A Review of Researches on Early Warning Index System of Chinese College Students’ Psychological Crisis

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Abstract. The early warning of College Students' psychological crisis is the key link of prevention, and the early warning index system is the core of the early warning work. In recent years, scholars have made more and more achievements in the research of College Students' psychological crisis early warning index system, including the theoretical basis, content and construction methods of the early warning index system. There are six problems in the relevant research, such as the lack of theoretical research on the selection of indicator system, the unclear classification standard, the single construction method, the lack of weight distribution research, the lack of reliability and validity test on the selection results, and the lack of specific application research on indicators in practical work.

Introduction

In recent years, various kinds of psychological crisis events occur frequently in Colleges and universities in our country: College Students' suicide death events, malignant events that hurt others, attempted suicide, leaving, mental disorders, etc. all show an increasing trend year by year. These psychological crisis events in Colleges and universities not only cause great losses to the whole society, but also become an important obstacle to the construction of a socialist harmonious society, and also challenge the psychological health education of contemporary college students. It is urgent to change the focus of College Students' psychological crisis work from intervention to prevention. Crisis early warning is the key link of crisis prevention, and early warning index system is the core of early warning. This paper reviews the research on the early warning index system of Chinese college students' psychological crisis in order to provide ideas for the follow-up research.

Theoretical Basis for the Construction of Early Warning Index System for Chinese College Students' Psychological Crisis

At present, the scholars in our country are basically based on the relevant theories of foreign scholars, and then according to their own experience to build the early warning system of College Students' psychological crisis. Caplan pointed out that when an individual is faced with psychological crisis, it often leads to emotional imbalance, which is closely related to the cognitive level, environmental or social support and coping skills of the individual for adverse events [1]. Belkin et al. proposed three modes of psychological crisis intervention including balance mode, cognitive mode, and psychological transformation mode [2]. Myer and Williams proposed a three-dimensional screening assessment model for cognition, emotion, and behavior: cognitive assessment includes violations, threats, and loss, and emotional assessment includes intensity and duration of emotions such as anger/hostility, fear/anxiety, depression/sorrow, and behavioral assessment. Including proximity, avoidance, and loss of mobility [3, 4].

In addition, some scholars believe that suicide is the most serious psychological crisis, so when constructing the early warning indicator system, it also refers to the relevant theories and models of suicide prevention. For example, Jin Hongzhang et al. used the suicide stress-susceptibility model...
established by Wasserman and the multi-factor suicide model proposed by Fei Lipeng to evaluate the psychological crisis of college students [5].

The Content of the Early Warning Index System of Chinese College Students' Psychological Crisis

The establishment of early warning indicators is a key link in the early warning work of college students' psychological crisis, and it is also the most discussed part by scholars, and has achieved rich results.

Two level early warning index system, that is, directly list the core indicators and describe the content of the core indicators. Chen Xiang and Jia Jucai studied the early warning indicators of psychological crisis earlier. They believed that the early warning indicators mainly include five dimensions: negative emotions, physical symptoms, stressors, individual development status and social environment [6]. Gu Guangling and others put forward five dimensions of early warning index system, including emotion, learning, interpersonal communication, physiological and family background, and emphasized that the actual situation of College Students' psychology is very complex. When judging the psychological crisis of college students, we should combine the actual situation and use it flexibly [7]. Song Fengning proposed that the early warning indicators of College Students' psychological crisis include: individual development status indicators, negative emotional indicators, interpersonal relationship indicators [8]. Ma Jianqing and Zhu Meiyan divided the early warning indicators into quantitative and qualitative ones, emphasized that the indicators with high sensitivity and good representativeness should be selected when selecting indicators, and proposed seven types of students who should be paid special attention to or interfered with and ten types of students with problems [9]. On the other hand, Jin Hongzhang included physical symptoms and suicidal thoughts into the crisis evaluation system in three dimensions of emotion, cognition and behavior [5]. According to Li Guojian, the early warning indicators of psychological crisis include nine indicators: negative emotions, social environment, physiological conditions, learning problems, love problems, interpersonal communication, personality development defects, stressors and family background [10]. Zhu Zheng believes that early warning indicators include individual development status indicators, negative emotions indicators, stressors indicators, social interaction indicators and physical symptoms indicators [11]. Shen Xiaoxie and Wang Jiacan put forward ten major types of psychological crisis intervention for high-risk individuals, mainly including depressed students, students who have attempted or committed suicide in the past and so on [12]. According to Xu Shimei, early warning indicators mainly include environmental indicators, cognitive indicators, emotional indicators, behavioral indicators, personality indicators and physiological indicators [13]. Zhou Hong thinks that individuals in psychological crisis will have obvious abnormal performance in emotion, cognition, behavior, body and other aspects, and describes their specific performance respectively [14]. Hong Li determined six core indicators of speech and behavior abnormality, major loss, long-term bad mood, long-term poor relationship, history of mental illness and history of major diseases [15].

Three-level or four level early warning indicator system, Guo Lan and Gong Yu constructed the "early warning index system of College Students' psychological crisis," including five first-class indexes (individual development, cognitive response, social environment, physiological status, negative emotions), 23 second-class indexes and 41 third-class indexes (observation clues), and determined the index mark of the index [16]. The early warning index system of College Students' psychological crisis constructed by Xu Hongyan includes stressors (learning stress, communication stress, future stress, heterosexual stress, independent and independent stress, family and economic stress, major and sudden stress), stress response (cognitive response, emotional response, will response, physiological response and behavioral response) and individual risk factors (individual characteristics: personality, coping style, attributional style, social support, self and individual background: gender, nationality, only child, grade, professional type, family source, self-assessment learning achievement, parents' education background, family structure, parents' marriage, personal health status and family income level, etc.) [17]. Wang Bingwei divides the early-warning index
system of psychological crisis into the common early-warning index system of crisis (including physiology, emotion, cognition and behavior) and the early-warning recognition system of suicide crisis (on the basis of common psychological crisis performance, there are some special performances in four aspects of language, behavior, relationship with surrounding environment and appearance) [18]. Cheng Jing has constructed a four-level index system of College Students' psychological crisis early warning, including the first level index of College Students' psychological crisis early warning comprehensive index, seven second level indexes of environmental background, personal status, personality characteristics, cognitive response, life event stimulation, emotional status, physiological status and physical response, 27 third level indexes and 109 original observation points, and the weight distribution of the three-level and above indexes is carried out [19]. According to the needs of her research topic, Zhou Linlin constructed a three-level index system, including the first level index, stressor, coping style, interaction item, mental factor, physiological factor, 5 second level indexes and 23 third level indexes, and allocated the weight [20]. Wen Xiaobing also constructed a three-level indicator system including stressors, coping styles, stress responses, social support and negative emotions [21].

In addition, there are many scholars who refine the early warning indicators of College Students' psychological crisis into a scale to enhance its applicability. For example, Liang Baoyong's psychological stress scale for Chinese college students [22], Xu Huanfang's stress response scale and stressor scale [23].

The Construction Method of Early Warning Index System of Chinese College Students' Psychological Crisis

In the study of College Students' psychological crisis early warning index system, although most scholars are directly using the methods of experience summary and theoretical analysis, but there are many scholars trying to carry out empirical analysis and qualitative research. The scholars who adopt the empirical analysis method, they always build a theoretical index system firstly based on the theoretical analysis and literature analysis, and then combine their own research topics to carry out further research through specific research methods. For example, on the basis of literature research and interviews, Jin Hongzhang and others compiled the psychological crisis test for Chinese college students, and used exploratory factor analysis and confirmatory factor analysis to determine the test structure and project retention, and used internal consistency coefficient to test the test reliability [5]. Xu Hongyan used literature analysis to establish the individual characteristics of crisis susceptibility factors, and used questionnaire survey and multiple regression analysis to determine the individual background indicators of stress sources, stress reactions and crisis susceptibility factors [17]. On the basis of investigation and research, Guo Lan and Gong Yu took the characteristics of College Students' psychological development and the current situation of mental health as the research background, established and constructed the early warning index system by questionnaire survey, expert interview and analytic hierarchy process [16]. Cheng Jing mainly used questionnaire survey and factor analysis to confirm the index, and used AHP and Delphi technology to determine the index weight [19]. Zhou Linlin used the literature analysis method when selecting the factors of College Students' psychological crisis, used the questionnaire survey method when establishing the early-warning indicators, and used the structural equation model to explore the path relationship between the factors inducing psychological crisis and the psychological crisis, analyzed the interaction effect between the factors, and established an early-warning indicator system with interaction items [20]. On the basis of questionnaire survey, through structural equation model, Wen Xiaoqing found that coping style had significant partial mediating effect on stressors and stress response, and stressors were also partial mediators of social support and stress response [21]. Zhang Yong uses the index reduction method of limiting advantage rough set to reduce the early-warning index system of College Students' psychological crisis, and finally obtains the leading factors of students' psychological crisis, so as to achieve the objective and de redundant purpose of the early-warning index system, and expounds the advantages of this method [24].
Hong Li is the representative of scholars who adopt qualitative research methods. She used content analysis method to study 100 college students' psychological crisis intervention reports in four universities, collected and sorted out college students' psychological crisis early warning indicators, and used semi-structured interview method to conduct interview for six front-line staff of psychological crisis early warning, to test the applicability of the indicators [15].

The Evaluation on the Researches of the Early Warning Index System of Chinese College Students' Psychological Crisis

It can be seen from the first three parts that, although scholars have different focuses on the selection of indicators, they are basically carried out in the four dimensions of stressor, stress response, individual characteristics and environmental variables, and these researches have several characteristics: firstly, the indicator system is becoming more and more perfect, from the initial two levels to three or even four levels, and some have developed scales. Secondly, the theoretical basis of the selection of indicators is not clear, which may lead to confusion of logic between indicators, some of which have inclusion relations. Thirdly, the index classification standard is not clear, the systematization of indicators is not strong or the level division between indicators is not scientific, resulting in the same level of indicators is not the same level of juxtaposition. Fourthly, the selection of indicators mainly comes from the summary of personal subjective experience. The construction method of indicators is relatively simple, scientific and empirical research is less, and not enough in-depth; qualitative research such as case analysis is insufficient. Fifthly, the index should include two parts: index name and index value, which can be operated. However, most of the existing research results only answer the "quality" part of the index, that is, only discuss the index name, while the "quantity" part of the index, that is, the establishment of index weight, is less. Sixthly, the research on the verification of early warning indicators is insufficient. Seventhly, the research on specific application methods of early warning index system in practical work is insufficient.

Future Research Direction

Firstly, construct the theory of early warning index system of Chinese college students' psychological crisis. Secondly, enrich the research methods of Chinese college students' psychological crisis early warning indicator system, strengthen the empirical research, expand the sample size of empirical research, test the reliability and validity of research results, and carry out longitudinal follow-up research. Thirdly, the application of big data, mobile Internet, self media, data mining technology, artificial intelligence technology in the construction of College Students' psychological crisis early warning index system and the ethical issues that may be involved. Fourth, the combination of early warning index system and the development of College Students' psychological crisis management platform.

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