401	48.5%
	Moderate	347	42%
	Poor	21	2.5%

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3.2 Research tools

The Positive Psychological Capital Questionnaire (PPQ) developed by Zhang Gao, Zhang Sai et al. (2010) was used for this assessment. The scale includes 26 items across four dimensions: self-efficacy, resilience, hope, and optimism.The self-efficacy dimension contains 7 items, the hope dimension contains 6 items, the resilience dimension contains 6 items, and the optimism dimension contains 6 items. The scale is rated on a scale of 1-7, with subjects rating each item according to their own situation, with higher ratings indicating greater conformity with themselves and smaller ratings indicating less conformity with themselves, of which 21 items are positively scored and 5 items are negatively scored. The higher the total score of the questionnaire, the higher the level of psychological capital.

3.3 Research methodology

3.3.1 Documentation method

Collect the relevant literature on psychological capital through the Knowledge Network and books, read, analyze and organize it to understand the relevant theories, measurement methods and the latest research results. Determine the content and purpose of the research and formulate the research ideas by taking into account the actual working needs of the school.

3.3.2 Questionnaire method

The Positive Psychological Capital Questionnaire (PPQ) compiled by Zhang Gao et al. was administered to the graduating students of our university, and the data were recovered and analyzed to understand the current situation and characteristics of the psychological capital of college students in agricultural colleges and universities in Guangxi. SPSS 22.0 statistical software was used to statistically analyze the psychological capital data of the college students, including descriptive statistics, independent -samples t-test, analysis of variance and so on.

4 Results

4.1 Overall psychological capital of agricultural college students

Table 2. Overall psychological capital of agricultural college students

variant	number	average	S.d deviation	number	Average score
self-efficacy	826	28.66	6.45	7	4.09
resilience	826	29.11	5.56	6	4.85
Hope	826	26.73	5.93	7	3.82
optimist	826	26.49	6.57	6	4.42
Total	826	110.23	21.54	26	4.24

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The Positive Psychological Capital Questionnaire uses a 7-point scale, and the higher the score, the higher the level of psychological capital. As can be seen from Table 2, the mean score of psychological capital of college students is 4.24, which is slightly higher than the theoretical median, indicating that the psychological capital of college students is at an intermediate level. The mean score of the hope dimension is 3.82, which is slightly lower than the theoretical median, and the mean scores of the remaining three dimensions: self-efficacy, resilience, and optimism are 4.09, 4.85, and 4.4,2 respectively, which are all higher than the theoretical median. The mean scores for the four dimensions, from highest to lowest, were resilience, optimism, self-efficacy, and hope.

4.2 Differences in psychological capital of agricultural college students by gender

Table 3 .College students' psychological capital and t-test of dimensions on gender

variant	male（M±SD）	female（M±SD）	F	p
self-efficacy	30.12±7.01	28.09±6.14	3.94	.048*
resilience	30.56±5.93	28.55±5.31	4.83	.028*
Hope	26.92±6.50	26.66±5.69	4.96	.026*
optimist	27.00±7.45	26.29±6.19	8.35	.004*
Total	113.81±26.15	108.8±19.29	16.56	.000***

（comment：*p ＜ 0.05, **p ＜ 0.01, ***p ＜ 0.001）

An independent samples t-test was conducted on the psychological capital of college students and its dimensions, and the results are shown in Table 3.As can be seen from the table, there is a significant difference in the total psychological capital score by gender ($p<0.001$), with male students having significantly higher psychological capital than female students. In terms of dimensions, there were also significant differences in the dimensions of self-efficacy ($p<0.05$), resilience ($p<0.05$), hope ($p<0.05$) and optimism ($p<0.05$). The results of independent samples t-tests showed that male students of agricultural vocational colleges and universities were significantly higher than female students in both psychological capital items and its dimensions self-efficacy, resilience, hope and optimism.

4.3 Differences in psychological capital of agricultural college students on the birthplace

As can be seen from Table 4, there is no significant in place of birth on the total psychological capital score of college students, but the total psychological capital score of college students from urban areas is significantly higher than the psychological capital of college students from rural and town areas. There were also no significant differences in the dimensions of hope and optimism, and significant differences in the dimensions of self-efficacy and resilience ($p < 0.05$). College students in urban areas scored higher on each dimension than those in rural and town areas, but there was no significant difference in the sub-dimensions.

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Table 4. Differences in psychological capital of university students on the ground of origin

variant	Countryside（M±SD）	City （M±SD）	towns （M±SD）	p	F
self-efficacy	28.31±6.33	30.63±6.73	28.88±6.63	.002**	6.357
resilience	29.01±5.38	29.63±5.96	29.22±6.10	.005**	5.390
Hope	26.66±5.91	27.38±6.17	26.58±5.83	.092	2.396
optimist	26.32±6.46	27.89±7.02	26.28±6.67	.521	.652
Total	109.32±21.58	117.68±21.71	109.10±20.32	.585	.537

4.4 Differences in psychological capital of agricultural college students on whether they are only children or not

Table 5. College students' psychological capital and t-tests of each dimension on whether they are only children or not

variant	only one child(M±SD)	Not one （M±SD）	F	t
self-efficacy	29.89±7.46	28.50±6.30	4.54	.033*
resilience	30.31±6.67	28.95±5.38	7.24	.007**
Hope	27.58±7.05	26.62±5.76	6.79	.009**
optimist	26.90±8.13	26.43±6.34	11.22	.001**
Total	113.26±26.80	109.84±20.75	7.9	.005**

An independent samples t-test was conducted on psychological capital and its dimensions of college students on whether they were only children or not, and the results are shown in Table 5.As can be seen from Table 5, there was a significant difference ($p<0.05$) in the total psychological capital scores. In terms of the dimensions, there were also significant differences in the dimensions of self-efficacy ($p<0.05$), resilience ($p<0.05$), hope ($p<0.05$) and optimism ($p<0.05$). The results of independent samples t-test showed that only children in agricultural colleges and universities were significantly higher than non-only children in both psychological capital items and its dimensions self-efficacy, resilience, hope and optimism.

4.5 Differences in psychological capital of agricultural college students in terms of academic performance

In this study, academic performance was categorized into four categories: excellent, good, moderate, and poor, and the results of one-way ANOVA (F-test) revealed that, as shown in Table 6, there was a significant difference among the total psychological capital scores of college students in agricultural colleges and universities in terms of academic performance ($p < 0.001$). On each dimension, self-efficacy ($p < 0.001$), optimism ($p < 0.001$), hope ($p < 0.001$), and resilience ($p < 0.001$) also differed significantly in academic performance.

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Table 6 .Differences between psychological capital and its dimensions in academic performance

variant	Excellent（N=57）M±SD	Good（N=401）M±SD	Moderate（N=347）M±SD	poor（N=21）M±SD	F	p	л²
self-efficacy	33.00±7.87	29.57±6.36	27.08±5.51	25.71±9.45	21.068	.000	.071
resilience	30.60±6.22	29.61±5.81	28.44±4.97	26.76±6.32	5.462	.001	.020
Hope	30.75±6.65	27.42±5.82	25.50±5.21	22.86±8.91	19.822	.000	.067
optimist	30.42±7.04	27.17±6.26	25.24±6.17	23.52±10.45	14.529	.000	.050
Total	125.82±26.32	112.67±20.33	105.47±18.66	99.81±39.86	20.304	.000	.069

In order to further understand the differences in psychological capital of college students in agricultural colleges and universities in terms of academic performance, this study conducted LSD post-hoc analysis test on the total psychological capital score and its dimensions for college students with different academic performance. The results showed that on the total psychological capital score, there were significant differences between excellent and good, moderate and poor ($p<0.05$); there were significant differences between good and excellent, moderate and poor ($p<0.05$), and there were no significant differences between moderate and poor ($p>0.05$). On the self-efficacy dimension, there is a significant difference between excellent and good, medium and poor ($p<0.05$); there is a significant difference between good and excellent, medium and poor ($p<0.05$), and there is no significant difference between medium and poor; on the optimism dimension, there is a significant difference between excellent and good, medium and poor ($p<0.05$), and there is no significant difference between good, medium and poor ($p>0.05$). On the hope dimension, there is a significant difference between excellent and good, medium and poor ($p < 0.05$), a significant difference between good and medium and poor ($p < 0.05$), and no significant difference between medium and poor ($p > 0.05$); and on the resilience dimension, there is no significant difference between excellent and good ($p > 0.05$), and a significant difference between medium and poor ($p < 0.05$), and a significant difference between good and medium ($p < 0.05$), not significantly different from poor ($p > 0.05$), and not significantly different from poor and moderate ($p > 0.05$).

4 Discussion

This study examined the psychological capital of students in agricultural vocational undergraduate colleges and universities. The results indicated that the psychological capital of college students in agricultural colleges and universities as a whole is at a moderately high level, consistent with Zhang's (2023) findings on the psychological capital of college students. At the age of early youth, college students are energetic, vigorous, and have a positive attitude toward life. In addition, about 70% of students in agricultural colleges and universities come from rural areas, and rural students tend to have more hard-working qualities,

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which is reflected in their higher scores on the resilience dimension of psychological capital. However, in the dimensions of self-efficacy and hope, there is still much room for improvement for college students in agricultural colleges.

College students' psychological capital exhibits significant differences across genders. A related study (Xuejuan Shi, 2023) showed that males significantly outperformed females in the dimensions of self-efficacy, mental toughness, and self-esteem. The present study similarly found that males also scored significantly higher than females on self-efficacy, resilience, hope and optimism dimensions. This may be due to the fact that males are less psychologically sensitive as compared to females, which reduces the impact of negative life events on them. In addition, society and families place higher role expectations on men, which allows them to adapt and grow more quickly in the face of setbacks and pressures. Based on this, it is recommended that women be given more encouragement and autonomy in family and school education in the future in order to help them improve their psychological level.

The total psychological capital scores did not show significant differences in terms of place of birth, but the exhibited significantly higher psychological capital. There were significant differences in the resilience and self-efficacy dimensions, and the scores of college students in urban areas were significantly higher than those of college students in rural areas, a result consistent with findings from previous research (Xuejuan Shi, 2023). This may be due to the fact that the educational resources and life experiences to which college students in urban areas are exposed help to foster their psychological capital; on the other hand, the perceptions of college students in rural areas about family, economy, identity, and status undermine their self-efficacy. In addition, this may also be related to the relative scarcity of educational resources in rural areas, where rural students' enriched after-school lives and the knowledge they acquire is not comprehensive enough.

There is a significant difference between the total psychological capital score and its dimensions in terms of being an only child. This may be due to the fact that only children receive more attention and encouragement from their family members and have access to richer educational resources, which is why the psychological capital level of only children is significantly higher than that of non-only children.

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