

The Influence Mechanism of Social Support on Self-Efficacy: The Mediating Role of Subjective Well-Being

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Date: 2024-10-10T00:00:00+00:00

Abstract

Grounded in positive psychology, this study administered a questionnaire survey to 303 college students using the General Self-Efficacy Scale (GSES), College Students' Subjective Well-Being Scale (SWB), and Social Support Scale (SSA) to investigate the impact of social support on college students' self-efficacy, examine the mediating effect model of subjective well-being and its applicability, construct a relational model among the three variables, and explore the internal mechanisms promoting college students' mental health development. The results indicated: (1) Significant correlations existed among social support, subjective well-being, and self-efficacy; social support and subjective well-being constitute important factors influencing college students' self-efficacy; (2) Regarding the only-child status, no significant differences were found among social support, subjective well-being, and self-efficacy; (3) The mediating effect of social support and subjective well-being on self-efficacy was significant; (4) The mediating effect of social support on self-efficacy through subjective well-being was significant. The findings confirm the psychological mechanism through which social support influences self-efficacy and the partial mediating role of subjective well-being, offering reference recommendations for promoting college students' mental health development.

Full Text

The Impact Mechanism of Social Support on Self-Efficacy: The Mediating Role of Subjective Well-Being

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Abstract

Based on positive psychology, this study administered questionnaires to 303 college students using the General Self-Efficacy Scale (GSES), the College Student Subjective Well-Being Scale (SWB), and the Social Support Scale (SSA) to investigate the influence of social support on college students' self-efficacy and to examine the mediating effect model of subjective well-being and its applicability. A relational model among the three variables was constructed to explore the internal mechanisms promoting college students' mental health development. The results indicated that significant correlations existed among social support, subjective well-being, and self-efficacy, with social support and subjective well-being being important factors influencing college students' self-efficacy. No significant differences were found in social support, subjective well-being, and self-efficacy regarding only-child status. The mediating effect of social support and subjective well-being on self-efficacy was significant. The mediating effect of social support on self-efficacy through subjective well-being was significant. These findings confirm the psychological mechanism through which social support influences self-efficacy with subjective well-being playing a partial mediating role, providing references and suggestions for promoting college students' psychological health development.

Keywords: social support; self-efficacy; subjective well-being; mediating effect

Student self-efficacy is interdependent with academic progress, personality development, ability growth, and teacher-student relationships, forming a necessary foundation for student development and serving as an important indicator of school education quality. In recent years, self-efficacy and subjective well-being have become hot topics in educational research worldwide, particularly in Western countries. Many nations have incorporated self-efficacy and subjective well-being into their educational evaluation systems to reflect on their educational systems and structures [1].

Meanwhile, China has gradually begun to pay attention to students' mental health. For instance, Shanghai conducted a large-scale survey of nearly 20,000 Chinese college students, revealing that nearly half experienced varying degrees of psychological problems, primarily concerning somatic issues, depression, and anxiety [2]. Additional research indicates that since the COVID-19 pandemic, mental health issues among university students, such as depression and anxiety, have shown higher detection rates compared to pre-pandemic levels [3]. Therefore, how to help college students overcome mental health problems to address life challenges represents not only a key focus of school-level research but also a hot topic of societal concern.

1.1 Social Support and Related Research

Social support refers to the material or spiritual assistance individuals receive from family, peers, and social relationships. Generally, social support can be divided into three aspects: objective support, subjective support, and support

utilization. Objective support refers to actual help received from others when individuals encounter difficulties. Subjective support refers to the recipient's subjective evaluation and feelings after receiving assistance, representing an important dimension combining social networks and quality of life. Support utilization refers to the degree to which individuals make use of available support. Compared to objective material support, the emotional support subjectively perceived by individuals constitutes a crucial channel for emotional experience, making subjective support more beneficial for enhancing mental health levels.

Research by WANG Y Y et al. (2023) demonstrated that effective social support can alleviate anxiety and depression among college students [4]. The primary sources of social support include family, friends, classmates, and partners. Yang Jing (2015) found that positive peer relationships can improve social cognitive abilities and promote more prosocial behaviors [5]. L. WEHMEYER M (2017) argued that good family relationships benefit adolescent mental health, as adolescents' curiosity and sense of competence can be developed through interactive patterns of mutual respect and understanding established by parents, thereby improving their mental health levels [6]. When adequate, timely, and positive social support is provided to college students, even without existing psychological problems, such support can improve their emotional intelligence and promote life satisfaction and positive life experiences [7]. Therefore, a complete social support system not only ensures individual health or helps recovery from harm but also reduces loneliness and depression, thereby enhancing subjective well-being [8].

1.2 Self-Efficacy and Related Research

Self-efficacy refers to the belief individuals hold about their capability to complete a specific behavior before executing it, through which behavioral and psychological changes are achieved [9]. Liu Feng'e and Huang Xiting (2001) proposed that individuals' internal psychology is influenced by social factors, a process requiring the function of self-concept, with self-efficacy being a core factor affecting individual self-concept [10]. Consequently, self-efficacy typically influences individuals' behavioral choices, as people tend to avoid environments they perceive as difficult to adapt to while choosing manageable ones. Self-efficacy also affects motivational effort levels; when individuals feel high self-efficacy in a particular area, their motivation and performance levels are correspondingly higher. Additionally, self-efficacy influences individuals' thought processes. When encountering difficulties and setbacks, those with higher self-efficacy typically adopt more proactive behaviors to solve problems, whereas those with lower self-efficacy often resort to negative emotions and behaviors, inevitably reducing their effort levels. Therefore, a close relationship exists between self-efficacy and mental health levels.

Empirical research by Kwok, A. H., and Paton (2018) clearly indicated that self-efficacy positively correlates with mental health levels, with students possessing stronger self-efficacy demonstrating higher mental health levels [11]. Meanwhile,

research by LICN et al. (2020) also showed that adolescent mental health not only positively correlates with self-efficacy but also with subjective well-being [12]. Lin Ying's (2016) study on college students revealed that all dimensions of emotional regulation self-efficacy significantly negatively correlate with negative coping while positively correlating with social support. Simultaneously, when individuals perceive higher levels of social support, they tend to employ more positive emotional strategies, thereby influencing self-efficacy [13]. LIU L et al. (2021) pointed out that social support effectively predicts college students' emotional regulation self-efficacy; when perceiving higher social support levels, individuals actively seek external help when facing negative emotions. Conversely, when perceiving lower social support levels, individuals have fewer coping resources and lower emotional regulation self-efficacy [14].

1.3 Subjective Well-Being and Related Research

Subjective Well-Being (SWB) refers to individuals' overall evaluation and emotional experience of their life based on comparisons between their actual and ideal lives according to personal standards. Diener divided subjective well-being into cognitive and affective dimensions. The cognitive dimension includes life satisfaction and domain-specific satisfaction, while the affective dimension comprises positive and negative emotions [15]. Research by DIENER E et al. (2009) indicated that individuals' subjective well-being not only reduces problem behaviors among college students but also effectively improves academic performance and self-evaluation levels, promoting mental health development [16].

Many factors influence subjective well-being, primarily divided into objective and subjective aspects. Objective factors include genetics, culture, family environment, economy, social support, and life events, while subjective factors encompass personality, self-efficacy, and individual coping styles [17]. The famous Minnesota twin study by Tellegen demonstrated that identical twins raised in different family environments showed much closer subjective well-being levels than fraternal twins raised in the same family environment [18]. Culture also affects subjective well-being; research indicates that college students' overall well-being positively correlates with parental emotional warmth and understanding factors in parenting styles while negatively correlating with parental interference, overprotection, punishment, strictness, and favoritism [19].

Hu Jie et al. (2002) argued that individuals with good social support have higher subjective well-being because social support can provide material and informational assistance, increase joy, enhance self-esteem and confidence, and prevent or alleviate stress reactions, thereby increasing positive emotions, suppressing negative emotions, and enhancing subjective well-being [20]. Additionally, college students' subjective well-being correlates with self-efficacy; Wu Danwei and Liu Hongyan (2003) suggested that when individuals' needs are met at a certain level, their subjective well-being in that aspect improves, with general self-efficacy being an important variable affecting subjective well-being [21].

1.4 Relationships among Social Support, Subjective Well-Being, and Self-Efficacy

Existing research has explored the relationship between social support and self-efficacy, revealing a positive correlation where perceived social support effectively improves emotional regulation self-efficacy. Studies examining social support and subjective well-being found that social support can influence subjective well-being [22]. Moreover, self-efficacy as an internal factor of subjective well-being has gradually attracted attention. Research by Song Lingqing et al. (2012) pointed out that improving individual subjective well-being is an effective means to enhance mental health levels, with social support and self-efficacy being two important internal and external factors affecting subjective well-being [23]. Meanwhile, scholar Yu Qian (2020) also found that self-efficacy significantly predicts subjective well-being; individuals with higher self-efficacy have clearer future goals and can achieve them more effectively, thereby improving subjective well-being to better cope with life and obtain greater psychological satisfaction. Conversely, individuals with insufficient self-efficacy experience ambiguous goals and lack personal motivation during goal achievement, subsequently reducing subjective well-being [24].

In summary, social support can influence individual self-efficacy, and subjective well-being also affects self-efficacy. However, previous research mostly examined the relationship between social support and subjective well-being, whereas college students' primary task in school is academic achievement, which directly correlates with self-efficacy, and self-efficacy is also one of the important factors in improving college students' subjective well-being [25].

In conclusion, this study attempts to use subjective well-being as a mediating mechanism to explore how various factors of social support influence self-efficacy and construct their relational model, aiming to provide targeted suggestions for college students. As shown in Figure 1 [Figure 1: see original paper], this study proposes the following hypotheses: (1) College students' social support significantly positively predicts their self-efficacy; (2) College students' subjective well-being plays a significant mediating role in the prediction of self-efficacy by social support.

Figure 1 Mediating Role of Social Support, Subjective Well-Being, and Self-Efficacy

2. Research Sample, Tools, and Methods

This study targeted first-year undergraduate students at a full-time university in Anhui Province, using Wenjuanxing as the research tool to conduct the survey from June to July 2024. Questionnaires were distributed by natural class units, issued on-site and collected uniformly after 20 minutes, followed by online distribution and collection. A total of 325 questionnaires were distributed, with 303 valid questionnaires recovered, yielding a validity rate of 93.32%. Among them, 51 were male (17% of the total) and 252 were female (83% of the total).

2.1 Research Tools

1. **General Self-Efficacy Scale (GSES):** Developed by Schwarzer et al., the scale originally contained 20 items, which was later revised and refined to a final version of 10 items. The scale uses a 4-point Likert scoring method, where higher scores indicate higher self-efficacy. In this study, the scale's Cronbach's α coefficient was 0.93, meeting statistical standards for internal consistency.
2. **Social Support Appraisals Scale (SSA):** Vaux, Phillips et al. (1986) proposed that social support comprises three dimensions: friend support, family support, and other support, with 23 total items using a 4-point scoring system where higher scores indicate greater social support. In this study, the scale's Cronbach's α coefficient was 0.81, meeting statistical standards for internal consistency.
3. **College Student Subjective Well-Being Scale (SWB):** Developed by Ji Nan and Li Yousui (2006) based on Chinese college students' physical and mental development indicators and combined with Diener et al.'s subjective well-being scale, this scientific instrument identifies ten dimensions of Chinese college students' subjective well-being: autonomy, interpersonal relationships, physical satisfaction, sense of power, and social behavior. In this study, the scale's Cronbach's α coefficient was 0.87, meeting statistical standards for internal consistency.

2.2 Research Methods

This study employed quantitative research methods to explore the relationships among social support, subjective well-being, and self-efficacy, with particular attention to the mediating role of subjective well-being [26]. First, SPSS 27.0 was used for descriptive statistics and correlation analysis to examine potential relationships among variables. Second, AMOS 27.0 was employed to investigate the structural equation model among social support, subjective well-being, and self-efficacy to explore the mediating effect of subjective well-being. Finally, BOOTSTRAP testing was used to examine the significance of each effect size.

3.1 Common Method Bias Test

This study used SPSS 27.0 software to conduct Harman's single-factor test on the sample data to verify common method bias [27]. The results showed eight factors with eigenvalues greater than 1, with the first factor explaining 30.44% of the total variance, below the critical value of 40%, indicating no serious common method bias in this study.

3.2 Differences in Social Support, Subjective Well-Being, and Self-Efficacy among Only Children

As shown in Table 1, whether college students are only children shows no significant differences across all dimensions of self-efficacy, subjective well-being, and social support ($P > 0.05$). The figure indicates no significant differences in negative emotions, friend support, family support, other support, personal social behavior, life satisfaction, positive emotions, and interpersonal communication dimensions ($P > 0.05$). Therefore, no significant differences exist in social support, subjective well-being, and self-efficacy between only children and non-only children among college students.

Table 1 Comparison of Differences in Social Support, Self-Efficacy, Subjective Well-Being and Their Dimensions by Only-Child Status

Variable	Only Child (M±SD)	Non-Only Child (M±SD)
Self-Efficacy	2.45±0.64	2.47±0.80
Positive Emotions	3.55±0.94	3.71±0.70
Personal Social Behavior	3.4	

Note: $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ *

3.3 Correlational Relationships among Social Support, Self-Efficacy, and Subjective Well-Being

As shown in Table 2, Pearson product-moment correlation analysis revealed that social support (family support, friend support, other support), self-efficacy, and subjective well-being all demonstrated significant pairwise positive correlations ($P < 0.01$). Self-efficacy positively correlated with life satisfaction ($r = 0.500$, $P < 0.01$) and family support ($r = 0.40$, $P < 0.01$). Friend support positively correlated with self-efficacy ($r = 0.32$, $P < 0.01$), and other support positively correlated with life satisfaction ($r = 0.30$, $P < 0.01$). These results provide support for further verification of the structural equation model.

Table 2 Correlation Analysis among Social Support, Subjective Well-Being, Self-Efficacy and Their Dimensions

	Life Satisfac- tion	Positive Emo- tions	Negative Emo- tions	Family Sup- port	Friend Sup- port	Other Sup- port	Personal Social Be- havior
Self-Efficacy	1						
Life Satisfac- tion	.503**	1					

	Self-Efficacy	Life Satisfaction	Positive Emotions	Negative Emotions	Family Support	Friend Support	Other Support	Personal Social Behavior
Positive Emotions	.357**	.536**	1					
Negative Emotions	.377**	.338**	.259**	1				
Family Support	.438**	.404**	.232**	.472**	1			
Friend Support	.393**	.435**	.487**	.320**	.489**	1		
Other Support	.446**	.487**	.404**	.304**	.298**	.372**	1	
Personal Social Behavior	.392**	.613**	.562**	.430**	.395**	.627**	.593**	1

Note: $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

3.4 The Effect of Social Support on College Students' Self-Efficacy

First, the correlation between social support and college students' self-efficacy was explored, followed by testing the mediating model with subjective well-being as the mediating variable. Using various dimensions of college students' social support (family support, friend support, other support) as independent variables and self-efficacy as the dependent variable, Table 3 shows that the significance levels of all social support dimensions were below 0.05, indicating significant relationships and positive predictive effects on college students' self-efficacy.

Table 3 Stepwise Regression Analysis of Social Support Dimensions on Self-Efficacy

Model	Dependent Variable	Independent Variable	β	t	p
1	Self-Efficacy	Family Support	0.438	8.123	<0.001
2	Self-Efficacy	Friend Support	0.393	7.215	<0.001
3	Self-Efficacy	Other Support	0.446	8.567	<0.001

3.5 Social Support Influencing Self-Efficacy: Testing the Mediating Effect of Subjective Well-Being

Using subjective well-being as the mediating variable, a model was constructed with social support as the independent variable and self-efficacy as the dependent variable, with corrections made using the Bootstrap method [28]. The results showed good model fit: $\chi^2/df=2.7$, $P=0.01$, $RMSEA=0.075$, $GFI=0.87$, $IFI=0.93$, $TLI=0.92$, $CFI=0.93$. Therefore, both direct and indirect effects of social support on self-efficacy were significant. The direct effect of social support on self-efficacy was 0.094, accounting for 48% of the total effect (0.197), while the indirect effect was 0.09, accounting for 51% of the total effect. Thus, the relationships among social support, self-efficacy, and college students' subjective well-being support the mediating effect model. The mediating model of self-efficacy is shown in Figure 2 [Figure 2: see original paper].

Figure 2 Mediating Model of Social Support, Self-Efficacy, and Subjective Well-Being

Finally, using the Bootstrap method with 5,000 resamples to calculate 95% confidence intervals, the mediating effect was analyzed as shown in Table 4. The study demonstrated that social support can directly improve college students' self-efficacy, with a standardized effect value of 0.43 and a 95% confidence interval of [0.21, 0.23], which does not include 0, indicating a significant direct path. Students' self-efficacy can be enhanced through social support promoting subjective well-being; the standardized effect value for the path social support \rightarrow subjective well-being \rightarrow self-efficacy was 0.43 with a 95% confidence interval of [0.27, 0.60], which does not include 0, indicating a significant mediating effect path.

Table 4 Bootstrap Analysis of Mediating Effect Test

Path	Standardized Effect	BootSE	95% CI
Social Support \rightarrow Self-Efficacy (Direct)	0.43	0.05	[0.21, 0.23]
Social Support \rightarrow Subjective Well-Being \rightarrow Self-Efficacy (Indirect)	0.43	0.08	[0.27, 0.60]

4. Research Conclusions and Discussion

First, among college student populations, no significant differences exist in total scores and various dimensions of social support, subjective well-being, and self-efficacy based on only-child status. This finding is generally consistent with previous research. For example, scholar He Minfen found that non-only-child nursing students had lower subjective well-being levels and required more care and support during clinical teaching to build self-esteem and confidence [29]. Other studies indicate no significant differences between only children and non-only children in subjective well-being and social support, though only-child females show more pronounced emotional differences, with higher perceived social support scores than only-child males, possibly due to different gender roles [30].

Second, using college students' subjective well-being as a mediating variable to examine its mediating effect between social support and self-efficacy, the study revealed significant pairwise positive correlations among social support, self-efficacy, and college students' subjective well-being. College students can enhance their self-efficacy by activating positive emotions and healthy mindsets through social support, consistent with previous research findings [31-32]. Regarding various dimensions of social support, family support showed the highest correlation with self-efficacy, followed by friend support. Within subjective well-being, life satisfaction showed the highest correlation with self-efficacy, followed by positive emotions.

Third, social support can positively influence students' self-efficacy, though research on the relationship between various dimensions of social support and self-efficacy remains limited. This study constructed a regression model between social support and self-efficacy to explore their relationship. The results showed that all dimensions of social support significantly predicted self-efficacy, consistent with previous research [33-34]. This indicates that when college students perceive more emotional support, such as family support, friend support, or other support, they develop greater self-efficacy, which subsequently improves their subjective well-being and academic performance. Therefore, providing multifaceted support for college students to help them deeply feel understanding and recognition is crucial. Social support can effectively help college students restore mental health, and more comprehensive social support can help them view things more positively and reduce negative emotions [35].

Fourth, using subjective well-being as a mediating variable, this study constructed a mediating model of social support influencing self-efficacy. The model results showed significant path coefficients among the three variables, with social support having both direct and indirect dual effects on self-efficacy and subjective well-being playing a mediating role. Social support, as a factor affecting self-efficacy levels, also significantly correlates with individuals' subjective well-being. When individuals perceive more social support, such as receiving understanding and respect from others, they can accumulate more pleasant emotions, thereby increasing subjective well-being and improving self-efficacy. Therefore,

in daily life, families, friends, and society should pay greater attention to students' emotional experiences and provide more care and support. Additionally, schools can offer perception education courses to enhance students' perceptual abilities, enabling them to sense attention and love from their surroundings, thereby increasing subjective well-being and improving students' self-efficacy.

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