Medical students’ attitude toward suicide attempters

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ABSTRACT

Background: Majority of health professionals have unfavorable attitudes toward the patients presenting with self-harm, which further compromises their therapeutic endeavors and outcomes. Objectives: This study was aimed to assess the medical students’ attitudes toward suicide attempters. Materials and Methods: A cross-sectional study was conducted in a tertiary care medical institute of Haryana, a Northern state of India. Two hundred and five final year medical students were recruited through total enumeration method. “Suicide Opinion Questionnaire” was administered to assess their attitudes toward suicide attempters. Results: Only minority had previous exposure of managing any suicidal patient and attended suicide prevention programs. Majority agreed for suicide attempters being lonely and depressed. Nearly half of the students reported small family, disturbed interpersonal relationship, weak personality, self-punishment approach, cultural inhibitions in emotional expression, national instability, and disbelief in afterlife, as a major push to attempt suicide. Compared to boys, girls reported the greater contribution of weak personality and self-destructive behaviors and lesser contribution of family disturbances and religious convictions as suicide triggers. They held favorable attitude for only one-third of the attitudinal statement, and they were uncertain for two-third of the attitudinal statements. Conclusions: Such a high proportion of uncertain responses imply toward lack of awareness and clinical expertise for managing suicide attempters. It also signifies the urgent need for enhancing their educational and clinical exposure, to improve their attitudes toward patients presenting with self-harm.

Keywords: Attitudes, doctors, medical students, self-harm, suicide

Medical students are a vital resource for future medical practices. Therefore, studying their attitudes toward suicide attempters is of great significance for understanding and addressing the health needs of these budding health professionals. There are several studies from the different parts of the world but only one from India. This literature gap has impelled us to study the medical students’ attitudes toward suicide attempters.

MATERIALS AND METHODS

This study was approved by the college authorities. Final year medical students pursuing MBBS course
were recruited from Postgraduate Institute of Medical Science, Rohtak, Haryana. Total enumeration method was employed, in which all the present final year MBBS students were recruited to provide a complete statistical coverage. Sociodemographic pro forma and Suicide Opinion Questionnaire (SOQ) were distributed in their classroom setting. Students were explained about the study aim and implications. Their doubts were clarified and subsequently written informed consent was taken from all the participants. The questionnaire was filled anonymously in nearly 30 min.

Following instruments were administered: Sociodemographic pro forma was used to assess their demographic profile and information about their experience of managing patients with suicide attempts and participation in suicide prevention workshops.

SOQ is a self-rated, 52-item, Likert scale which measures suicide attitude on the basis of following factors: acceptability, perceived factual knowledge, social disintegration, personal defects, and emotional perturbation. Its psychometric properties have been established and it has been widely used.

**Statistical analysis**

SPSS version 14.0 for Windows (Chicago, IL) was used. Frequencies with percentages were calculated for categorical variables, and mean and standard deviation were calculated for continuous variables. Comparisons were made by Chi-square test for categorical variables and t-test for continuous variables.

Attitude on individual item was scored on a five-point Likert scale: 1 - “strongly agree,” 2 - “agree,” 3 - “don’t know,” 4 - “disagree,” and 5 - “strongly disagree.” Mean attitude values were categorized into “favorable,” “unfavorable,” and “uncertain.” Attitude scores between 1 and 2.4 were considered “favorable attitude” or “positive disposition,” between 2.5 and 3.4 “uncertain attitude” or “unsure,” and 3.5 and above “unfavorable attitude” or “negative disposition.” The descriptors were reversed for negatively-worded items.

**RESULTS**

**Sociodemographic profile**

As shown in Table 1, total sample consists of 205 final year medical students, pursuing MBBS course. All were single and males were slightly over numbered than females. Majority were Hindus, from urban locality and nuclear family, with the mean age of 21.9 years (range 19–26 years). Only minority of students have attended workshops or lectures on the management of patients with suicide attempts and actually managed such patients.

| Variable                          | Frequency (%) |
|-----------------------------------|---------------|
| Age, mean±SD (range)              | 21.901.35 (19-26) |
| Income (INR), mean±SD (range)     | 46.965±64,275 (5000-50,000) |
| Sex, frequency (%)                |               |
| Male                              | 112 (54.1)    |
| Female                            | 94 (45.9)     |
| Marital status, frequency (%)     |               |
| Single                            | 205 (100)     |
| Religion, frequency (%)           |               |
| Hindu                             | 196 (95.6)    |
| Non-Hindu                         | 11 (4.5)      |
| Family type, frequency (%)        |               |
| Nuclear                           | 155 (75.6)    |
| Extended or joint                 | 50 (24.4)     |
| Locality, frequency (%)           |               |
| Urban                             | 122 (59.0)    |
| Rural                             | 84 (40.9)     |
| Attended workshop on suicide      | 3 (1.5)       |
| prevention, frequency (%)         |               |
| Professional experience to manage | 4 (2)         |
| suicidal patient, frequency (%)   |               |
| Had seen a patient who attempted  | 32 (15.6)     |
| suicide, frequency (%)            |               |

SD – Standard deviation; INR – International normalized ratio

**Table 1: Sociodemographic profile**

## Attitude toward suicide attempters (items mentioned in Table 2)

Attitude scores were derived for individual items and were categorized into three categories: “favorable attitude,” “uncertain attitude,” and “unfavorable attitude.” They had favorable attitude for one-third of attitudinal items (18 statements). Students had uncertain responses for the remaining two-third of attitudinal statements (34 items). Thus, overall their attitude toward suicide attempters remained predominantly uncertain.

They had a positive disposition by agreeing the following eight direct statements: majority of suicide attempters were lonely and depressed; I would be ashamed if a member of my family committed suicide; most suicide attempts were impulsive in nature; unreturned love was a main content in suicide notes; suicide rates were going to reduce substantially on allowing them for emotional expression; alcoholism and other self-destructive behaviors were different forms of unconscious suicide attempts; suicide attempters were cowards; and depressed individuals were more commonly attempting suicide and by disagreeing the following ten negatively-worded items: Suicide was an acceptable measure to end an incurable illness as well as for aged and infirm persons; most of suicide victims were older with little to live for; possibility of suicide attempts was greater in older than young population; suicide was...
Table 2: Suicide Opinion Questionnaire

| Variable                                                                 |   |
|--------------------------------------------------------------------------|--|
| Most persons who attempt suicide are lonely and depressed                |   |
| Most suicides are triggered by arguments with a spouse                   |   |
| The higher incidence of suicide is due to the lesser influence of religion|   |
| I would feel ashamed if a member of my family committed suicide          |   |
| Most suicide attempts are impulsive in nature                            |   |
| People with incurable diseases should be allowed to commit suicide in dignified manner* |   |
| Suicide is an acceptable means to end an incurable illness*              |   |
| People who commit suicide are usually mentally ill                      |   |
| Some people commit suicide as an act of self-punishment                 |   |
| Suicide is acceptable for aged and infirm persons*                      |   |
| Suicide is clear evidence that man has a basically aggressive and destructive nature |   |
| Suicide happens without warning*                                        |   |
| Most suicide victims are older persons with little to live for*          |   |
| About 75% of those who successfully commit suicide have attempted suicide at least once before |   |
| It's rare for someone who is thinking about suicide to be dissuaded by a “friendly ear”* |   |
| People who commit suicide must have a weak personality structure        |   |
| Social variables such as overcrowding and increased noise can lead a person to be more suicide-prone |   |
| A large percentage of suicide victims come from broken homes             |   |
| A rather frequent message in suicide notes is one of unreturn love       |   |
| People who set themselves on fire to call attention to some political or religious issue are mentally unbalanced |   |
| The possibility of committing suicide is greater for older people (≥60) than for younger people (20–30)* |   |
| Most people who commit suicide do not believe in an afterlife           |   |
| In times of war, for a captured soldier to commit suicide is an act of heroism |   |
| Once a person is suicidal, he is suicidal forever*                      |   |
| There may be situations where the only reasonable resolution is suicide* |   |
| Improvement following a suicidal crisis indicates that the risk is over* |   |
| Suicides among young people (e.g., students) are particularly puzzling as they have everything to live for |   |
| Once a person survives a suicide attempt, the probability of his trying again is minimal* |   |
| Suicide is a normal behavior*                                           |   |
| Many victims of fatal automobile accidents are actually unconsciously motivated to commit suicide |   |
| If a culture were to allow the open expression of feelings such as anger and shame, the suicide rate would decrease substantially |   |
| From an evolutionary point of view, suicide is a natural means by which the less mentally fit are eliminated* |   |
| Suicide attempters who use public places (such as a bridge or tall building) are more interested in getting attention* |   |
| Suicide rates are a good indicator of the stability of a nation; that is, the more suicides the more problems a nation is facing |   |
| Sometimes suicide is the only escape from life’s problems*              |   |
| If someone wants to commit suicide, it is their business and we should not interfere* |   |
| Obese individuals are more likely to commit suicide than persons of normal weight |   |
| Usually, relatives of a suicide victim had no ideas of what was about to happen |   |
| Long-term self-destructive behaviors, such as alcoholism, may represent unconscious suicide attempts |   |
| We should have “suicide clinics” where people who want to die could do so in a painless and private manner* |   |
| Those people who attempt suicide are usually trying to get sympathy from others* |   |
| People who commit suicide lack solid religious convictions              |   |
| Passive suicide, such as an overdose of sleeping pills, is more acceptable than violent suicide such as by gunshot |   |
| Suicide occurs only in civilized societies*                             |   |
| Most people who commit suicide do not believe in God                    |   |
| Children from larger families (three or more children) are less likely to commit suicide as adults than single or only children |   |
| Suicide attempters are, as individuals, more rigid and less flexible than nonattempters |   |
| The large majority of suicide attempts result in death*                 |   |
| Some people are better off dead*                                        |   |
| People who attempt suicide are, as a group, less religious              |   |
| Those who commit suicide are cowards who cannot face life’s challenges |   |
| Individuals who are depressed are more likely to commit suicide          |   |

*Negatively-worded item
the only reasonable solution in certain situations; suicide was a normal behavior; if anyone wanted to attempt suicide, one should not be interfered; suicide clinics should be established where interested individuals could die in a painless and private manner; suicide would occur only in civilized societies; some people were better off dead.

**Opinion related to characteristics of suicidal patients**

Majority of the students agreed for suicide attempters being lonely and depressed. Nearly half of the students reported small family, disturbed interpersonal relationship, weak personality, cultural inhibitions in emotional expression, national instability, and disbelief in afterlife, as a major push to attempt suicide. Nearly half were agreed that most of the suicidal people will not reveal their suicidal plans to others. One-third of the students considered unemployment and poverty as a main cause of suicide and were quite hopeless about those factors.

**Opinion related to suicide prevention measures**

More than half of the students agreed for their responsibility for suicide prevention. Nearly half of the students considered it rewarding in working with suicidal patients, whereas other half were not comfortable in assessing suicidal patients (girls > boys). Only minority of the students were defensive about suicide prevention and considered suicide management efforts as waste of resources and time.

**Relationship between respondents’ characteristics and attitude**

**Gender**

Compared to females, males had more favorable attitude for following 14 items: Most suicide attempters were lonely and depressed (1.56 ± 0.74 vs. 1.79 ± 0.67, \( t = -2.28^* \)); most suicides were triggered by arguments with a spouse (2.50 ± 0.77 vs. 2.97 ± 2.13, \( t = -2.17^* \)); higher suicide rates were due to lesser religiosity (3.05 ± 1.09 vs. 3.37 ± 0.82, \( t = -2.37^* \)); suicide attempter would remain suicidal forever (3.18 ± 1.03 vs. 3.51 ± 0.81, \( t = -2.50^* \)); suicide survivors were having minimal probability for subsequent suicide attempts (3.26 ± 1.07 vs. 3.67 ± 0.78, \( t = -3.06^* \)); suicide represents a normal behavior (3.97 ± 1.07 vs. 3.67 ± 0.78, \( t = -3.27^* \)); suicide remains a natural mean to eliminate mentally unfit (3.24 ± 1.23 vs. 3.72 ± 0.98, \( t = -3.04^* \)); suicide attempters used to have weaker religious convictions (2.96 ± 0.99 vs. 3.21 ± 0.71, \( t = -2.01^* \)); passive suicide was more acceptable than violent suicide (2.94 ± 1.01 vs. 3.23 ± 1.04, \( t = -2.06^* \)); suicide used to occur only in civilized societies (3.51 ± 1.06 vs. 3.79 ± 0.78, \( t = -2.06^* \)); mostly atheist would commit suicide (3.22 ± 1.01 vs. 3.60 ± 0.96, \( t = -2.73^* \)); children from larger families would have lesser risk of suicide (2.62 ± 1.13 vs. 2.96 ± 0.92, \( t = -2.29^* \)); and suicide attempters used to be less religious people (3.13 ± 0.93 vs. 3.46 ± 0.74, \( t = -2.77^* \)). Compared to boys, girls reported the greater contribution of weak personality and self-destructive behaviors and lesser contribution of family disturbances and religious convictions as suicide triggers.

**Religion**

Students of Hindu religion had more favorable attitude for two attitudinal items compared to students of other religions: some people used to commit suicide for self-punishment (2.58 ± 0.92 vs. 3.44 ± 0.72, \( t = -2.76^* \)); and suicide attempter would remain suicidal forever (3.30 ± 0.95 vs. 4.0 ± 0.70, \( t = -2.17^* \)).

**Locality**

Compared to students from urban locality, students from rural locality had more favorable attitude for four attitudinal items: most suicides were triggered by arguments with a spouse (2.91 ± 1.91 vs. 2.43 ± 0.76, \( t = 2.18^* \)); I would be ashamed if a member of my family committed suicide (2.57 ± 1.13 vs. 2.17 ± 0.99, \( t = 2.63^* \)); suicide used to happen without warning (2.99 ± 1.04 vs. 2.62 ± 1.14, \( t = 2.42^* \)); and suicide rates were a good indicators of the stability of a nation (3.20 ± 1.19 vs. 2.81 ± 1.09, \( t = 2.37^* \)).

**DISCUSSION**

Medical students reflect a group of future gatekeepers, insofar as they will be concerned with suicidal patients in their professional life.\[2\] Many studies have also shown that negative attitudes toward suicide prevail among medical students\[9,10\] although for some these attitudes may change over the years of medical training.\[8\] In this regard, Indian data are grossly lacking\[2\] to fill this research gap, index study was conceptualized to study final year medical students’ attitudes toward suicide attempters.

Attitudes of medical professionals toward suicide not only influence their motivation to treat patients in suicidal crises\[23\] but also their approach at times of personal crises as due to job complexity they themselves have high risk of depression\[26\] and suicide.\[27\]

Suicide attempters’ psychological assessment is recommended as comprehensive care, but many patients are usually not assessed.\[28,29\] However, when assessed, the

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1 *\( P < 0.05 \)
2 **\( P < 0.01 \)
3 ***\( P < 0.001 \)
majority of patients perceived it superficial and rushed. In real world practice doctors', unfavorable attitudes toward suicide attempters have been reported with favorable attitudes among older and experienced doctors. 

Common suicide triggers were reported somewhat similar to earlier studies such as disturbed interpersonal relationship, small family, weak personality, cultural inhibitions in emotional expression, and national instability. Again in line with earlier studies nearly half of our participants opined for the common association of mental illness and broken homes with suicide attempters.

Our participants held predominantly uncertain attitude toward patients presenting with self-harm, whereas other studies on health professionals reported favorable or unfavorable more commonly. It points toward their lack of awareness, education, and experience of managing patients with self-harm.

Earlier studies reported more positive attitude in female health professionals, whereas index study found more favorable attitude in males. Suicide was considered as an impulsive behavior in index as well as earlier study.

In earlier studies, greater professional experience was found to be associated with improvements in attitude in psychiatric setting, but not in general hospital setting. Greater education was more consistently associated with positive attitudes. Our mean attitude scores were similar to other study but we could not find any of such association as our participants were nearly of same age, with limited clinical experience and minority has attended any workshop/lecture on suicide prevention.

Cultural factors play a significant role in individual’s suicidal behavior and in attitudes toward suicide attempters as shown among Indian and Austrian, Austrian and Turkish, and Japanese and American medical students. The only Indian study reported very restrictive attitude of medical students in Madras (India), whereas more permissive attitude toward suicide was found in Vienna (Austria).

Index study has several limitations: findings cannot be generalized as the sample was drawn only from a medical institution of Northern India, SOQ is not validated for the Indian population, and we could not collect information about respondents' personal or family history of any suicidal idea or acts. Minority of the students have attended awareness lectures and educational sessions on the management of suicide attempters and they also had limited experience of managing this population; thus, we could not establish any association between the knowledge and expertise with their attitudes.

However, with these limitations, the study leads to the following conclusions: small family, disturbed interpersonal relationship, weak personality, cultural inhibitions in emotional expression, national instability, and disbelief in afterlife, were commonly considered as a major push for suicide. Only minority had previous exposure of managing any suicidal patient and attended any related educational program. Their attitude toward suicide attempters was predominantly uncertain. This imply toward the lack of knowledge and exposure for this complex public health concern and also signifies the urgent need for enhancing their educational and clinical exposure, to carve their favorable attitude toward patients presenting with self-harm.

Future studies should assess health professionals’ attitude toward suicide attempters with a larger sample size in different educational, hospital, and community settings, by additionally employing qualitative methods, to examine interrelationship between professionals’ attitude, demographic profile, perceived social support, coping strategies, spiritual and religious practices, personal or family history of suicidal behaviors, etc.

Since the majority of the medical students may not find psychiatry as their specialty, therefore, acquisition of appropriate attitudes toward suicidal patients among all medical students during medical training is of vital importance. Undergraduate medical school curricula provide an important platform and opportunity to equip future doctors with education and clinical skills for assessment, management, and prevention of suicide.

Medical students are future doctors, who frequently encounter suicide attempters and therefore they must be aware of their attitudes toward this group of patients as part of their professional training. Therefore, the index study has several implications for improving medical students’ attitudes toward suicide attempters through awareness and educational programs for suicide risk assessment, management, and prevention of future attempts.

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Conflicts of interest
There are no conflicts of interest.

REFERENCES

1. Bašić S, Lazarević B, Jović S, Petrović B, Kocić B, Jovanović J. Suicide knowledge and attitudes among medical students of the University of Niš. Med Biol 2004;11:154-9.
2. Etzersdorfer E, Vijayakumar L, Schöny W, Grausgruber A, Sonneck G. Attitudes towards suicide among medical students: Comparison between Madras (India) and Vienna (Austria).
3. National Crime Records Bureau. Suicides in India; 2014. Available from: http://www.ncrb.gov.in. [Last accessed on 2016 Jul 02].

4. Sethi S, Shipra U. Attitudes of clinicians in emergency room towards suicide. Int J Psychiatry Clin Pract 2006;10:182-5.

5. Samuelsson M, Asberg M, Gustavsson JP. Attitudes of psychiatric nursing personnel towards patients who have attempted suicide. Acta Psychiatr Scand 1997;95:222-30.

6. Barber JH, Hodgkin GK, Patel AR, Wilson GM. Effect of teaching on students’ attitudes to self-poisoning. Br Med J 1975;2:431-4.

7. Domino G, Takahashi Y. Attitudes toward suicide in Japanese and American medical students. Suicide Life Threat Behav 1991;21:345-59.

8. Wallin U, Runeson B. Attitudes towards suicide and suicidal patients among medical students. Eur Psychiatry 2003;18:329-33.

9. Sato R, Kawanishi C, Yamada T, Hasegawa H, Ikeda H, Kato D, et al. Knowledge and attitude towards suicide among medical students in Japan: Preliminary study. Psychiatry Clin Neurosci 2006;60:558-62.

10. Emul M, Uzunoglu Z, Seving H, Güzel C, Yilmaz C, Erkut D, et al. The attitudes of preclinical and clinical Turkish medical students toward suicide attempters. Crisis 2011;32:128-33.

11. Eskin M, Voracek M, Stieger S, Altinyazar V. A cross-cultural investigation of suicidal behavior and attitudes in Austrian and Turkish medical students. Soc Psychiatry Psychiatr Epidemiol 2011;46:813-23.

12. Ouzouni C, Nakakis K. Attitudes towards attempted suicide: Tim development of a measurement tool. Health Sci J 2009;3:222-31.

13. Youusuf S, Beh PS, Wong PW. Attitudes towards suicide following an undergraduate suicide prevention module: Experience of medical students in Hong Kong. Hong Kong Med J 2013;19:377-85.

14. Rogers JR, DeShon RP. A reliability investigation of the eight clinical scales of the Suicide Opinion Questionnaire. Suicide Life Threat Behav 1992;22:428-41.

15. Rogers JR, DeShon RP. Cross-validation of the five-factor interpretive model of the Suicide Opinion Questionnaire. Suicide Life Threat Behav 1995;25:305-9.

16. Domino G, Moore D, Westlake L, Gibson L. Attitudes toward suicide: A factor analytic approach. J Clin Psychol 1982;38:257-62.

17. Domino G. Test-retest reliability of the Suicide Opinion Questionnaire. Psychol Rep 1996;78(3 Pt 1):1009-10.

18. Kodaka M, Postuvan V, Inagaki M, Yamada M. A systematic review of scales that measure attitudes toward suicide. Int J Soc Psychiatry 2011;57:338-61.

19. Anderson M, Standen P, Nazir S, Noon JP. Nurses’ and doctors’ attitudes towards suicidal behaviour in young people. Int J Nurs Stud 2000;37:1-11.

20. Anderson M, Standen PJ. Attitudes towards suicide among nurses and doctors working with children and young people who self-harm. J Psychiatr Ment Health Nurs 2007;14:470-7.

21. McCann TV, Clark E, McConnachie S, Harvey J. Deliberate self-harm: Emergency department nurses’ attitudes, triage and care intentions. J Clin Nurs 2007;16:1704-11.

22. Kim SN, Lee KS, Lee SY, Yu JH, Hong AR. Awareness and attitude toward suicide in community mental health professionals and hospital workers. J Prev Med Public Health 2009;42:183-9.

23. Chan SW, Chien WT, Tsao S. Evaluating nurses’ knowledge, attitude and competency after an education programme on suicide prevention. Nurse Educ Today 2009;29:763-9.

24. Nebhinani M, Nebhinani N, Tamphasana L, Gaikwad AD. Nursing students’ attitude towards suicide attempters: A study from rural part of Northern India. J Neurosci Rural Pract 2013;4:400-7.

25. Ramsay R, Bagley C. The prevalence of suicidal behaviors, attitudes and associated social experiences in an urban population. Suicide Life Threat Behav 1985;15:151-67.

26. Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. Acad Med 2006;81:354-73.

27. Schernhammer ES, Colditz GA. Suicide rates among physicians: A quantitative and gender assessment (meta-analysis). Am J Psychiatry 2004;161:2295-302.

28. Kapur N, House A, Creed F, Feldman E, Friedman T, Guthrie E. Management of deliberate self poisoning in adults in four teaching hospitals: Descriptive study. BMJ 1998;316:831-2.

29. Bennewith O, Gunell D, Peters T, Hawton K, House A. Variations in the hospital management of self harm in adults in England: Observational study. BMJ 2004;328:1108-9.

30. Hengeveld MW, Kerkhof AJ, van der Wal J. Evaluation of psychiatric consultations with suicide attempters. Acta Psychiatr Scand 1988;77:283-9.

31. McCann T, Clark E, McConnachie S, Harvey I. Accident and emergency nurses’ attitudes towards patients who self-harm. Accid Emerg Nurs 2006;14:4-10.

32. McLaughlin C. Casualty nurses’ attitudes to attempted suicide. J Adv Nurs 1994;20:1111-8.

33. Anderson M. Nurses’ attitudes towards suicidal behaviour – A comparative study of community mental health nurses and nurses working in an accidents and emergency department. J Adv Nurs 1997;25:1283-91.

34. McAllister M, Creedy D, Moyle W, Farrugia C. Nurses’ attitudes towards clients who self-harm. J Adv Nurs 2002;40:578-86.

35. Ghose AH. The attitudes of casualty staff and ambulance personnel towards patients who take drug overdose. Soc Sci Med 1978;12:341-6.

36. Domino G, Perrone L. Attitudes toward suicide: Italian and American medical students. Psychol Rep 1993;73(Pt 4):495-504.

37. Friedman T, Newton C, Coggan C, Hooley S, Patel R, Pickard M, et al. Predictors of A and E staff attitudes to self-harm patients who use self-laceration: Influence of previous training and experience. J Psychosom Res 2006;60:273-7.

38. Commons Treloar A, Lewis A. Professional attitudes towards deliberate self-harm in patients with borderline personality disorder. Aust N Z J Ment Health Nurs 2008;42:578-84.

39. Sun FK, Long A, Boore J. The attitudes of casualty nurses in Taiwan to patients who have attempted suicide. J Clin Nurs 2007;16:255-63.