

Research Article

EXPLORATION AND REVISION OF THE CONTENT FOR “MENTAL HEALTH SCALE FOR MIDDLE SCHOOL STUDENTS (MSSMHS)”: EXPERT CONSENSUS AND ANALYSIS OF RELIABILITY AND VALIDITY

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Abstract

Objective: Primary and secondary school students in a unique stage of development, has a unique psychological age characteristics, their mental health screening should be appropriate for their psychological development characteristics. The contents of Middle School Students Mental Health Scale (MSSMHS) were explored and revised, and the reliability and validity of the revised scale were tested.

Methods: The middle school and high school students in Shiyang city of Hubei province were selected by random cluster sampling, and the revised mental health scale for middle school students was used to investigate. The 57 items of the original scale were revised, and SPSS25.0 statistical software was used for statistical analysis of the data. Cronbach's Alpha coefficient under Alpha was used to test the reliability of the scale. Factor analysis was used for structural validity analysis.

Results: The results of factor analysis, correlation analysis and internal consistency coefficient showed that the revised scale had high reliability, and its validity also met the requirements of psychological measurement.

Conclusion: The revised content of "MSSMHS" reasonably avoids cultural taboos and sensitive words of "suicide", and has good reliability and validity, which is worth popularizing in the practice of psychological assessment of middle school students.
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Keywords: Middle School Students, Mental Health, Suicide, Reliability, Validity, Expert Consensus

Introduction

The mental health of middle school students has always been the focus of social attention. In recent years, the COVID-19 and electronic products have affected middle school students.

Many surveys at home and abroad and self-reports of middle school students show that middle school students have psychological and behavioral problems such as social withdrawal, poor learning, exam anxiety, smoking and drinking to varying degrees [1-5], which

seriously affects the physical and mental health and growth of adolescents. In terms of self-developed measurement tools, Professor Wang Jisheng took the lead in compiling the "Mental Health Scale for Middle School Students (MSSMHS)", which is widely used and can accurately measure and find out the mental health problems and symptoms of middle school students. However, the content of item 57 of MSSMHS adopts the content expression of "I often have suicidal thoughts". Considering the cultural sensitivity and taboos and the voice of content expression, it is necessary to revise and improve the content of item 57. A large sample of middle school students is applied, and the reliability and validity of the revised MSSMHS are tested and analyzed. The report is as follows.

Brief introduction of MSSMHS scale

Mental health is very important in students' growth. It not only restricts students' physical health, but also plays an important role in students' personality and intellectual development [6]. Mental health level is also an important factor restricting academic achievement [7]. This scale is compiled by Professor Wang Jisheng, a famous psychologist in China. It can be used to evaluate the mental health status of middle school students. The scale consists of 60 items, and it includes 10 subscales. They are obsessive-compulsive symptoms, paranoia, hostility, interpersonal sensitivity, depression, anxiety, learning pressure, maladjustment, emotional instability and psychological imbalance. That is, the mental health status of subjects can be measured as a whole, or evaluated according to the average score of each scale [8]. The scale uses a 5-level scoring system, and each question is a declarative sentence. An assessment takes about 20 minutes. He has tested this scale with a large sample (20,000 subjects). Due to its wide coverage, high screening rate, small number of questions, and short duration, the scale is an effective and accurate tool to measure the mental health status of middle school students. It is independently completed by middle school students and is widely used [9-12]. The scale adopts a 5-level score from 1 (none) to 5

(always). The test-retest reliability is between 0.716 and 0.905, the homogeneity reliability is between 0.6501 and 0.8577, and the split-half reliability is between 0.6341 and 0.8400; The correlation between the total score of the scale and each subscale is 0.7652-0.8726, and the correlation between each subscale is 0.4027-0.7587 [13].

Methodology

In the MSSMHS scale, items 5, 13, 14, 16, 44 and 57 are the contents of depression factors, of which question 57 is "I often have suicidal thoughts". Can the word "suicide" be replaced by "life is meaningless" or "despair"? It is still not very reasonable. By referring to the content of depression and suicide on Beck Depression Questionnaire, PHQ-9 scale, Burns Depression Checklist (BDC), SDS scale and Center for Epidemiologic Studies Depression Scale (CES-D), the first round of expert demonstration and research meeting was held. At least two experts from different professional fields and institutions participated in the revision. Among them, there were 6 chief psychiatrist, 10 psychologists, 8 educators, 5 social workers, 3 government leaders, 2 computer engineers, and 2 statisticians. After the first round of expert argumentation meeting, the three items "I feel like life is meaningless.", "I feel like living, studying, or even entertaining is meaningless." and "There is no point in doing anything." were suggested as a replacement for "suicide". We needed to refer to several other items of depression factors in MSSMHS scale. Among them, Item 5: I feel depressed; Item 13: I cry easily; Item 14: I feel hopeless for the future; Item 44: I am often listless and unable to lift myself up. It was necessary to ensure that the newly revised content did not overlap with the above four items. Then we held the second and third rounds of expert discussion meetings. Finally, it was confirmed that item 57 of the MSSMHS scale was revised as: "I often have the idea of doing anything is meaningless".

Survey objects and methods

From March 25, 2021 to April 15, 2021, students from two ordinary high schools and two ordinary

students' mental health, this scale will be continuously revised and improved to realize the distinctive features of simplicity and practicality, and to become a scale that researchers of mental health and workers in the fields of counseling and education are willing to use.

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Authors' contribution

X Chen, GL Yan and CQ Ai attended to the patient. X Chen, K Ma and Q Luo wrote the manuscript. ZC Liu gave conceptual advice. All authors read and approved the final manuscript.

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Availability of data and materials

The datasets analyzed in this case report are available from the corresponding author on request.

Ethics approval and consent to participate

All experimental protocols were approved by Shiyuan Taihe Hospital Ethics Committee, Reference Number (201930).

Competing interests

The authors declare that they have no competing interests.

Statement

All methods were carried out in accordance with relevant guidelines and regulations. The students involved were all anonymous, as no specific students' names were involved, all data results were approved by the education department and government. All experimental protocols were approved by Shiyuan Taihe Hospital Ethics Committee and Shiyuan City government. All

informed consent forms are signed by their parents or legal guardian.

References

1. Agorastos A, Tsamakis K, Solmi M, Correll CU, Bozikas VP. The need for holistic, longitudinal and comparable, real-time assessment of the emotional, behavioral and societal impact of the COVID-19 pandemic across nations. *Psychiatriki*. 2021.
2. Lin Z, Zhang X, Chen L, Feng D, Liu N, et al. Impact of middle-and long-distance running on mental health in college students in Guangzhou during COVID-19 outbreak. *Journal of Southern Medical University*. 2021;41(12):1864-1869.
3. Xiang Y, Miao Y, Zhang J, Lin Y. The status of chinese national theoretical discourse system and its correlation with psychological education of college students. *Frontiers in Psychology*. 2021;12:755115.
4. Wang Y, Di Y, Ye J, Wei W. Study on the public psychological states and its related factors during the outbreak of coronavirus disease 2019 (COVID-19) in some regions of China. *Psychology, Health & Medicine*. 2021;26(1):13-22.
5. Luo T, Wei D, Guo J, Hu M, Chao X, et al. Diagnostic contribution of the DSM-5 criteria for internet gaming disorder. *Frontiers in Psychiatry*. 2022;12:2406.
6. Zhu X, Tian L, Huebner ES. Trajectories of suicidal ideation from middle childhood to early adolescence: risk and protective factors. *Journal of Youth and Adolescence*. 2019;48(9):1818-1834.
7. Zhou Y, Wang J, Zhou N, Zhan J, Sun L, et al. The hidden factors affecting academic performance among chinese middle school students: traumatic experience and

- correlated with body image and partnership quality in female university students. *The Journal of Sexual Medicine*. 2016;13(10):1530-1538.
23. Vinciguerra A, Réveillère C, Potard C, Lyant B, Cornu L, Courtois R. Personality profiles of students at risk of dropping out: Resilients, overcontrollers and undercontrollers. *L'encephale*. 2018;45(2):152-161.
24. Masoumian S, Zadeh HY, Ashouri A, Hejri M, Mirzakhani M, et al. Validity and reliability of the Persian version of the food thought suppression inventory for Obese University students. *East Asian Archives of Psychiatry*. 2020;30(3):84-87.
25. Marques C, Santos T, Martins MJ, Rodrigues I, Pereira AT, et al. Negative affect and eating psychopathology: the moderator effect of gender. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*. 2019 Oct;24(5):879-885.
26. Otu A, Ahinkorah BO, Ameyaw EK, Seidu AA, Yaya S. One country, two crises: what Covid-19 reveals about health inequalities among BAME communities in the United Kingdom and the sustainability of its health system?. *International Journal for Equity in Health*. 2020;19(1):1-6.
27. Malti T, Zuffianò A, Noam GG. Knowing every child: Validation of the Holistic Student Assessment (HSA) as a measure of social-emotional development. *Prevention science*. 2018;19(3):306-317.
28. Luo L, Song N, Yang H, Huang J, Zhou L, et al. Intervention effect of long-term aerobic training on anxiety, depression, and sleep quality of middle school students with depression after COVID-19. *Frontiers in Psychiatry*. 2021:1815.
29. Lu L, Xu DD, Liu HZ, Zhang L, Ng CH, et al. Mobile phone addiction in Tibetan and Han Chinese adolescents. *Perspectives in Psychiatric Care*. 2019 1;55(3):438-444.
30. Kuan PF, Powers S, He S, Li K, Zhao X, et al. A systematic evaluation of nucleotide properties for CRISPR sgRNA design. *Bmc Bioinformatics*. 2017;18(1):1-9.
31. Liu Q, Jiang M, Li S, Yang Y. Social support, resilience, and self-esteem protect against common mental health problems in early adolescence: a nonrecursive analysis from a two-year longitudinal study. *Medicine*. 2021;100.
32. Lin M, Hirschfeld G, Margraf J. Brief form of the Perceived Social Support Questionnaire (F-SozU K-6): Validation, norms, and cross-cultural measurement invariance in the USA, Germany, Russia, and China. *Psychological Assessment*. 2019;31(5):609.

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