

# Characteristics, Hotspots and Frontiers of the Research on Subjective Sense of Happiness in China

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**Abstract**—In order to grasp the research characteristics, hot issues and frontiers of subjective sense of happiness in China in 2008-2018, the knowledge map is to be made with the 3960 articles included in CNKI with the CiteSpace knowledge mapping software. (1)Zheng Xue, Gan Xiong, Wang Jian and others are representative figures in the field; (2)Southwest University, Beijing Normal University, Huazhong Normal University and other institutions are typical research institutions in this field; (3)The hot research fields include the influencing factors of subjective sense of happiness, student groups and psychological factors, social support and other aspects; (4)The research frontiers focus on such aspects as the new generation of migrant workers, psychological capital and intervention research. The cooperation of researchers and research institutes in the research of subjective sense of happiness in China is not strong enough., the fields of hot issues are concentrated, and the research frontiers reflect the characteristics of the times.

**Keywords**—Knowledge map; Subjective sense of happiness; CiteSpace; Characteristics; Hotspots; Frontiers

## I. INTRODUCTION

The pursuit and yearning of happiness is a topic that human beings never stop talking about. Subjective well-being is an overall assessment of an individual against its quality of life, including positive & negative emotions, life satisfaction and other dimensions. Further, it has three basic characteristics: subjectivity, subjectivity and stability [1]. Domestic research on the subjective well-being began with the "Research on Depressive Symptoms and Subjective Well-being of the Elderly Living Alone" as published on Foreign Medical Sciences (Section of Social Medicine) in 1993 by Xiancai, Ling, which mainly introduces the research results of Japanese researchers. The first real research on subjective well-being in China is the Subjective Well-being and Relevant Factors Analysis of the Elderly University Students as published on the Chinese Mental Health Journal in 1995 by Chunsheng Shen, Nailing He and Qi Shen. Since then, the research on subjective well-being in China has ushered in the boom period, especially in the past 10 years.

In the research, it is proposed to use CiteSpace5.0.R7 to map the Knowledge Domain based on the domestic research on subjective well-being in 2008-2018, and we hope to explore the current basic macroscopic state of the research field with the help of the Mapping Knowledge Domain, to provide references and support for the research in the future.

## II. DATA SOURCES AND RESEARCH METHODS

### A. Data sources

The CNKI was used as the data retrieval source library during the research. The document retrieval process included: Firstly, enter the CNKI Advanced Search page and select the "Journal" search; Secondly, set the search conditions, the subject retrieval vocabulary takes "subjective happiness" as the key word; time range: 2008-2018, and source category: all journals. Initially 4,165 articles were obtained, but through the data cleaning and irrelevant literatures deletion (like the Title Catalogues, Volume 25, Chinese Journal of Clinical Psychology in 2017), finally 3,960 articles were valid, and exported and saved in the format of Refworks that can be processed by CiteSpace5.0.R7.

### B. Research methods

In the research, the "Mapping Knowledge Domain" method was used to map the Knowledge Domain in connection with the research author, research institution and keywords of the 3,960 research articles by the means of CiteSpace5.0.R7 software developed by Chaomei Chen et al. The domain mapping parameters of the subjective happiness were set: (1) Time: the data age was 2008-2018, divided by 1 year; (2) Cluster vocabulary: from the topic, subject words, keywords, abstracts, etc., and the morphological pattern was a prominent word; (3) Node type: authors, institutions and keywords; (4) Node determination: a cosine function was used, along with internal time slice; (5) Threshold: 30 was the threshold in the past; (6) Tailoring: the author collaborated on path algorithm, mechanism and keyword to select a minimum spanning tree algorithm, and to perform age slice and merging processing; (7) Visualization: static clustering and merging network views.

## III. RESEARCH RESULTS

### A. Author collaboration characteristics

The author collaboration map was drawn, aiming at the top 30 subjective well-beings researchers with the highest frequency occurred in each year, including 509 nodes, 100 links, map network density of 0.008, as shown in Figure 1. As a whole, the author collaboration map showed that the nodes were relatively independent and scattered, and there were not many connecting lines. This shows that the domestic research on subjective well-being is in a state of their own. Xue Zheng, Xiong Gan, Jian Wang and other representative research teams are the frontier teams for the domestic research on the

subjective well-being. The "Research on the Relationship between Interpersonal Relationship Problems and Subjective Well-being of College Students" conducted by Xue Zheng et al. ranked the first in the domestic research on the subjective well-being in 2008-2018, by citation times of 243 and download frequency of 13,169. The team carried out the research on the subjective well-being and individual psychological factors (like life satisfaction, personality characteristics, explanatory style, etc.), mainly aiming at the college students. Xiong Gan mainly carried out a series of empirical researches on the subjective well-being, like the preparation of scale [2], the status quo survey [3] and so on. In the research, Jian Wang and others turned to other social groups, mainly aiming at the rural residents to explore the relationship between the subjective well-being and urbanization [4] and daily activities [5], etc.

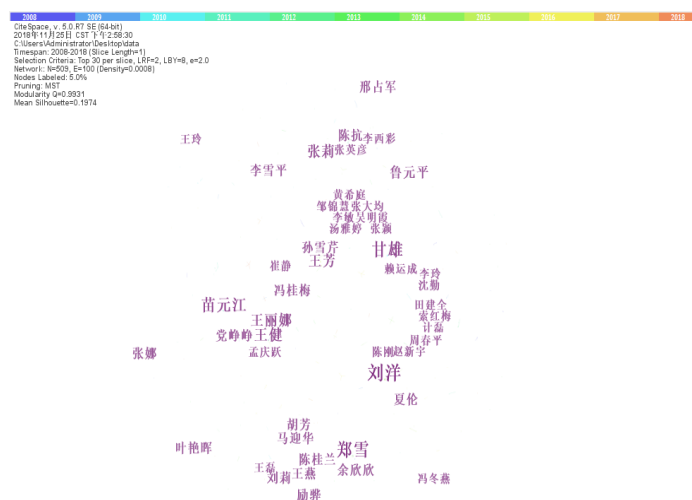


Fig. 1 Author Collaboration Map

### B. Institutional cooperation characteristics

The institution collaboration map was drawn, aiming at the top 30 subjective well-beings research institutions with the highest frequency occurred in each year, including 371 nodes, 39 links, map network density of 0.0006, as shown in Figure 2. As consistent with the author collaboration map, the nodes on the institution collaboration map were relatively independent and scattered on the whole, the number of connecting lines was very small, with 39 only. This shows that the exchange of academic results and research cooperation, etc. on the subjective well-being among various research institutions are infrequent in China. The very obvious institutional partners were the Southwest University and the Central China Normal University Center, namely Southwest University & Hunan Normal University, and China West Normal University & Xinxiang Medical University, etc.; further, the Central China Normal University and Shaanxi Normal University, and South China Normal University and Jiangxi Normal University, etc. also have formed a good cooperative relationship, respectively.



Fig. 2 Institution Collaboration Map

### C. Keyword characteristics

By mapping "Knowledge Domain" for the top 30 keywords, and merging and summarizing similar nodes, like "middle school students", "junior middle school students", "senior middle school students" merged into "middle school students", and "personality", "personality traits" and "personality characteristics" were merged into "personality", finally a keyword co-occurrence map was drawn, including 156 nodes, 84 lines, with a network density of 0.0069, as shown in Figure 3. The mapping was formed mainly around the subjective well-being, happiness, the elderly, and influencing factors, etc.



Fig. 3 Keyword Co-occurrence Map

To further determine the research hotspots of the subjective well-being, the frequency, centrality and clustering of the keywords were processed and analyzed. The keywords with subjective well-being frequency equal to or more than 20 were extracted as high-frequency keywords, and more researches were also carried out around such node, based on the centrality of more than 0.1 that is an importance index in the whole knowledge network to identify the nodes. [6] Through combination between the frequency and centrality of the keywords, we found that: "Social Support", "Mental Health", "Self-Efficacy", "Self-esteem", "College Students", "Self-Concept", "Old Man", "Intermediary Correspondence", "Personality", "Life Satisfaction", "Interpersonal Relationship", "Parenting Style" and other keywords had high frequency and centrality and also were the core research themes on the subjective well-being within the time span of 2008-2018 in China.

#### D. Hotspots

By clustering the keywords, 159 nodes, 174 connecting lines, and a network map density of 0.0139 were obtained. 17 clusters were obtained. For subsequent mapping presentation and interpretation, the clusters with less than 10 keywords were not considered, and the clustering results meeting the "Knowledge Domain" requirements were obtained, as shown in Figure 4.

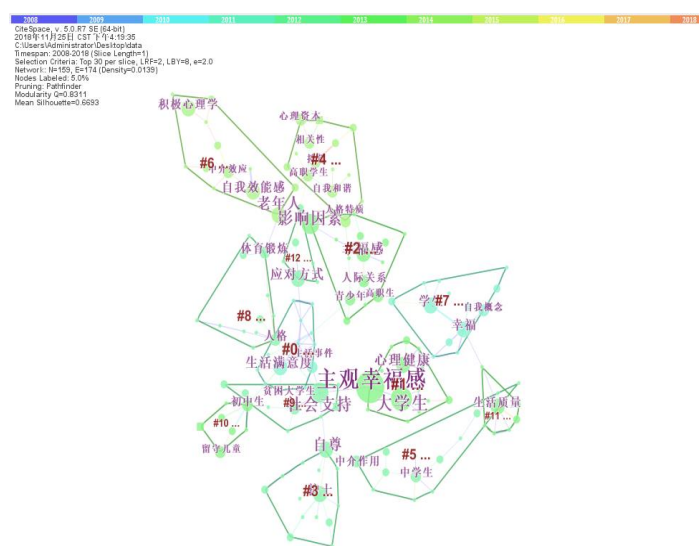


Fig. 4 Keyword Clustering Map

The module value (Q value) and the average outline value (S value) were two key indicators for judging the effect of the map. Generally, when the Q value was more than 0.3, the result of the division was significant; when the S value was above 0.5, the clustering results were acceptable; the clustering results with S value above 0.7 were very good. [7] In the subjective well-being keyword clustering, Q value = 0.8311 > 0.5, S value = 0.6691; S value > 0.5 for the first 8 clusters; the log likelihood ratio method was used to obtain clustering label, thus obtaining the hotspot research areas of the subjective well-being in 2008-2018: Factors affecting the subjective well-being, student group and psychological factors, social support, mental health and different groups, coping style,

middle school students and parenting & attribution, mental health, self-psychological and ethnic studies, personality characteristics & adaptation, satisfaction & emotions, research methods & mental health and positive psychological and cognitive factors, etc.

#### E. Research frontiers

According to the burst words that are most suitable to represent the frontiers and trends of the research field [8], the frontier evolution of the domestic research on the subjective well-being has been obtained, through the processing of the burst words on the subjective well-being. From 2008 to 2011, the "Coping Style", "Life Satisfaction", "Job Satisfaction", "Questionnaire Survey", "Life Events", "Factor Analysis" and "Senior Middle School Students", etc. with respect to the subjective well-being were carried out. The research involved the influencing factors, research methods and research objects of the subjective well-being. In 2008-2012, we mainly focused on the researches with respect to the "Self-concept", "Middle School Students", "Personality" and "Source of Psychological Control", etc., placing emphasis on the relationship between psychological level and subjective well-being. In 2009-2011, those research focused on "Higher Vocational College Students", "Negative Emotions", "Nursing Students", "Scales" and "Self-evaluation (psychology)", and the research objects have changed. In 2010-2012, we turned to "Graduate" and "Parenting Style", etc. in the research. In 2011-2014, "Ethnic Minority", "Job Burnout" and "Measures", etc. were included in the research field of the subjective well-being. In 2012-2014, "Vocational College Student" and "Mental Well-being", etc. were included in the researcher's view. In 2013-2017, "Investigation and Research" was continued, and "Care Intervention" and "Psychological Capital", etc. were also paid attention to. Further, "New Generation of Migrant Workers" also attracted the interest of researchers.

#### IV. DISCUSSION

After mapping the literature knowledge domain and sorting out the literature of the researcher on the subjective well-being in China from 2008 to 2018, we found that: Firstly, the research team for the subjective well-being headed by Xue Zheng, Xiong Gan, Jian Wang, Zhanjun Xing, Yuanjiang Miao and Jianwei Li has been formed in China and achieved fruitful research results, but the lateral exchanges and cooperation between the teams needed to be further improved; Secondly, a subjective well-being research institute represented by Southwest University, Beijing Normal University, Central China Normal University, South China Normal University, Shaanxi Normal University and the Institute of Psychology, CAS has been formed and also published a series of influential research results; Thirdly, the hotspot research field of the subjective well-being in China in 2008-2018: Factors affecting the subjective well-being, student group and psychological factors, social support, mental health and different groups, coping style, middle school students and parenting & attribution, mental health, self-psychological and ethnic studies, personality characteristics & adaptation, satisfaction & emotions, research methods & mental health and positive psychological and cognitive factors, etc. Fourthly, the research on the subjective well-being in China from 2008 to 2018, from

the investigation and research of the basic conditions of the subjective well-being of various groups of people, to exploration of the relationship between the subjective well-being and multivariate, kept pace with the development of times and tended to how to obtain, improve and raise the well-being.

## V. CONCLUSION

Firstly, the cooperation between researchers and research institutions with respect to the subjective well-being in China was few.

Secondly, the research on the subjective well-being was involved in a wide range of research field in China.

Thirdly, the research on the subjective well-being captured the pulse of the times in China.

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