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# Analysis of determinants of suicide ideation among Hainan medical students based on structural equation model

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**Objective:** To investigate suicide status and influence of medical students in Hainan, and analyze the direct and indirect effects of influencing factors on suicide ideation among college students based on the structural equation model.

**Methods:** By using multi-stage sampling method, we selected 696 students of 11 majors of Hainan Medical College as the research subjects, by questionnaire, simplified coping style questionnaire, Adolescent Self-Rating Life Events Scale (ASLEC), self-rating depression scale (SDS), social support rating scale, the self-esteem inventory and the Self-rating Idea of Suicide Scale(SIOSS) was conducted.

**Results:** The idea of suicide in Hainan Medical College students occurred in 15.4%, and suicide act ideation rate was higher in male than in female ( $\chi^2=7.161$ ,  $P=0.006$ ), non-medical higher medical ( $\chi^2=6.004$ ,  $P=0.014$ ). The goodness of fit for the structural equation model was satisfactory and major indices had met corresponding requirements. The depression was a direct influencing factor on suicide ideation, while three factors including social support, positive coping style and passive coping style had indirect impacts. Negative life event and self-esteem not only directly affected suicide ideation, but also had indirect effects. According to the percentages of their contribution, the risk factors were ranked as follows: depression (45.6%), negative life event (33.6%) and passive coping style (18.5%). Similarly, the top protective factors were self-esteem (37.0%), followed by social support (28.4%) and positive coping style (14.3%).

**Conclusion:** The higher incidence of suicide idea of students at the Hainan Medical College, depression and self-esteem were the main factors of suicide ideation. So, it is of great importance to not only strengthen the mental health of college students, but also to train students to face up the difficulties with a positive style, and provide the college students with sufficient social supports.

**Keywords:** Structural equation model; Suicide ideation; Factor analysis; Medical students; Hainan

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