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A108: Mood State of the University Students During the COVID-19 and Its Influencing Factors: A Longitudinal Analysis Based on Three-Year Data

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Abstract

Purpose: Employing a stratified random sampling approach, we conducted an investigation into the mental state and its influencing factors among 10,285 college students across 80 universities in 20 provinces (cities), spanning Beijing, Fujian, Gansu, Guangdong, Guizhou, Henan, Hubei, Hunan, Jiangxi, Jilin, Liaoning, Ningxia, Qinghai, Shandong, Shanxi, Shaanxi, Sichuan, Tibet, Zhejiang, and Chongqing. This study, conducted in 2020, 2021, and 2022, aims to effectively enhance the mental well-being of college students within the context of the COVID-19 pandemic. **Methods:** Frequency was employed to examine the basic characteristics of the respondents. The Pearson chi-square test was then utilized to test the rates of emotional strife across different parameters such as grade, gender, ethnicity, year, visual acuity, physical activity (PA), and physical class. Additionally, binary logistic regression was applied to analyze the quantitative-effect relationships between distinct mental states and various other indicators. **Results:** The chi-square test indicated statistically significant differences ($p < 0.05$) in the comparison of emotional strife scores among college students across the years 2020, 2021, and 2022, except for high total emotional strife scores and visual acuity across different physical fitness levels. Results from binary logistic regression analysis demonstrated a significant effect ($p < 0.05$) of all factors, excluding physical class, on emotional strife among college students. Specifically, the odds of higher emotional disturbance decreased in 2021 ($OR=0.782$) compared to lower total emotional disturbance scores. However, except for graduate students, the odds of higher emotional disturbance gradually increased with higher academic levels (sophomore, $OR=1.51$; junior, $OR=2.319$; and senior, $OR=2.932$) compared to freshmen. Male students exhibited higher odds of higher emotional disturbance ($OR=1.139$) than their female counterparts. Furthermore, the odds of higher emotional disturbance were higher for male students compared to female students ($OR=1.139$). However, the odds of higher emotional disturbance decreased for Han Chinese ($OR=0.764$) and other ethnic groups ($OR=0.909$) compared to Tibetans. Simultaneously, the odds of higher emotional disturbance tended to decrease with increasing self-rated health levels compared to poor health (fair, $OR=0.509$; good, $OR=0.255$; healthy, $OR=0.157$). In terms of physical activity, compared to low PA, subjects with moderate PA ($OR=0.776$) and high PA ($OR=0.67$) tended to experience higher emotional disturbance, reflecting a decreasing trend in the odds of higher emotional strife. **Conclusion:** The impact of the COVID-19 outbreak on the mental well-being of college students exhibited significant variations. In 2021, along with poor self-health ratings and low levels of physical activity (PA), were identified as risk factors associated with higher emotional strife among college students. Conversely, being in sophomore, junior, or senior years, identifying as male, and belonging to the Han or other ethnic groups were identified as protective factors against higher emotional strife. These findings suggest that schools should specifically address Tibetan college students across different grades who engage in moderate to high levels of physical activity, aiming to enhance their overall mental well-being.

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