

The Interrelated Effects between College Students' Subjective Well-being and Self-efficacy

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Abstract

General self-efficacy pertains to an individual's overall confidence when confronted with diverse challenges or unfamiliar situations. Prior studies have demonstrated a strong link between general self-efficacy and mental health conditions, including anxiety and depression. Specifically, general self-efficacy exhibits a significant negative correlation with trait anxiety, test anxiety, state anxiety, as well as depression. Conversely, subjective well-being represents an individual's personal assessment of their life quality, based on their own standards. It is considered a crucial psychological indicator of both personal and societal quality of life, reflecting the overall life quality of individuals within society.

1. Introduction

In today's society, with the popularization of higher education and increasingly fierce competition, college students, as an important group in society, have received widespread attention to their mental health status. Subjective Well-being (SWB) and self-efficacy, as important indicators for measuring individual mental health and positive psychological states, have a profound impact on the growth and development of college students. Subjective well-being is an individual's overall evaluation of life satisfaction and emotional experience, reflecting their cognitive and emotional feelings about the quality of life; Self-efficacy refers to an individual's beliefs and expectations about whether they can successfully complete a task or

achieve a goal, which affects their behavioral choices, level of effort, and persistence in the face of difficulties.

2. Literature Review

In recent years, extensive research has been conducted by scholars both domestically and internationally, exploring the relationship between general self-efficacy and subjective well-being^{[1-2][13-14]}. Ryan (2000) et al. explored the relationship between personal goals and well-being by controlling for goal efficacy, and found that autonomously set personal goals effectively predicted an individual's level of well-being^{[3][12]}. In 2004, Chinese scholar Tong Yuehua conducted a study on college students, examining the influence of gender and major differences on general self-efficacy and subjective well-being. The findings indicated that gender and major had insignificant effects on these variables, but a significant positive correlation was observed between general self-efficacy and subjective well-being^[4]. Additionally, studies on college students from various regions also revealed a significant positive correlation between self-efficacy and subjective well-being^{[5][14]}. Xueqing Tan came to the same conclusion that the higher the self-efficacy of poor students^[6], the stronger their subjective well-being; there are also studies that examine the relationship among college students' coping styles, self-efficacy, and subjective well-being, suggesting that enhancing college students' self-efficacy can contribute to an improvement in their subjective well-being^{[7][14]}.

In fact, there is a scarcity of academic research specifically focusing on the relationship between self-efficacy and subjective well-being among college students in Xianning City, Hubei Province, China. Consequently, the current study, targeting college students in Xianning City, Hubei Province, China, intends to delve deeply into the connection between subjective well-being and general self-efficacy. The objective is to offer valuable insights for colleges and universities to devise effective psychological interventions and carry out mental health education initiatives tailored for college students.

3. Objects of study and research methodology

3.1 Subject of the study

In this investigation, a random sampling technique was employed to select 290 undergraduate students from Hubei Institute of Science and Technology and Xianning Institute of Vocational Technology as the subjects of the survey. Subsequently, 290 questionnaires were disseminated, and 282 were retrieved, with 258 of them being deemed valid, yielding an effective recovery rate of 91.49%. Among the surveyed students, the gender breakdown was 154 males and 104 females.

Furthermore, 18 students originated from single-parent households, while 240 hailed from non-single-parent families. The survey also revealed that 198 were only children, and 60 were not. Additionally, the number of student cadres amounted to 96, while the number of non-student cadres was 162.

3.2 Research tools

3.2.1 General Self-Efficacy Scale

In this research, the revised Chinese edition of the General Self-Efficacy Scale (GSES) was utilized as the evaluative instrument. Originally developed and revised by Schwarzer, the GSES was originally composed of 20 sub-items, but was later streamlined to 10 sub-items. The GSES has been widely used around the world, and has been translated into Chinese by many researchers to meet the needs of research in different cultural contexts. In this research, the Chinese-adapted version of the scale furnished by Wang Caikang et al.[8] was meticulously selected. This version comprises 10 inquiry items and possesses robust construct validity as well as predictive efficacy.

After testing, the Cronbach's alpha coefficient of the Chinese revised version of the GSES used in this study reached 0.87, indicating high internal consistency. Furthermore, the reliability coefficient upon retesting after an interval of approximately 10 days was found to be 0.83 ($p < 0.001$), while the split-half reliability coefficient was 0.82 ($p < 0.001$), thereby further confirming the stability and dependability of the scale. In terms of scoring, a 4-point Likert scale was employed in this study, offering options such as "not at all accurate", "somewhat accurate", "mostly accurate", and "entirely accurate", with respective scores ranging from 1 to 4.

3.2.2 Subjective well-being scale

In this research, the Chinese-adapted edition of the General Well-being Schedule (GWBS), formulated by the National Center for Health Statistics (NCHS), was utilized as the evaluative instrument. The original scale contains 33 items, but after revision by Duan, the first 18 items of the scale were selected as the assessment in this study^[9]. The revised scale encompasses six pivotal factors, including vitality, health awareness, life satisfaction and enthusiasm, mood state (whether melancholic or cheerful), emotional and behavioral regulation, as well as stress levels (anxiety) ^[10]. After rigorous testing, the revised scale met psychometric standards in terms of reliability and validity, ensuring the accuracy and reliability of the assessment results.

3.3 Testing process and statistical methods

The study was conducted by randomly selecting students as participating members of the test. Prior to completing the questionnaire, detailed instructions were given to the test subjects to

ensure that they could accurately understand the content of the questionnaire and it was filled in an anonymous manner to protect the privacy of the test subjects. After the completion of data collection, the data were fully analysed using SPSS 26.0 statistical software. In the analysis process, a range of statistical techniques, including correlation analysis, regression analysis, and independent-samples t-tests, were employed to delve deeply into the relationships and disparities among the variables.

4. Analysis of findings

4.1 Descriptive statistics of self-efficacy and subjective well-being

Descriptive statistics of general self-efficacy, subjective well-being and its six dimensions of the returned questionnaires were analysed in Table 1.

As shown in Table 1, the average score of general self-efficacy reached 26.30, showing a high level. And the average score of subjective well-being is 69.70, which is in the middle range. Further examining the six components of subjective well-being, the average scores for each element surpassed the threshold of 3, suggesting that university students possess robust perceptions concerning their health, mental disposition, vitality, life satisfaction and enthusiasm, emotional and behavioral regulation, as well as stress levels (anxiety). Notably, university students exhibit the most profound experiences in terms of melancholy or agreeable mental states, whereas their grasp of emotional or behavioral control is comparably less intricate.

Table 1. Descriptive statistics of general self-efficacy and subjective well-being

Variant	Mean value statistic	Standard error
General self-efficacy	26.30	0.579
Subjective well-being	69.70	1.865
Energies	4.07	0.111
Health concerns	4.00	0.185
Satisfaction and interest in life	3.40	0.092
State of mind	4.35	0.121
Emotional and behavioural control	3.38	0.082
Nervousness (anxiety)	3.86	0.123

Source: Self-collected data

4.2 Correlation analysis between general self-efficacy and subjective well-being

To ascertain the existence of a correlation between general self-efficacy and subjective well-being, as well as its various facets, correlational analyses were executed between the predictor and outcome variables, as presented in Table 2.

Table 2. Correlation analysis between general self-efficacy and subjective well-being

Variant	General self-efficacy	Subjective well-being	Energies	Health concerns	Satisfaction and interest in life	State of mind	Emotional and behavioural control	Nervousness (anxiety)
General self-efficacy	1.000	0.751 **	0.733 **	0.506 **	0.580 **	0.749 **	0.674 **	0.698 **
Subjective well-being	0.751 **	1.000	0.959 **	0.662 **	0.868 **	0.932 **	0.920 **	0.955 **
Energies	0.733 **	0.959 **	1.000	0.599 **	0.783 **	0.860 **	0.877 **	0.917 **
Health concerns	0.506 **	0.662 **	0.599 **	1.000	0.407 **	0.474 **	0.431 **	0.502 **
Satisfaction and interest in life	0.580 **	0.868 **	0.783 **	0.407 **	1.000	0.868 **	0.855 **	0.838 **
State of mind	0.749 **	0.932 **	0.860 **	0.474 **	0.868 **	1.000	0.900 **	0.889 **
Emotional and behavioural control	0.674 **	0.920 **	0.877 **	0.431 **	0.855 **	0.900 **	1.000	0.890 **
Nervousness (anxiety)	0.698 **	0.955 **	0.917 **	0.502 **	0.838 **	0.889 **	0.890 **	1.000

Note: **p<0.01

As illustrated in Table 2, there is a notable correlation between general self-efficacy and subjective well-being, as well as its six constituent dimensions, at the 0.01 significance level.

4.3 Regression analysis of general self-efficacy and subjective well-being

A univariate regression analysis was carried out, utilizing general self-efficacy as the predictor variable and subjective well-being, along with its six facets, as the outcome variables, respectively. This analysis aimed to investigate the impact of general self-efficacy on subjective well-being among university students in Xianning City, Hubei Province, China. The findings are presented in Table 3.

Table 3. Regression analysis of general self-efficacy and subjective well-being

Variant	<i>B</i>	Coefficient <i>R</i>	<i>R</i> ²	Adjustment <i>R</i> ²	<i>F</i>	<i>P</i>
Energies	0.733	0.733	0.538	0.534	147.892	0.000
Health concerns	0.506	0.506	0.256	0.250	43.688	0.000
Satisfaction and interest in life	0.918	0.580	0.336	0.331	64.285	0.000

State of mind	0.749	0.749	0.562	0.558	162.744	0.000
Emotional and behavioural control	0.954	0.674	0.454	0.450	105.748	0.000
Nervousness (anxiety)	0.698	0.698	0.487	0.483	120.660	0.000
Subjective well-being	0.751	0.751	0.564	0.561	164.320	0.000

Source: Self-collected data

Drawing insights from the data presented in Table 3, it is evident that general self-efficacy exerts a substantial positive influence on both subjective well-being and its six constituent dimensions. Specifically, general self-efficacy accounts for 56.1% of the overall variability in subjective well-being. The magnitude of general self-efficacy's impact on each of the six dimensions differs, with the melancholic or cheerful mental state being the most influenced (explained variance of 55.8%), followed by vitality (explained variance of 53.4%), stress levels (explained variance of 48.3%), emotional and behavioral regulation (explained variance of 45.0%), life satisfaction and enthusiasm (explained variance of 33.1%), and health concerns (explained variance of 25%). This underscores that general self-efficacy has the greatest impact on the melancholic or cheerful mental state dimension.

4.4 Analysis of variances

4.4.1 Gender differences in general self-efficacy and subjective well-being

To investigate potential disparities in general self-efficacy and subjective well-being among university students of varying genders in Xianning City, an analysis of variance was performed. The sample comprised 154 male participants and 104 female participants, as detailed in Table 4.

Table 4. Gender differences in general self-efficacy and subjective well-being

Variable	Gender	$\bar{x} \pm s$	t	p
General self-efficacy	Male	2.62 ± 0.075	-0.307	0.760
	Female	2.65 ± 0.091		
Subjective well-being	Male	3.89 ± 0.124	0.239	0.812
	Female	3.84 ± 0.180		

Source: Self-collected data

The findings presented in Table 4 reveal that the p-value exceeds 0.05, suggesting that there are no statistically significant differences in general self-efficacy and subjective well-being between male and female university students in Xianning City.

4.4.2 Differences in general self-efficacy and subjective well-being for the Only Child

To ascertain whether there are disparities in general self-efficacy and subjective well-being between only children and those with siblings among university students in Xianning City, Hubei Province, China, a comparative analysis was undertaken. The survey responses comprised 198 only children and 60 non-only children, with the specific data outlined in Table 5.

Table 5. Differences in general self-efficacy and subjective well-being for the Only Child

Variable	The Only Child	$\bar{x} \pm s$	t	p
General self-efficacy	YES	2.950 ± 0.128	3.179	0.002
	NO	2.530 ± 0.062		
Subjective well-being	YES	4.130 ± 0.201	1.373	0.172
	NO	3.794 ± 0.120		

Source: Self-collected data

The results detailed in Table 5 indicate that there is a statistically significant difference in general self-efficacy between only children and those with siblings. However, no significant difference was observed in subjective well-being between the two groups.

4.4.3 Lone parent family differences in general self-efficacy and subjective well-being

To determine whether there exist disparities in general self-efficacy and subjective well-being among university students in Xianning City, based on whether they come from single-parent or non-single-parent families, a comparative analysis was carried out. The collected questionnaires encompassed 18 students from single-parent families and 240 students from non-single-parent families, with the specific data presented in Table 6.

Table 6. Single parent family differences in general self-efficacy and subjective well-being

Variable	Single-parent family	$\bar{x} \pm s$	t	p
General self-efficacy	YES	1.940 ± 0.067	-8.237	0.000
	NO	2.680 ± 0.059		
Subjective well-being	YES	2.383 ± 0.123	-9.953	0.000
	NO	3.984 ± 0.104		

Source: Self-collected data

The findings outlined in Table 6 reveal that there are statistically significant differences ($p < 0.01$) in both general self-efficacy and subjective well-being between students from single-parent families and those from non-single-parent families. Specifically, students from single-parent families exhibit notably lower levels of self-confidence in tackling challenges compared to those from non-single-parent families. Furthermore, their happiness levels are also lower than those of students from non-single-parent families.

4.4.4 Differences in general self-efficacy and subjective well-being of student cadres

In order to investigate whether there are differences in general self-efficacy and subjective well-being between student cadres and non-student cadres among university students in Xianning City, Hubei Province, China, a difference in difference analysis was conducted. In the collected questionnaires, there were 68 student cadres and 190 non-student cadres, see Table 7 for specific data.

Table 7. Differences in general self-efficacy and subjective well-being of student cadres

Variable	Student cadres	$\bar{x} \pm s$	t	p
General self-efficacy	YES	3.130 ± 0.079	6.719	0.000
	NO	2.450 ± 0.064		
Subjective well-being	YES	5.000 ± 0.125	9.318	0.000
	NO	3.468 ± 0.106		

Source: Self-collected data

According to the results of the data in Table 7, there is a significant difference between university students who are student cadres and those who are non-student cadres in terms of general self-efficacy and subjective well-being.

5. Discussion of results

The aforementioned research indicated that gender did not produce statistically significant variations in general self-efficacy among university students in Xianning City, Hubei Province, China.

The status of being an only child has a more pronounced influence on the general self-efficacy of university students. Due to the absence of close peer companionship during their upbringing, only children tend to engage in more independent thinking and problem-solving, which fosters their abilities and self-confidence. Conversely, students from single-parent families exhibited

notably lower levels of both general self-efficacy and subjective well-being compared to those from non-single-parent families. Children from incomplete families may experience reduced self-esteem stemming from a lack of comprehensive care and encouragement, resulting in decreased self-confidence when confronting challenges and a correspondingly lower perception of happiness.

Student cadres have significantly higher general self-efficacy and subjective well-being than non-student leaders. Through organising and participating in various activities, student cadres are able to enhance their abilities and face challenges with greater ease and confidence. At the same time, these experiences also help them to explore their inner potential and improve their sense of well-being.

In addition, it was found that the subjective well-being of university students in Xianning City and its six dimensions were significantly and positively influenced by general self-efficacy. Students with higher self-efficacy actively participate in activities, calmly think about solving problems, hold on to their beliefs and work hard to achieve their goals, and show positive perceptions, courage, and wisdom. They have more positive emotions and spread positive energy, and therefore are more likely to perceive happiness^[11].

6. Conclusion

In conclusion, the general self-efficacy of university students in Xianning City, Hubei Province, China, plays a crucial and beneficial role in their subjective well-being. High levels of general self-efficacy augment students' life satisfaction and enthusiasm, elevate their vitality and emotional and behavioral regulation, mitigate health concerns, and assist in alleviating anxiety and depressive symptoms.

At the school level, schools should provide more care and encouragement to special groups of students who generally have a low sense of self-efficacy, such as students from single-parent families. Through in-depth understanding of the problems and needs of these students, schools can provide the necessary support and assistance in life, study and psychology. For instance, they can offer financial aid for subsistence, academic counseling, and psychological support, while also arranging a diverse array of seminars and cultural activities on campus to foster more participation opportunities. This, in turn, nurtures their entrepreneurial spirit, values, and self-assurance, thereby bolstering their overall self-efficacy and, consequently, their subjective well-being^[14].

At the individual student level, strengthening the development of self-will quality is the key to enhancing general self-efficacy and subjective well-being. Students can start by setting small goals in the near future and gradually accomplish goals at different stages to continuously build up their personal confidence^[15]. At the same time, they should focus on physical exercise and

thinking exercise, and regulate and control their emotions by learning psychological skills such as alternative thinking and verbal persuasion. These efforts will help enhance students' general self-efficacy and subjective well-being.

It is worth noting that the sample selection for this study was confined to students from just two universities in Xianning City, Hubei Province, China, potentially limiting the scope of the findings. To gain a more comprehensive understanding of how general self-efficacy impacts subjective well-being, future research endeavors should broaden the sample size to further corroborate and expand upon these results.

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