

Intervention Study on the Psychological Health of Li and Han High School Students in Tropical China through "Sunshine Sports"

Wenhuan Huang¹, Weiguo Chen², Qiuxiang Xie^{3,*}, Qinqin Yang⁴, Wenting Hao¹

¹ Hainan College of Economics and Business, Haikou, Hainan, China

² Hainan Vocational University, Haikou, 570216, China

³ Haikou University of Economics, Haikou, 572022, China

⁴ Xinjiang Police Academy, Urumqi, 830011, China

*Corresponding author: 815146176@qq.com

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Abstract: The physical health of adolescents has been widely concerned by the society, and the study of students' mental health has become the focus of educators. The research randomly selected 65 Li and 99 Han ethnic group school students from each 3 middle schools of Haikou and Wuzhishan city in Hainan province as the research object, used scl-90 to test their mental health status, and proposed the "sunshine sports" intervention measures according to the statistical inference of the data.

1. Preface

The development of society has some effects on the mental health of middle school students. Drastic competition and school emphasis promotion rate too much, which makes family and school only attach importance to imparting knowledge and educating of intellectual, so they ignore the health development of students' psychology. At present, many of students are only child; parents hope their child will have a bright future. Promotion and mark becomes the invigorator of psychological balance. Students have to face many problems, which makes they fell confused and perplexity. But they don't know how to resolve and come face to face with psychological stress[1]. As educator, who just knows the causation of students' psychological problems, they can avoid it consciously in education. Students suffer from psychological problems caused by many reasons, but the main reason is to study pressure, social influence, family environment and teacher education methods, it reflects many contradictions form school education and social and family, so concerned about and research the students' mental health has become the focus of attention in our society. This study investigated high school students' mental health status in Hainan Han and Li ethnic group, through statistical inference, interventions of sunshine sports is proposed[2].

2. Subjects and Methods

2.1 Object of Study

This research took middle school students of Hainan province as the research community, Li and Han ethnic group students of each 3 middle schools from Haikou and Wuzhishan city composed the investigated population.

2.2 Research Methods

2.2.1 Documentation Method

The author searched on "mental health", "Sports Sociology", "Health Education" and other aspect books, collected the valuable material which the research subject needed, and comprehensively referred to various research results, which laid the foundation for this research's selected topic and the related theory support.

2.2.2 Questionnaire Method

The study selected 65 Li and 99 Han ethnic group high school students from each 3 middle schools of Haikou and Wuzhishan city in Hainan province as research subjects, used “SCL-90 mental health evaluation scale” to test.

2.2.3 Mathematical statistics method

The thesis used U-test, T-test statistics and analysis (see formula below).

Selection indicators: The indicators selected in this study include the number of positive items (interpretation), total score (interpretation), factor average score (interpretation factor score), and factor standard deviation.

Comparison index: The normal population of China was used as the standard norm for comparison.

$$u = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{S_{\bar{X}_1 - \bar{X}_2}} (\sim N(0,1))$$

$$u = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

3. Results and Analysis

3.1 Analysis of scl-90 Positive Items on High School Students in Hainan

Through statistics on the number of positive items of the samples, statistical results are shown in Table 1, SCL-90 positive items for the questionnaire items on high school students in Hainan Province is 25.19 ± 20.36 , National adult healthy norm is 24.92 ± 18.41 , the number of scl-90 positive items on high school students in Hainan province is slightly higher than that of national adult healthy norm.

Table 1 The distribution of the number of scl-90 positive items on high school students in Hainan

sort	norm	High school sample	ethnic group		sex	
			Han	Li	male	female
<i>n</i>	—	164	99	65	98	66
\bar{x}	24.92	25.19	23.67	37.27	26.09	22.75
<i>s</i>	18.41	20.36	19.81	21.29	20.38	20.38

3.2 Analysis of scl-90 Total Score Situation on High School Students in Hainan

Through the statistics on scl-90 project total situation and the detection rate of psychological problems of high school students in Hainan Province, statistical results are shown in Table 2, the scl-90 total score of high school students in Hainan Province is 127.56 ± 40.15 , the total score of norm is 120.96 ± 38.76 , detection rate of psychological problems is 7.46%, which is higher than the norm. The scl-90 total score of junior middle school students with physical exercise is 110.77 ± 25.23 , the detection rate is 1.22%, which is much lower than the norm. The total score of junior middle school students with lack of physical exercise is 155.94 ± 45.66 , detection rate of psychological problems is 19.35%, which is much higher than the norm again.

Table 2 The scl-90 project total situation and the detection rate of psychological problems on high school students in Hainan

sort	norm	High school sample	ethnic group		sex		physical exercise	
			Han	Li	male	female	often	not often
<i>n</i>	—	164	99	65	98	66	98	66
\bar{x}	120.96	127.56	124.22	154.07	130.34	120	110.77	154.04
<i>s</i>	38.76	40.15	37.30	52.34	41.42	35.91	25.23	44.99
max	—	270	265	270	270	241	216	270
≥204	—	7	6	1	6	1	1	6
≥230	—	0	0	0	0	0	0	0
≥234	—	3	1	2	2	1	0	3
detection	—	10	7	3	8	2	1	9
detection rate(%)	—	7.46	5.88	20.00	8.16	5.56	1.22	17.31

3.3 A Comparison between the Different ethnic group Students and the Norm

The comparison between the different ethnic group students and the norm in Hainan province is shown in table 3, Han ethnic group students in somatization, interpersonal relationship, terror, psychosis these four factor scores are higher than the norm in Hainan, while Li ethnic group students in compulsion, anxiety, hostility, terror, paranoid, psychosis these six factor scores are higher than the norm in Hainan, the u-test has significant and very significant differences. The above situation can explain that the mental health of high school students in Hainan is below the national average, the mental health state of Li ethnic group high school students is even worse than that of Han ethnic group high school students in Hainan.

Table 3 The factor mark on the different ethnic group middle school students and compared with the norm in Hainan

factor	Han ethnic group (<i>n</i> = 99)	Li ethnic group (<i>n</i> = 65)	norm	<i>u</i> -test	
				Han	Li
somatization	1.22±0.38	1.32±0.35	1.37±0.48	* *	
compulsion	1.62±0.62	1.98±0.67	1.62±0.58		* *
interpersonal relationship	1.53±0.56	1.78±0.54	1.65±0.61	* *	
depression	1.37±0.46	1.64±0.57	1.39±0.43		* *
anxiety	1.46±0.54	1.75±0.74	1.46±0.55		* *
hostility	1.33±0.46	1.51±0.54	1.23±0.41	* *	*
terror	1.46±0.56	1.66±0.68	1.43±0.57	*	
paranoid	1.41±0.53	1.66±0.57	1.29±0.42		*
psychosis	1.51±0.56	1.74±0.65		* *	*

4. Conclusion and Analysis

The mental health level of high school students in Hainan is obviously lower than the domestic adult's health mold, and the mental health condition of Li ethnic group middle school students is worse than the mental health condition of Han ethnic group middle school students in Hainan. This

explained that the mental health question of Li ethnic group high school students is serious day by day in Hainan.

The mental health state of junior middle school male students is better than that of female student in Hainan, specially in the compulsion, anxiety, hostility, phobia, paranoid these 5 aspects appears more prominent; But the mental health state of High school students in Hainan is better than that of junior middle school students[3].

The mental health level of the middle school students frequently taking part in physical exercise is lower than normal level in Hainan, but middle school students without physical exercise in compulsion, interpersonal relationship, depression, anxiety, hostility, paranoia, and psychosis these 7 factor minutes are higher than normal level in Hainan. All sorts of situations indicated that regular physical exercise have some positive effects on the mental health of high school students in Hainan[4].

5. Intervening Measures of Sunshine Sports

How to promote the reform of physical education is the purpose to regulate students' psychological characteristics and improve their mental health. We analyzed these mental health problems as students exist: People with symptoms of compulsive disorder should relax themselves, keep good mood, kindness, reality and normal, rather than grief, hostile and intolerance. Therefore, we could consciously make full use of characters of physical to improve the mental atmosphere of students. They shall learn to relax themselves, be happy and have quick thoughts. Hereon, we give some suggestions focused on physical education of middle school students accordingly.

5.1 Emphasizing the Entertainment of Physical Education

According to the research, if a student loves exercise, who will benefit mental health from it. Otherwise, it's impossible to make him satisfied. So students could experience happiness and love physical training from its lively and interesting teaching methods, and good for their mental health, especially for those students with compulsive disorder and grief.

5.2 Improving the Mutual Assistance of Physical Education

Sport psychologists thought the individual is easily fascinated by the group because of some reasons as bellow: self-identity, social enforcement, competition and opportunity of participation. Sports participator can keep closely with others. Gym teacher shall develop communication and encourage teamwork among students. It's a good skill to improve interpersonal relation and keep mental health, especially for those impulsive disorders[5].

5.3 Focus on Commonality of Physical Education

Commonality is not just called exercise together, but to develop the strength and purpose of commonality in students. The commonality of community sports is the best way to cultivate students' mental health. By engaging in a variety of sports (take ball and relay racing as examples), they take on their responsibilities and obligations as members of the community[6]. Students can get encouragement, help and exercise from the community, and the role of the community is to educate and regulate the sad, rational and unfree students.

5.4 The Encouragement of Sunshine Physical Training

Through the above research and analysis, we find that there are some mental health problems in Li ethnic group middle School students in Hainan Province. As a sports worker, we should always grasp the psychological characteristics of students; A variety of sunshine sports training methods were adopted to intervene. In addition, we should encourage students to go outdoors to breathe fresh air and take part in some proper sports when they are under great pressure. An hour of exercise every day can relieve students' tension, improve their physical and mental health, enhance physical fitness, and achieve the purpose of improving learning efficiency.

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Corresponding author: Xie Qiuxiang, female, Han ethnic group, lecturer. Her research interests include student mental health and college physical education teaching reform. Email: 815146176@qq.com.

References

- [1] WHO.Diet, physical activity and health: report by the secretariat. Fifty-fifth World Health Assembly, Provisional agenda item[R].Geneva:WHO,2002.
- [2] Atlanta Centers forDisease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Physical activity and health: a report of the surgeon general[R]. Atlanta:Atlanta CDC,1996.
- [3] Wang Meirong and Yang Deming.Sports can improve the university students'interpersonal relationship and the psychological quality[J].Journal of Xinyu College,2007,12(3):81-83.
- [4] Zhang Juhuan.A research on the relationship between the physical exercise and mental health among the graduates at the university[J].China School Health.2007,28(8):757-758.
- [5] Li Yun, Shen Liqin, Li Rongqiong and so on. The influence of sports habits on mental health of the middle school students[J].Modern Nursing.2007,13(18):1694-1696.
- [6] Ji Liu, Li Lin and Wang Xiaozan. The influence of physical exercise on mental health[J].Journal of Guangzhou Physical Education Institute.1998,14(1):37-42.