Original Research

Resilience and its influential factors in left-behind middle school students in Yunyang County of Rural Three Gorges Areas in China: a cross-sectional survey

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ABSTRACT

Background: Left-behind middle school students are a common phenomenon in the rural Three Gorges areas causing wide concerns as students in puberty undergoing rapid development of the mind and body. This study examines the mental health of the left-behind middle school students from a positive perspective instead of emphasizing negative factors, which may explore a new way to study their mental health.
Study design: A cross-sectional survey.
Methods: A cross-sectional study was conducted among middle school students in the Yunyang County of the Rural Three Gorges areas. Information about demographic characteristics was collected using a self-designed questionnaire; mental health status, resilience status, and the influential factors of resilience were collected using Mental Health Test (MHT) and Resilience and Youth Development Module (RYDM) scales.
Results: The detection rate of mental health problems in left-behind students was 6.01%. The difference in detection rates between left-behind students and non-left-behind students was not significant. The detection rates of low resilience in left-behind students was 0.95%, of medium resilience was 54.15%, and of high resilience was 44.90%. Binary logistic regression analysis showed that influential factors associated with the resilience of left-behind students included grade, contradiction with the guardian, and students' worry about their parents working outside the county.
Conclusions: Future studies should explore the links between each influential factor and its influencing mechanism. Meanwhile, the appropriate mental health education activities should be conducted in line with local conditions.

Introduction

According to a recent survey from the National Bureau of Statistics of China, the number of rural-to-urban migrant workers exceeded 163 million in 2012.[1] These migrants are forced to leave their residences for better paid jobs in cities while their children stayed at home. This long-term separation from the parent-child family model results in a special group of individuals: the left-behind children. This study focused on the middle school left-behind children, who are specifically defined as 'middle school students who have lived and studied at their original rural residence while one or both parents migrate into city for work at least six months.' Middle school students in the survey refer to the junior and senior high school students aged between 13 and 18 years old. By 2009, the number of 'left-behind children' in rural China reached 58 million people, 20 million of whom were middle school students.[2,3]

The existing studies found that left-behind middle school students in this age group are undergoing puberty, with the rapid development and maturity of the mind and body, they could encounter various mental health problems.[4,5] Moreover, they do not grow up in intact families, and the lack of parental love and care may easily lead to loneliness, inferiority, depression or other mental health problems.[6–8]

Recently, the research on the psychology of left-behind middle school students has been gradually increasing both domestically and abroad. However, relevant studies have laid much emphasis on the risk factors of mental health,[8–11] while few are concerned about the psychology of mental health from a positive perspective which aims at studying its protective factors. From a practical point of view, left-behind students do not necessarily all have negative problems. In 1955, Werner and colleagues launched a 20-years longitudinal study with 505 individuals on the island of Kauai, Hawaii.[12] Their research demonstrated that one out of every three high-risk children (most of their parents did not graduate from high school and worked as semi-skilled or unskilled laborers) had developed well and authors identified this observation had a strong relationship with the self-righting tendencies. Until 1988 the concept of resilience was first put forward by Norman Garmezy,[13] but there has been no uniform definition about resilience. One accepted operational definition of resilience is the state of being able to cope well with challenges after having encountered adversity.[14] The existing studies focused on the theoretical discussion on the mechanism study of resilience and the influential factors of resilience in high-risk children (abused children, children with asthma, and students with learning disability).[15–17] Studies showed that the influential factors, which included internal factors (such as self-efficacy or disposition) and external factors (such as school, family and community), performed an important intervening function in the formation and development of resilience, thereby promoting mental health of students.[18,19]

The research hypothesizes that left-behind middle school students may not have mental health problems although they encounter some adversity and that resilience plays a vital role in this psychology. Furthermore, the cause of different adaptation levels is varied in the left-behind environment, so there are multifactors that affect students' resilience.

Presently, there is no relevant research on the resilience of left-behind middle school students in the Rural Three Gorges areas in China. Therefore, the aim of this study is to examine the mental health and resilience status as well as the influential factors of resilience in left-behind middle school students in the Yunyang County of these areas.

Methods

Study settings

The Three Gorges area is one of the 18 most economically undeveloped and poverty stricken areas in China.[20] Its geological conditions are poor, and its agricultural and industrial productivity levels are low. Most farmers are forced to work away from home in order to increase household income and save money for their children's educations. There were 900,000 left-behind children in the rural Three Gorges areas, accounting for 38% of the total number of left-behind children in Chongqing.[21] This study was conducted in Yunyang County, which is located in the center of the Three Gorges Areas. Yunyang County was the first big immigrant county and one of the counties identified as in need of support by the national poverty alleviation and development program. Meanwhile, Yunyang County has a population of 1.3 million with about 100,000 left-behind middle school students.[22]

Considering the geographic location, economic conditions, and demographic characteristics, three townships of Yunyang County, including Hongshi, Gaoyang and Panshi, were selected as the sampling areas. The specific conditions of the three townships are shown in Supplementary Table 1.[23]

Participants and sampling procedures

This study was a cross-sectional survey which conducted according to a multistaged stratified cluster random sampling method. A pilot investigation has been carried out for further modifying and perfecting the study protocol and tools before the formal investigation. First, we chose Yunyang County from the Rural Three Gorges Areas; then, we selected three townships and one middle school from each selected township. Junior and senior high school students were selected respectively. In the three middle schools, three to five classes were randomly selected from the junior grade one and from the senior grade one respectively; a total of 23 classes from the three middle schools were selected. At last, the questionnaires were administered to the whole class, which was sampled from the grade.

Survey procedures

The standard questionnaires developed by the research team from Chongqing Medical University, China were distributed with survey instructions. The survey was conducted during October 2012 and the sampled students were asked to complete a self-administered questionnaire under the guidance of the investigators. It took the students about 20–30 min to