

**Review Article**

## **CHINESE AND AMERICAN MEDICAL STUDENTS' ATTITUDES TOWARD SUICIDE**

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### **ABSTRACT**

Less research has been done on the efficacy of current interventions to mitigate burnout among medical students and residents, inspite of its association with mood disorders, absenteeism, low job satisfaction, and medical errors. Although there are accumulating data regarding the epidemiology of suicide in Malaysia, there are meager data on suicidal ideation and attempts among medical college students. Undoubtedly, elevated impulsivity is thought to facilitate the transition from suicidal thoughts to suicidal behavior. Preventing suicide depends upon the health professionals' knowledge regarding suicide, attitude towards suicide attempters, assessment and management skills of suicidal risk. The objective of this research was to identify the associations between suicide and the personality factors of impulsivity and aggression.

**Keywords:** Personality, Behavior, Medicine, Suicide, Attitude

### **INTRODUCTION**

There is increasing use of educational technologies in medical and surgical specialties like application of an interactive virtual patient (VP) to teach suicide risk assessment to health profession trainees. An interactive VP is plausible to deliver basic concepts of suicide risk assessment to medical students. Facilitates individual preferences by giving easy access and portability, and has potential generalizability to other aspects of psychiatric training (Foster *et al.*, 2014). Less than half of the students had positive attitude in working with suicidal patients suggesting, a strong need to organize more educational and training programs on suicide prevention such that these budding health professionals are more equipped and trained to manage suicidal patients (Nebhinani *et al.*, 2013). Risky music listening behaviors continued up to an age of 25 years. Permanent hearing related symptoms were associated with health and wellbeing of people. Participants who experienced such symptoms have changed their behavior to be less risky. The study results suggest that in order to induce behavior change before permanent and irreversible hearing related symptoms occur, preventive measurements concerning hearing health are needed (Vogel *et al.*, 2014).

#### **Chinese Students**

Suicidal ideation (SI) was prevalent among Chinese university students with high aggression scores and were more susceptible to committing suicide. Scores on selforiented attack and cognitive impulsivity were important factors for differentially predicting suicide ideation and suicide attempts (Wang *et al.*, 2014). Social anxiety and negative coping style were the risk factors for suicidal ideation while better family function and quality of life were the protective factors. Suicide ideation was prevalent among rural children in Anhui province. Family, school and society must carry out different kinds of preventive measures to prevent suicide related behaviors in Chinese children (Chen *et al.*, 2013). Gender, grade, family structure, and subjective social status affect the development of Personality disorders (PDs) in Chinese. Longitudinal studies and studies of the full scope of PDs are needed to fully elucidate the impact of demographic variables on PD prevalence rates in adolescence and adulthood (Wang *et al.*, 2013).

This study revealed association between a stressful psychosocial school environment in terms of effort-reward imbalance and suicidal ideation in Chinese adolescents. Preventive measures aiming at reducing this imbalance may define a promising approach towards a healthy psychosocial school environment (Shang *et al.*, 2014). Rural background was associated with depression, which was in turn associated with suicidal ideation (Meng *et al.*, 2013). In Chinese college students, the risk of suicide was associated with

### Review Article

exposure to suicide events and life events. Exposure to suicide events involving acquaintances will modulate the effects of life events on suicide risk (Zhao *et al.*, 2013). Differences were noted in the prevalence of suicide ideation among middle school students between genders and grades in China (Chang *et al.*, 2013). Factors such as gender, nationality, religion, history of attempted suicide and suicide exposure to others had important effect on the attitude towards suicide among university students in Chongqing, suggesting the need to consider above mentioned factors when developing related suicide crisis intervention strategy (Xu *et al.*, 2013). The individual's self-esteem and social functioning played an important role in suicide risk among Japanese young adults with major depressive episodes (MDEs) of major depressive disorder (MDD) (Mitsui *et al.*, 2014).



**Figure 1: Risk factors for suicidal behavior**

The study done by Yao and Chang *et al.*, (2014) suggested that SI was common among Chinese adolescents. Being female, high score of passive coping, lower family satisfaction, lower school satisfaction, lower living environment satisfaction and higher self-esteem were significantly associated with increased risk of SI. There is need to take effective measures reducing the rate of SI among adolescents through collaboration among families, schools and society (Yao *et al.*, 2014). Both boys and girls were more likely to report suicidal ideation and attempts after a parent's remarriage, whereas family affluence was inversely related to suicidal ideation and attempts in girls, in a study done among Koreans (Lee *et al.*, 2014). Girls had more suicidal ideation than boys. No gender differences were found in suicide planning or attempted suicide. Study on middle school students of China suggested that the incidence of the suicidal behavior among students with sleeping problems was significantly higher than students without sleeping problems (Chen *et al.*, 2014).

### American Students

With the excellent scores on reliability and validity, the English version of the perceived stress scale (PSS) scales can be an excellent measurement for estimating the psychological strain levels of American college students as well as predicting their psychopathology. The study suggests PSS is applicable for research to evaluate and predict suicidal behaviors and mental disorders (Zhang and Lyu, 2014). Positive outcomes were found in program group students' suicide and depression knowledge, attitudes, confidence, and behavioral intentions compared to the comparison group. Suicide prevention specialists and prevention planners in United States can benefit from the study findings (Strunk *et al.*, 2014). Bullying victimization, in school, cyber, or both, was associated with higher risk of sadness and suicidality among teens suggesting the need for interventions to prevent school bullying as well as cyberbullying. When caring for teens reporting being bullied, either at school or in cyberbullying, it's pivotal to screen for depression and suicidality (Messias *et al.*, 2014).

### Review Article

IS	PATH	WARM
<ul style="list-style-type: none"><li>• Ideation(suicidal thoughts)</li><li>• Substance abuse</li></ul>	<ul style="list-style-type: none"><li>• Purposelessness</li><li>• Anxiety</li><li>• Trapped</li><li>• Hopelessness</li><li>• Helplessness</li></ul>	<ul style="list-style-type: none"><li>• Withdrawal</li><li>• Anger</li><li>• Recklessness</li><li>• Mood changes</li></ul>

Figure 2: Warning signs of suicide

Ten out of 13 of the medical students with suicidal risk (SR) who dialogued with a counselor were not already receiving mental health treatment. Anonymous Interactive Screening Program (ISP) identified a high proportion of an untreated, at risk, and potentially suicidal population in a US medical school (Downs *et al.*, 2014). The Bridge represented a useful method for instructing students and residents on suicide indicating significant utility in medical education. This must be used alongside lectures for assisting in education about suicide (Retamero *et al.*, 2014). Two deaths by suicide occurred in first year, two in second year, and two in third year of medical school. Two of the suicides occurred by gunshot, two by hanging, one by overdose, and for one, the cause of death was unknown. Three of the six students left a suicide note. Even the number and rate of suicides among medical students was lower than a prior survey conducted 15 years ago, the data affirm the significance of suicide prevention programs for US medical students (Cheng *et al.*, 2014). Psychiatry residents commonly experienced the death of a patient by suicide. There is a paucity of data on this topic concerning the experiences of medical students and of residents in other specialties (Puttagunta *et al.*, 2014). Training was the peak time for distress among physicians. Differences in the prevalence of burnout, depressive symptoms, and recent suicidal ideation were relatively small. Burnout was more prevalent among physicians than among their peers in the U.S. population (Dyrbye *et al.*, 2014).

"Feeling unsafe at school" was a significant risk factor for depression and all suicide questions. Being a victim of school bullying, cyberbullying, or both, increased the risk for depression, suicidal ideation and plan (Kindrick *et al.*, 2013). The risk behaviors strongly associated with suicide attempts among U.S. high school female students were injection drug use, carrying a weapon on school property, and methamphetamine use. Among male students, the strongest associations were for intra venous drug usage (IDU) using vomiting/laxatives for weight control and having been forced to have sex (Lowry *et al.*, 2014).

#### Around the Globe

Study done on German medical students reported a lifetime prevalence of 14.3% for Nonsuicidalself injury(NSSI) and 1.5% for suicide attempt. The students with NSSI showed higher levels of neuroticism and openness to experience but lower levels of conscientiousness and extraversion on the NEO Five-Factor Inventory. The results are in line with previous research from other countries regarding the prevalence of NSSI among students and its association with personality (Allroggen *et al.*, 2014). Australian medical students study findings indicated that exposure to suicidal people through clinical experience improved knowledge about suicide but can lead to more negative attitudes toward informal helpseeking. The suicide prevention curriculum must aim to raise mental health literacy levels, reduce stigmatising attitudes and limit the normalisation of suicide (Chan *et al.*, 2014). Transgender students and those reporting not being sure were numerically small group. Transgender students were diverse and

## **Review Article**

represented across demographic variables, including their sexual attractions. Transgender youth face considerable health and wellbeing disparities suggesting the need to address the challenging environments these students face and to increase access to responsive services for transgender youth of New Zealand (Clark *et al.*, 2014). Indian Nursing students had favorable attitude towards suicide attempts. Their uncertain response indicated the need for enhancing educational exposure of nursing students and new staff at the earliest, to carve their favorable attitude towards patients presenting with selfharm (Nebhinani *et al.*, 2013). Female medical students choose their profession earlier, and their career motivations were more altruistic than their male colleagues.

Lack of a role model was more typical for females. Female students had more psychosomatic disorders, and stress factors than males. Workload, sleeping disorders and emotional exhaustion were significantly higher among female medical students. The results indicate health protection of female medical students has a key role in the prevention of subsequent morbidity of female physicians in Hungary (Győrffy *et al.*, 2013). Majority of the students of Norwegian medical schools rejected legalization of euthanasia. Opinions were divided in the case of terminal illness, since a larger proportion was in favour of legalisation and more respondents were undecided (Nordstrand *et al.*, 2013). A suicide prevention training module had been considerably valued by medical students of the University of Hong Kong and lead to positive attitudes towards understanding suicide. Adopting such initiative as a suicide prevention strategy warrants further exploration (Yousuf *et al.*, 2013).

Acceptability of Physician-assisted death and Therapy withdrawal was increasing in Mexico, probably as a result of evolving social attitudes that appeared to be counteracted by a more conservative upbringing at home in young students of religiously administered medical schools (Loria *et al.*, 2013). The awareness of euthanasia was high, but a very small proportion of students approved of it in Karachi suggesting the need to include palliative care and euthanasia in the Behavioural Science module in the under graduation programmes of both public and private medical schools (Hassan *et al.*, 2013). A schoolbased educational intervention using

The Adolescent Depression Awareness Program (ADAP) improved knowledge about depression and attitudes toward helpseeking in adolescents. Future studies are needed to investigate if such change in knowledge results in helpseeking behaviors (Ruble *et al.*, 2013). Study findings suggest the presence of combined hyperactive/impulsive (HI) and/or inattentive (IA) symptoms conveyed increased suicide risk for depressed college students.

Additionally, results suggested a complex relationship between independent HI and IA symptoms and severe suicidal outcomes (Patros *et al.*, 2013). Study indicated that psychiatry clerkship provides a unique opportunity to reinforce and develop communication skills with a formal, skills-based medical curriculum (Fiedorowicz *et al.*, 2013). Priming manipulation interacted with individual differences in locus of control (LOC) among medical students. Significant differences in accessibility to implicit suicidal mind were observed in individuals with internal LOC. Effects of priming manipulation were eliminated in individuals with external LOC (Tang *et al.*, 2013).

Borderline personality characteristics like physical abuse, emotional abuse and neglect, mediated the relations between each type of child maltreatment and suicide potential. The mediating borderline symptoms were affective dysregulation, identity problems, and paranoia (Allen *et al.*, 2013). The services available for people who have attempted suicide were patchy in south Indian teaching hospitals. Training of frontline staff in the assessment and management of people who have attempted suicide is critical (Kumar *et al.*, 2012).

The prevalence of suicidal ideation and attempts among medical students of UAE was in the lower range in international comparison. Negative attitudes toward suicide were accompanied by a strong support for a suicidal friend and were related to religiosity (Amiri *et al.*, 2013). Students from Polish universities were found to have different opinions on practicing euthanasia, euthanasia law and possible abuse which might follow euthanasia legalization. They shared similar views on the choice of euthanasia if they themselves were incurably ill and the legalisation of euthanasia. Gender and religion influenced students.

### Review Article

Differences observed between medical students might be related to gender and cultural differences (Leppert *et al.*, 2013).



**Figure 3: Approach to suicide prevention**

Selfdevelopment groups, the Respiratory One Method for relaxation, and conversion to a pass-fail grading system reduced burnout. The burnout data on mindfulness training and the 2003 resident duty hour restrictions were mixed. No studies are available on burnout amongsuicide prevention among medical students or residents and premedical students (Williams *et al.*, 2014). Suicide intervention programmes and depression counseling must target older students and students of lower socioeconomic status. Students presenting to university clinics with non-inflammatory joint pain, headache or sleep disorders must be evaluated for suicidal tendencies. The Chinese Health Questionnaire and Taiwanese Health Questionnaire were found potentially valuable screening tests for early detection of potential suicidal students (Fan *et al.*, 2012). In addition to low age, high neuroticism yielded a threefold increased risk over the 15-year follow up. High reality weakness, linked to personality pathology, doubled the risk. These factors were clinically relevant for identification of students at risk (StøenGrotmol *et al.*, 2013).

### Conclusion

Positive change was found in attitudes towards suicide following the participation in the special study modules like reduced negative appraisal of suicide, reduced stigmatisation of the phenomena, and increased sensitivity to suiciderelated facts. Women and those who reported that religion was important to them were less positive than men to permit euthanasia. Workload, sleep disorders and emotional fatigued were significantly higher among female medical students. Suicide risk among young adults is related to multiple factors. It is difficult to predict suicidal behavior. Medical students and residents were more likely to exhibit symptoms of depression than others but not more likely to have experienced recent suicidal ideation. The suicide prevention curriculum must aim to raise mental health literacy, reduce stigmatising attitudes and limit the normalisation of suicide. Medical trainees need to be assisted in effectively managing the psychologically distressing consequences of the death of a patient. Novel interventional program to identify students at risk and potentially suicidal medical students must be implemented in institutions for older students and students of lower socioeconomic status. Improvement on the quality of sleep, emotional awareness and reasonable arrangement of sleeping time might help alleviate related suicidal behaviors in students.

## Review Article

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**Review Article**

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**Review Article**

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