

Meta-analysis of the relationship between social support and subjective well-being of Chinese college students

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Abstract

[Objective] To explore the relationship between social support and college students' subjective well-being based on the social support rating scale, and explore the research characteristics that affect the relationship between the two. **[Methods]** We searched the databases of CNKI, Wanfang and VIP, collected the articles on social support and college students' subjective well-being published from 2003 to 2023, and used CMA software to conduct meta-analysis. **[Results]** A total of 40 articles were included and 40 independent samples were generated, with a total of 27740 samples. The results showed that subjective support, objective support and utilization of support were positively correlated with the overall subjective well-being of college students, life satisfaction and positive emotions, and negatively correlated with negative emotions. The correlation between the two was regulated by the test group, that is, the correlation between the two was different in different test groups.

Keywords

College students, Social support, Subjective well-being, Meta-analysis.

1. Introduction

As an important positive psychological quality, subjective well-being plays a significant role in improving the quality of human life, including but not limited to health and life span, work and income, and friendship (Diener&Ryan, 2009).

Social support is one of the important predictive variables of subjective well-being. Western scholars have carried out a large number of related studies on the two, and have also carried out a meta-analysis of relevant studies (Chu, Saucier, & Hafner, 2010). Although there are still differences on whether social support plays a direct or indirect role (Bal, Crombez, van Oost, & Debourdeaudhuij, 2003; Gençöz, Özlale, & Lennon, 2004), they basically reached a consensus conclusion on the important predictive role of social support on subjective well-being. Domestic scholars have also carried out a lot of research on the relationship between the two in the past 30 years. Although the social support rating scale compiled by Xiao Shuiyuan (1987) is usually used in China, which is different from the commonly used scale for understanding social support compiled by Zimet (1987), the same trend has been achieved in the significant correlation between the two, but there are differences in the correlation coefficient. Later, Song Jiameng et al. (2013) solved the problem of different correlation sizes in previous studies through meta-analysis, and drew a reliable and significant conclusion between the two.

In China, studies focusing only on the relationship between social support and subjective well-being of college students have also formed a scale, but there are also problems of different sizes, ranging from 0.2 (Zhang Jianren, 2007; Gu Meixi, 2016) to 0.6 (Fu Jing, 2011; Chen Zhenqi, 2020). Therefore, the size of the correlation between social support and subjective well-being of college students based on the social support rating scale has been reported, And whether it is affected by the research characteristics has become a problem that needs further research. The solution of these problems is of great significance for the operational intervention plan to

improve the subjective well-being of college students. Therefore, this paper will conduct a meta-analysis of previous domestic research results, explore the relationship between social support and college students' subjective well-being, and explore the regulatory effect of the relationship between the two.

2. Literature review

Subjective well-being (SW) is defined as the overall feeling and judgment of individuals on their own quality of life according to their subjective criteria, with characteristics of subjectivity, stability and integrity (Diener, Suh, Lucas & Smith, 1999). Subjective well-being is a multi-level and multi-dimensional construct, mainly including three dimensions of life satisfaction, positive emotion and negative emotion (Wu Mingxia, 2000). There are many tools to measure subjective well-being. Some scales measure it from the overall perspective, while others measure only part of its dimensions. The scales of overall orientation include the General Well-being Schedule (GWB) developed by the National Center for Health Statistics of the United States, the Index of Well-being (IWB) developed by Campbell and others, and the Memorial University of Newfoundland Scale of Happiness (MUNSH) developed by Kozma (Wang Xiangdong, Wang Xilin, Ma Hong, 1999) Oxford happiness inventory (OHI) (Hills&Argyle, 2001). The dimension-oriented scales include the life satisfaction scale (LSS) prepared by Diener (Diener&Gonzalez, 2011) and the emotional balance scale (ABS) prepared by Bradburn et al. (Wang Xiangdong et al, 1999). The former uses the life satisfaction index to reflect the individual's subjective well-being level, while the latter uses the relative number of positive and negative emotions to reflect the individual's subjective well-being level.

Social support (SS) includes visible and practical support (such as direct material assistance and social network), as well as emotional support (such as the experience of being understood and respected and their satisfaction) (Angford, Bowsher, Maloney,&Lillis, 1997; Xiao Shuiyuan, Yang Desen, 1987). Chinese scholars Xiao Shuiyuan and Yang Desen (1987) summarized the views of western scholars on the content of social support into subjective support and objective support, and proposed a unique dimension - support utilization. Support utilization refers to the active utilization of existing support by individuals. Up to now, the dimension of support utilization has not been systematically studied in western psychological literature. Based on the three-dimensional division of subjective support, objective support and support utilization, Xiao Shuiyuan and Yang Desen (1987) developed a social support assessment scale. The scale has 10 items in total, including 4 subjective support, 3 objective support and 3 utilization of social support. The social support rating scale is widely used in domestic research, and its frequency of use is far more than that of the social support rating tools imported from abroad (such as the Perceived Social Support Scale), but it is rarely used abroad. In view of this, in the process of meta-analysis, this paper only includes the Chinese literature in the domestic database.

Western original research and meta-analysis show that social support is significantly related to subjective well-being. Social support is positively related to life satisfaction and positive emotions, and negatively related to negative emotions. In the group division of the research objects, the main criteria are age. Among them, there is a positive correlation between the social network of the elderly and happiness (Kahn et al, 2003; Pinquart&Sörensen, 2000). There is also a slight positive correlation between children's and adolescents' social support and subjective well-being, of which the correlation of perceived support is the highest, and there is an adjusting variable of the subject's age, and the increase of age will bring about the related enhancement (Chu et al, 2010).

Among the domestic studies, the research on social support and subjective well-being based on the social support rating scale is the most. There are also meta-analyses based on such

documents that prove that there is a significant correlation between the two (Song Jiameng&Fan Huiyong, 2013). However, the literature taking college students as the research object has not reached an agreement on the degree of correlation between the two, nor has it systematically analyzed the possible regulatory effect of the subdivision type within the college students group, so there are deficiencies in the process of promoting practical intervention measures.

This paper conducts a meta-analysis of the relevant research on social support and subjective well-being of domestic college students, trying to solve the following problems: 1) The relationship between social support and subjective well-being of college students. 2) Whether the correlation between different structures of college students' subjective well-being and social support is different. 3) Whether the research feature effect exists, that is, whether the research characteristics of the original research (such as the subject group, the type of scale) will affect the correlation between college students' subjective well-being and social support.

3. Research design

The concept of meta-analysis was first proposed by Glass GV in 1976. It was initially applied to relevant research in the medical field, and now it is widely used in the fields of psychology and management. Meta-analysis is a comprehensive analysis method of literature. It uses advanced statistical techniques to integrate the effect values obtained from different empirical studies under a specific theme and conduct quantitative analysis of different research sub-categories. It has been widely recognized by the academic community. The process of meta-analysis mainly includes the following four steps, namely, determining the research topic, searching and screening documents, document coding, data processing and statistical analysis.

3.1. Literature retrieval and screening

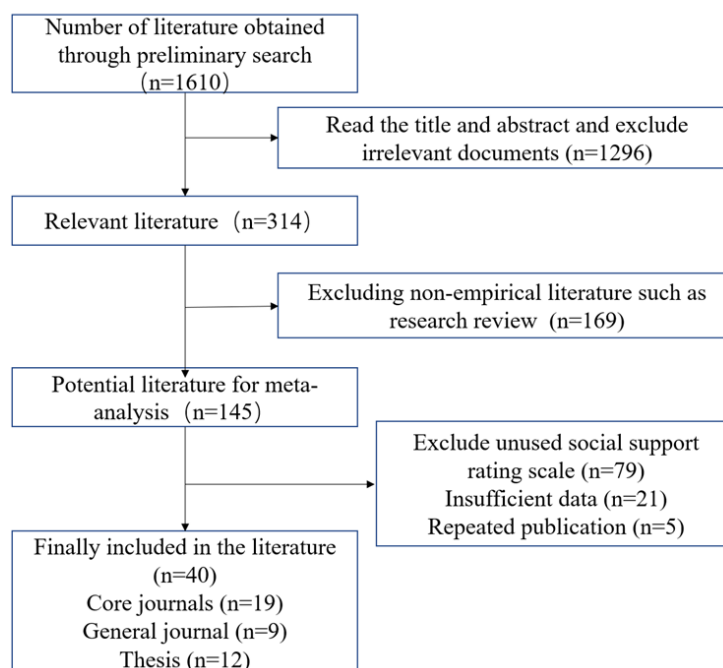


Figure 1 Document screening process

With "college students" plus "social support" plus "subjective well-being" or "happiness" or "positive emotion" or "negative emotion" or "satisfaction" as the search term, search in the full text database of CNKI journals, the full text database of Chinese doctoral dissertations, and the full text database of Chinese excellent master's dissertations, and then search from the Weibo journal website and Wanfang data to find out and fill in the gaps. In order to have better

practical significance, the retrieval time range is set as 2003-2023. A preliminary search of 1610 relevant documents, including 1044 journals and 566 dissertations.

In order to include as many documents as possible, this paper screened the documents according to the following criteria: (1) empirical documents related to the relationship between social support and college students' subjective well-being (2) simultaneously used the social support rating scale and the well-being scale, and reported the correlation coefficient between the dimension or total score of at least one scale and the dimension or total score of another scale. (3) The number of samples is clear (4) If the data is repeatedly published, only one of them will be taken. If the degree paper is published in a journal after revision, the journal shall prevail, otherwise the degree paper data shall be used. The filtering process is shown in Figure 1.

A total of 40 papers met the above screening criteria, including 19 core journal papers, 9 general journal papers and 12 degree papers. The subjects include different groups of college students, such as undergraduate and junior college students, urban and rural students, students with and without left-behind experience, and students from 21 provinces and cities, including Beijing, Hebei, Heilongjiang, Jilin, Liaoning, Hubei, Hunan, Shaanxi, Anhui, Shandong, Guangdong, Guangxi, Fujian, Henan, Zhejiang, Jiangsu, Gansu, Sichuan, Chongqing, Yunnan, and Shanghai.

3.2. Document feature coding

The included documents were coded according to the research characteristics. It mainly includes subjects' gender, sample size, happiness measurement scale, publication type, publication time and effect value. The extraction of the effect value follows the following principles: (1) The total score of social support and the correlation between each dimension and the total score of happiness and each dimension are included in the code; (2) Each independent sample is coded once. If a paper reports multiple independent samples at the same time, it is coded separately; (3) When calculating the effect value of each category, the data used do not overlap, that is, each original data only appears once under each category to ensure the independence of the effect value calculation.

The coding method of this study is that the first and second authors code independently; Check and proofread one by one after completion. The results showed that the consistency of the independent coding of the two authors reached 96%, except for the deviation of individual data. The characteristics of 40 documents included in the meta-analysis are shown in Table 1.

Table 1 Basic data of the original research included in the analysis

Source	Publication	Sample size	Male	Subjects	SW scale
DUAN Haiyan, 2010	Dissertation	700	43.00	College	ICS
FU Jing, 2011	Dissertation	290	46.55	College	SWLS, PANAS
FENG Xia, 2008	Dissertation	294	54.10	College	SWLS, PANAS
CHEN Kang, 2010	Dissertation	990	52.93	College	SWLS, PANAS
ZHANG Lin, 2012	Dissertation	331	46.83	College	ICS
LIU Jing, 2007	Dissertation	326	44.48	College	ASLS, PANAS
WAN Hening, 2020	Dissertation	1865	39.10	College	GWB, PANAS
CHEN Zhenqi, 2020	Dissertation	322	37.58	College	SWLS, HS
ZHU Wei, 2018	Dissertation	581	44.1	College	SWLS, HS
GONG Ping, 2015	Dissertation	258	23.6	Junior college	GWB
ZHOU Yang, 2015	Dissertation	2385	39.53	Medic	GWB
HUANG Yongfeng, 2012	Dissertation	174	50.57	Poor	GWB

WANG Yong, 2022	General	1023	37.05	Single-parent	GWB
YANG Jianzhen, 2022	General	4212	25.80	Medic	GWB, PANAS
GUO Dongsheng, 2021	General	373	31.64	College	GWB
CUI Yanting, 2012	General	200	NG	Medic	GWB
YU Zhiying, 2012	General	251	19.52	Poor	GWB
LIANG Yanhong, 2010	General	386	30.83	College	GWB
ZOU Qiong, 2010	General	622	48.39	College	ICS
ZHANG Guohua, 2009	General	881	19.3	College	IWB
ZHOU Jiao, 2009	General	123	NG	Poor	GWB
ZHANG Wen, 2004	Core	362	51.66	College	IWB
HUANG Shihua, 2016	Core	742	33.96	College	SWLS, ABS
TIAN Baowei, 2016	Core	324	100	Gay men	SLSS, ABS
KANG Tinghu, 2015	Core	225	40.44	Christian	SWLS, PANAS
WANG Yuhua, 2010	Core	1141	37.69	Left-behind	SWLS, AM2
GU Meixi, 2016	Core	418	36.60	College	SWLS, PANAS
YANG Hongmeng, 2020	Core	618	47.25	College	GWB
YANG Jinlong, 2018	Core	276	43.48	Junior college	ASLS
LIU Li, 2015	Core	736	37.36	College	SWLS, PANAS
LIU Liping, 2013	Core	826	70.9	Rural	GWB
HE Dongli, 2013	Core	958	NG	Left-behind	GWB
CHEN Kang, 2013	Core	685	55.18	College	ICS
KONG Feng, 2012	Core	389	33.16	College	SWLS, PANAS
LI Zhiyong, 2010	Core	341	42.52	College	SWLS, PANAS
CHEN Lifang, 2009	Core	1773	43.71	College	IWB, PANAS
GU Fan, 2008	Core	337	NG	Poor	SWLS, PANAS
ZHANG Jianren, 2007	Core	214	49.07	College	IWB, PANAS
ZHANG Lianyun, 2008	Core	348	52.90	College	GWB
ZHOU Jinyan, 2007	Core	440	48.41	Medic	GWB

Note: a. In order to reduce the space, most of them only list the first author. B. General=papers in general public publications; Core=core journal papers of Beijing University and South University; Degree=Master's degree thesis. C.NG said that the paper did not provide gender information. D. AM2=Emotional Scale 2, ICS=International University Questionnaire, SWLS=Life Satisfaction Scale, ASLS=Youth Life Satisfaction Scale, ABS=Emotional Balance Scale, HS=Diener Happiness Scale, PANAS=Emotional Balance Scale, IWB=Happiness Index Scale, SLSS=Student Overall Life Satisfaction Scale, GWB=Overall Happiness Scale.

3.3. Calculation of effect value

Repeat the following steps in each group (Card, 2012; Lipsey, Wilson, 2008): (1) Extract the total score of social support and happiness in each original study and the correlation coefficient between each dimension r_i . That is, the initial effect value. (2) Calculate the overall effect value of the corresponding group ρ . First, set the initial effect value r_i . Perform Fisher Z conversion, the formula is: $Z_i = 0.5 \ln \left(\frac{1+r_i}{1-r_i} \right)$. Then the weighted average of Z value is converted into correlation coefficient to obtain the overall effect value ρ . $\rho = \frac{e^{2Z}-1}{e^{2Z}+1}$, weight $w_i = n - 3$. (3)

With SE_{ρ} is the standard deviation, $SE_{\rho} = \frac{1}{\sqrt{\sum w_i - 3k}}$, calculate the 95% confidence interval of the overall effect value. Cohen suggested that the effect value ≤ 0.2 is small, the effect value is medium from 0.21 to 0.79, and the effect value ≥ 0.80 is large (Cohen, 1988, p25).

3.4. Homogeneity test

In order to determine whether it is necessary to carry out the effect analysis of adjustment variables, homogeneity test is required. The homogeneity test formula is: $Q = \sum_{i=1}^k w_i r_i^2 - \frac{\sum (w_i r_i)^2}{\sum w_i}$, where $w_i = n - 3$, k is the number of original studies. The homogeneity coefficient Q follows the chi-square distribution of $df = K - 1$. The homogeneity test results also relate to how we deal with the analysis and measurement errors. If the test results show that the effect values are homogeneous, the fixed effect model is selected; If it is heterogeneous, the random effect model needs to be selected. The random effect model is selected in this paper because this paper attempts to make a moderate summary of the research conclusions.

3.5. Publication bias test

Publication bias means that the sample of meta-analysis is lack of representativeness, especially the lack of original research with insignificant results, such as unpublished dissertations. In order not to affect the reliability of the meta-analysis results, it is necessary to increase the sample representativeness as much as possible, for example, to increase the degree papers and manuscripts whose research results may not be significant.

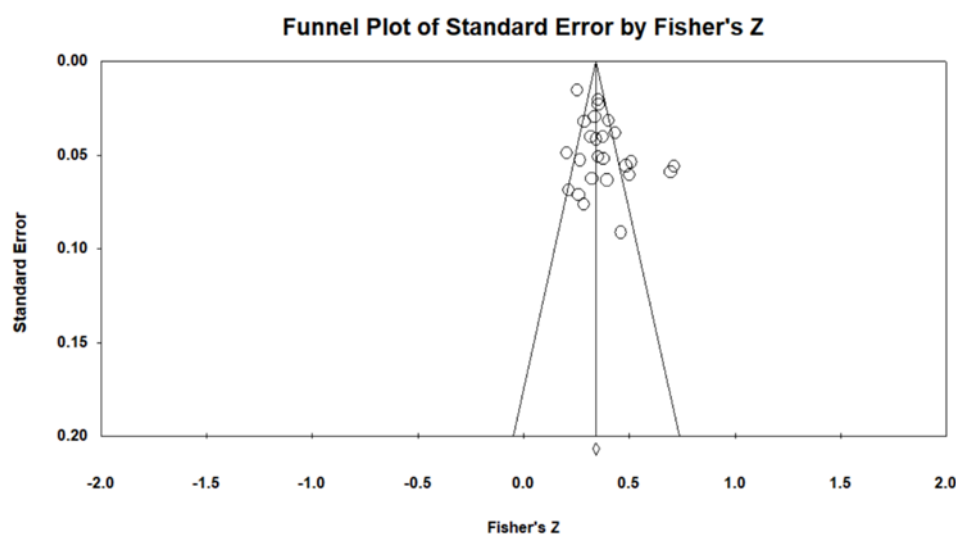


Figure 2 Funnel diagram of total scores

This article first uses a funnel chart to assess the effect values of the relationship between social support and the total score of subjective well-being (as shown in Figure 2). Most of the effect values are concentrated in the upper and middle parts of the funnel, and evenly distributed on both sides of the total effect amount, showing a symmetric distribution, indicating that there is a small possibility of publication bias in the research data. Secondly, in order to fill in the deficiency that the funnel chart can only be judged subjectively, the method of loss of safety coefficient is used for further verification in the following article.

The unsafe factor shows the number of negative original studies required to make statistically significant results insignificant. The calculation formula of unsafe factor is: $N_{fs} = \left[\frac{\sum Z_i}{Z_{\alpha}} \right]^2 - k$. Where, Z_i is the significance level of the i th original study P_i Standard deviation corresponding to, Z_{α} Is the critical value of the unilateral test of the set significance level, and K is the number of original studies. Rosenthal suggested: if N_{fs} is less than $5K + 10$, the impact of publication bias

needs to arouse researchers' vigilance. In order to facilitate understanding, Mullen proposed the failsafe ratio (FSR) = $\frac{N_{fs}}{5K+10}$. Accordingly, if the rate of insecurity is less than 1, researchers need to check the representativeness of their meta-analysis samples (Rothstein, Sutton & Borenstein, 2005, pp. 112-126).

4. Result analysis

This part includes the relevant estimation of different social support dimensions and the total score of college students' subjective well-being, the relevant estimation of different happiness dimensions and the total score of social support, and the analysis of the regulatory effect of the original research characteristics.

4.1. Correlation between SS and total score of SW

Among the meta-analysis documents included in this paper, the measuring tool of social support is the social support rating scale. Happiness involves multiple scales, including national social survey, happiness index, and overall well-being. Therefore, in the process of calculating the correlation coefficient between each dimension of social support and its total score and the total score of happiness, only the total score of happiness is used, and its sub-dimensions are not used. Table 2 shows that the correlation between the total score and each dimension of the social support rating scale and the total score of happiness is between 0.22 and 0.36, and the 95% confidence interval does not include 0, indicating that the correlation coefficient is unlikely to be caused by accidental factors. The value of failsafe ratio is greater than 1, indicating that the meta-analysis results are less affected by publication bias. In general, different dimensions of social support are moderately correlated with the total score of happiness.

In addition, the Q coefficient of homogeneity test is between 111.98 and 1888.28, which is far greater than the critical value at 0.01 level $\chi^2(25)=42.98$, indicating that there are adjustment variables.

Table 2 Meta-analysis between different structures of SS and total scores of SW

Social support	k	Sample size	Effect value	95%CI	Q	FSR
Objective support	23	15777	0.21	0.17~0.25	111.98	29.12
Subjective support	23	16463	0.28	0.24~0.32	137.28	56.43
Support utilization	24	16800	0.32	0.19~0.44	1888.28	79.38
Total score of SS	25	18376	0.36	0.32~0.39	167.16	89

4.2. Correlation between different structures of SW and SS

In most of the documents included in this paper, the dimensions of college students' happiness mainly include life satisfaction, positive emotion and negative emotion. As shown in Table 3, life satisfaction and positive emotion are positively correlated with the total score of social support, and the correlation coefficient is between 0.21 and 0.33; Negative emotion is negatively correlated with the total score of social support, and the correlation coefficient is between 0.15 and 0.25. The 95% confidence interval does not include 0, indicating that the correlation coefficient is not caused by accidental factors. The rate of insecurity is greater than 1, indicating that meta-analysis is less affected by publication bias. In short, the different dimensions of happiness are slightly to moderately correlated with the total score of social support.

Similarly, most of the Q coefficient of homogeneity test is greater than the critical value at 0.01 level $\chi^2(25)=42.98$, indicating that there may be adjustment variables.

Table 3 Meta-analysis between different structures of SW and SS

Subjective well-being	Social support	k	Sample size	Effect value	95%CI	Q	FSR
Life satisfaction	Objective support	15	11120	0.19	0.16~0.23	35.95	17.54
	Subjective support	16	12286	0.23	0.19~0.27	71.77	27.54
	Support utilization	15	11380	0.22	0.19~0.24	29.43	21.32
	Total score of SS	22	13138	0.24	0.20~0.29	159.11	35.68
Positive emotions	Objective support	12	9186	0.24	0.20~0.28	40.78	20.76
	Subjective support	12	9186	0.3	0.25~0.34	57.72	33.09
	Support utilization	13	9523	0.3	0.26~0.33	45.50	35.15
	Total score of SS	20	11042	0.31	0.27~0.36	134.66	49.38
Negative emotions	Objective support	10	7063	-0.16	-0.22~-0.10	57.47	7
	Subjective support	10	7063	-0.19	-0.26~-0.11	97.42	9.23
	Support utilization	11	7400	-0.27	-0.36~-0.19	149.16	20.28
	Total score of SS	18	8919	-0.23	-0.31~-0.16	240.05	20.43

4.3. Research characteristic effect

The homogeneity test structure indicates the existence of regulatory variables. According to previous research experience, this paper examines whether the regulatory effects of the four research characteristics of publishing type, publishing age, subject group and scale type are significant. In view of the previous conclusion that the total score of the scale is related to each dimension, only the correlation coefficient between the total score of social support and college students' happiness is used in the analysis of research characteristics in the following text.

4.3.1. Publication type effect

Among the documents included in this article, a total of 25 reported the correlation coefficient of the total score of social support and college students' sense of support, including 10 core journals, 7 general journals, and 8 academic theses. The intra-group average correlation coefficient (standard deviation) of the three were 0.34 (0.09), 0.34 (0.12), and 0.40 (0.11), respectively. By analysis of variance, there was no significant difference in the effect values of the three groups ($p>0.05$), indicating that the regulatory effect of publishing type was not significant.

4.3.2. Publishing time effect

The publication time is a continuous variable, which is directly correlated with the effect value. The correlation between the two ($n=25$) is 0.31 ($p>0.05$), which is not significant, indicating that the regulatory effect of publication time is not significant.

4.3.3. Group effect of college students

According to the similarity of the survey objects, the survey objects are divided into two categories, namely, ordinary college students ($k=17$, college students, medical students, etc.) and relatively disadvantaged students ($k=8$, including poverty, homosexuality, and left-behind experience, etc.). The mean (standard deviation) of the correlation coefficients for the two groups were 0.36 (0.03) and 0.31 (0.21), respectively. Analysis of variance showed that the difference between the two groups was 0.76 standard deviations. The results indicate that the regulatory effect of the subject population is significant.

Table 4 lists the correlation between the total score of social support and well-being of two groups of college students. It can be seen that the correlation between relatively disadvantaged students is lower, while the correlation between ordinary college students is higher.

Table 4 The regulatory effect of different groups on the relationship between SS and SW

Subjects	k	Sample size	Effect value	95%CI	Q	FSR
Ordinary college students SS	17	14871	0.36	0.31~0.40	147.96	72.25
Relatively disadvantaged students SS	8	3505	0.31	0.25~0.37	42.47	16.96

4.3.4. Scale type effect

According to the well-being scale used in the literature, 25 studies were divided into three groups: the overall well-being scale group (k=13), the well-being index scale group (k=7), and the other groups (k=5). The average effect values (standard deviation) of the three groups were 0.33 (0.12), 0.38 (0.14), and 0.39 (0.14), respectively. After analysis of variance and pairwise comparison, the difference of effect value between groups was not significant (p>0.05), indicating that the regulatory effect of scale type was not significant.

5. Discussion

5.1. SS is significantly related to college students' SW

The results of meta-analysis showed that the correlation between the total score and each dimension of the social support rating scale and the total score of college students' subjective well-being ranged from 0.21 to 0.36; The correlation with life satisfaction and positive emotion ranged from 0.19 to 0.31, both of which were positively correlated to a moderate degree; The correlation with negative emotion was between 0.16 and 0.27, showing a significant negative correlation at low and medium levels. This result is basically consistent with the research findings of western academia based on other definitions of social support (such as the Perceived Social Support Scale).

In addition, western researchers call the direct relationship between social support and subjective well-being the main effect model, and the indirect relationship between them the indirect effect model. This paper does not test the indirect effect model, but the research results further support the establishment of the main effect model and provide new systematic evidence for the model at the group level of college students.

The results of this meta-analysis are from a widely representative original research sample (the rate of insecurity is greater than 1), which has strong reliability. However, when promoting, it is also necessary to note that the regulatory effect of some research characteristics (such as the subject population) is significant.

5.2. The moderating effect of the subjects between SS and SW

Among the four research characteristics involved in this paper, namely, publishing type, publishing time, college student group and scale type, only the moderating effect of the tested group has been significantly verified, but the correlation coefficient reported by publishing type and scale type also has a large intra-group standard deviation. The former may be due to the less inclusion of unpublished papers, which has brought about a certain degree of publishing bias, The latter may be due to the small sample size or the unstable high correlation conclusion of a certain scale (for example, the happiness index scale has only 7 items). Both of them remind us that we should be more careful to consider the issue of publication bias and measurement tool selection in the follow-up study.

The regulatory effect of the subject group has been involved in domestic and foreign studies. For example, the meta-analysis of Chu et al. (2010) found that the correlation between social support and subjective well-being has increased with the increase of the subject age, but its research is limited to the youth group; The meta-analysis of Song Jiameng and Fan Huiyong (2013) also found the existence of the regulatory effect of the subject group. They pointed out that the social support and well-being of different groups such as the elderly and the disabled

have different correlation sizes, not just the effect of age. This paper focuses on the internal differences of college students, which not only supports the group effect view of Song Jiameng and Fan Huiyong (2013), but also provides a feasible idea for the subsequent segmentation research of other groups.

6. Conclusion

This dimensional meta-analysis systematically collates the relevant research on the social support rating scale and the subjective well-being of college students, provides systematic supporting evidence for the social support scale compiled by Xiao Shuiyuan, and draws the following conclusions:

(1) The overall and three dimensions of social support (objective support, subjective support, and support utilization) have a moderately significant positive correlation with the total score of subjective well-being, life satisfaction, and positive emotions, while they have a moderately significant negative correlation with negative emotions.

(2) The correlation between the two is regulated by the type of college students' group, that is, the correlation between the two is different due to different groups, but not affected by the type of subjective well-being scale, publication type and publication time.

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