

# Subjective experience of depressed mood among medical students at the University of Pretoria

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*Introduction.* Following the suicide of a 4th-year medical student, questions were raised as to whether medical students are more vulnerable to depression and suicide than their counterparts studying other courses at the University of Pretoria. A literature search revealed that medical students and doctors run a higher risk for suicide than other students and professions.

*Method.* A questionnaire was devised and distributed to medical students and a control group of other students, asking about feelings of despair/hopelessness, suicide ideation and previous attempts, knowledge regarding support structures provided by the university, and willingness to use these structures.

*Results.* Both groups of students responded similarly to all questions. Frequency of diagnosed psychiatric illness, use of medication, and suicidal thoughts and attempts did not differ significantly. Both groups of students were unaware of support services offered by the university, and both were unwilling to utilise such services. The students seemed to have high rates of depression in comparison with prevalence data from other countries.

*Conclusion.* Attempts to improve support for medical students should address students' awareness of available support structures and their willingness to utilise them.

In 2005, a 4th-year medical student at the University of Pretoria committed suicide a day before her mid-year exam. Her classmates felt stunned and guilty for not recognising her distress. In their words: 'The news came to all of us as a shock, as she always appeared to be in control and sure of herself. ... somehow we all failed in recognising the burden that our classmate was carrying.'

Suicide in Pretoria by young people between the ages of 21 and 24 years accounted for 8.4% of all suicide victims.<sup>1</sup> This is similar to the figures quoted in the guidelines by the American Academy of Child and Adolescent Psychiatrists (AACAP) for suicide management in adolescents,<sup>1</sup> which state that suicide in the age group 20 - 24 years accounted for 8% of all suicide victims during 1997 in the USA, and that 7% of all deaths in this age group were attributable to suicide.

Tyssen *et al.*<sup>3</sup> and Wallin and Runeson<sup>4</sup> report that physicians run an increased risk of committing suicide, but that only a few studies have been done on suicide and suicidal ideation among medical students and young physicians. Tyssen identifies a number of risk markers associated with suicidal thoughts, including perceived study strain, personality factors and social support. Wallin and Runeson<sup>4</sup> report that 14% of final-year medical students had experienced suicidal ideation in their last year, but that few had attempted suicide. Poch *et al.*<sup>5</sup> add feelings of hopelessness as a risk factor for suicide. They stated that 13.9% of Spanish students in their study reported moderate or severe hopelessness on the Beck's Hopelessness Scale, and concluded that there was a need to develop programmes or services that improve students' adaptation to university life. Tyssen *et al.*<sup>3</sup> give the following guidelines for preventive efforts to be successful: Programmes should: (i) reduce the experience of time pressure and interruptions at work; (ii) strengthen competence in coping with stress; and (iii) ensure proper mental health services.

Mueller and Waas<sup>6</sup> describe much higher levels of suicidal ideation among college students than among the general population, with 43% of their sample reporting suicidal ideation in the preceding year. They suggest that fellow students may be in the best position to recognise and assist their peers at risk.

This study was prompted by the death of the 4th-year student as well as the paucity of literature to help guide one in the prediction and prevention of suicide. The aim was to examine feelings of hopelessness and suicidal ideation among medical students at the University of Pretoria, and their knowledge about and attitude towards help structures provided by the University.

## Method

A questionnaire was specifically designed for this study. The questionnaire asked for demographic details regarding gender, age, relational status and year of study. More specific questions included which study year to date had been perceived as the most difficult, had the student ever been diagnosed with depression or another psychiatric disorder, and whether the student was taking medication to enhance his or her mood. Further questions were about feelings of tiredness, satisfaction with the course being studied, thoughts of committing suicide during the past year of study, and previous attempts at suicide. In addition, Paykel's instrument,<sup>3</sup> which has been used for the general population as well as for physicians, was used to measure suicidal ideation and attempts. It comprises the following questions, implying increasing severity of suicidal ideation: (i) Have you ever felt that life was not worth living? (ii) Have you ever wished you were dead? (iii) Have you ever thought of taking your own life, even if you would not really do it? (iv) Have you ever reached the point where you seriously considered taking your life, or perhaps made plans as to how you would go about it? (v) Have you ever made an attempt to take your own life?

Other questions were about hope for the future; whether the student would change to another course if given the chance; and knowledge about and willingness to use support structures provided by the university. They were also asked to identify the support structures, if aware of such.

The questionnaire was distributed to all 1st-, 4th-, 5th- and 6th-year medical students at the University of Pretoria, as well as to a control group studying any course at the university other than medicine. The medical students received the questionnaire on an exam day, to promote participation. The control group was recruited at a general study hall of the same university. All participants had to be enrolled students at

the University of Pretoria, and participation was voluntary and anonymous. All returned questionnaires were used for data analysis. The study was mainly a descriptive type. Statistical analysis was done using the F-test to detect variance in the two groups.

## Results

A total of 416 medical students completed the questionnaire. The control group comprised 250. There were no significant differences in the groups regarding gender or relationship status (that is, being single or in a relationship) ( $p=0.28$ ), although the percentage of married medical students was double that of the other students (7% v. 3.2%) (see Table I).

Medical students tended to perceive the difficulty of their course as increasing with time, whereas the control group of students saw their 1st and 2nd years as the most difficult. Sixty of the 75 final-year medical students regarded the 5th and/or 6th years as being the most difficult. Medical students also described themselves as feeling tired more often towards their later years of study (see Fig. 1).

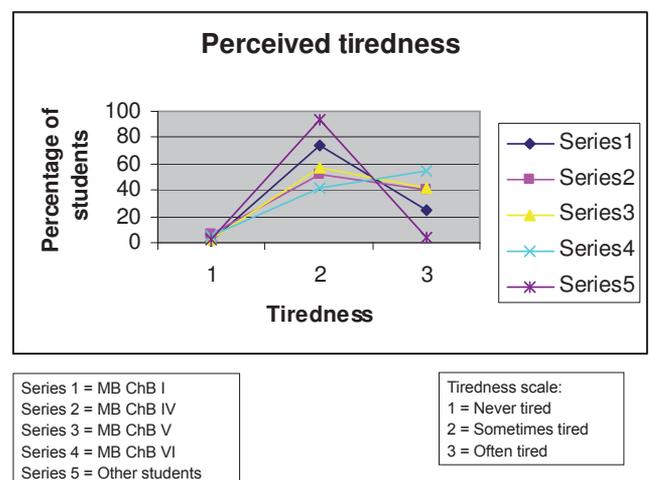


Fig. 1. Tiredness as reported by students.

Table I. Demographic information

	MB ChB 1 N=96	MB ChB 4 N=149	MB ChB 5 N=95	MB ChB 6 N=76	Total for MB ChB N=416	Other degrees N=250
Male	26% (25)	43.2% (64)	37.9% (36)	35.5% (27)	36.5% (152)	43.2% (108)
Female	69.8% (67)	55.9% (83)	54.7% (52)	64.5% (49)	60.3% (251)	54.4% (136)
Single	63.5% (61)	54.9% (82)	48.3% (46)	48.7% (37)	54.3% (226)	63.6% (159)
In relationship	31.3% (30)	40.1% (60)	43.2% (41)	34.2% (26)	37.7% (157)	32.8% (82)
Married	5.2% (5)	3.9% (6)	5.3% (5)	17.1% (13)	7% (29)	3.2% (8)

Students reported the diagnosis of major depressive disorders and other psychiatric diagnoses that might have been made in the past, and commented on the use of medication to alter their mood, regardless of whether this was obtained through a prescription or not. Table II shows the results in terms of previous diagnoses and medication use. No statistically significant differences were found between the groups of students. The 14.9% of students who reported having been diagnosed with a major depressive disorder is significant, considering the lifetime prevalence of major depressive disorder being between 5% and 25%.<sup>7</sup>

The medical student group rated their satisfaction with life slightly higher than the students studying other courses. This difference is not statistically significant, however ( $p=0.4$ ) (see Fig. 2). Medical students also seemed more positive about the future than their counterparts (see Fig. 3). Satisfaction with life and hope for the future are factors that protect against suicidal thoughts or attempts, according to Paykel *et al.*<sup>5</sup>

There were no statistically significant differences between the two groups of students in terms of suicidal thoughts or attempts. Although not statistically significant, students studying other courses reported higher rates of suicide ideation and previous

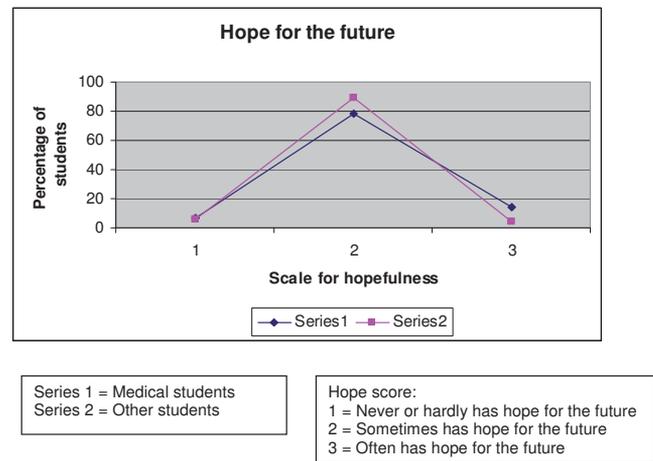


Fig. 3. Subjective experience of hope.

attempts than the medical students, which does not support the hypothesis that medical students are at a higher risk for committing suicide than other students. These results appear in Figs 4 - 6 and Table III.

It is of concern that only 15.9% of medical students indicated that they were aware of support structures provided by the university for students experiencing difficulties. They were aware of support systems at the Hatfield (main) campus and the dean's office, as well as through the impaired students' committee and the mentoring programme. However, students were hesitant to make use of these services – only 29.3% indicated that they would be willing to seek support from them. Of the control group, 17.2% knew about the support structures to assist students, and 24% of them indicated that they would be willing to make use of these structures.

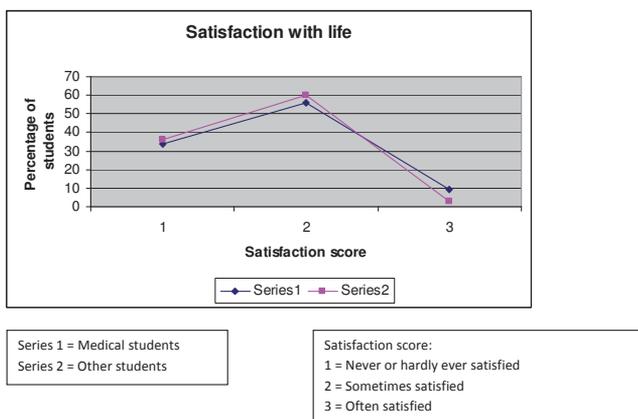


Fig. 2. Subjective experience of satisfaction.

## Discussion

This study is the first of its kind at a southern African university. It was initiated as a result of concerns about the mental wellbeing of medical students. It was hypothesised that medical students were more at risk for suicidal ideation and

Table II. Diagnosis of psychiatric disorders

		MB ChB 1 (96)	MB ChB 4 (149)	MB ChB 5 (95)	MB ChB 6 (76)	Total MB ChB (416)	Other students (215)	p-value
Diagnosed with MDD	Yes	16.7%	16%	14.7%	17.1%	14.9%	19.6%	0.39
	No	83.3%	80.4%	85.3%	82.9%	82.7%	80.4%	
Diagnosed with other psychiatric illness	Yes	1%	5.4%	4.2%	2.6%	3.6%	6%	0.5
	No	99%	94.6%	95.8%	97.4%	96.4%	94%	
Taking treatment for mood	Yes	18.75%	22.3%	22.1%	22.4%	21.4%	17.2%	0.46
	No	81.25%	77%	77.9%	77.6%	78.3%	82.8%	

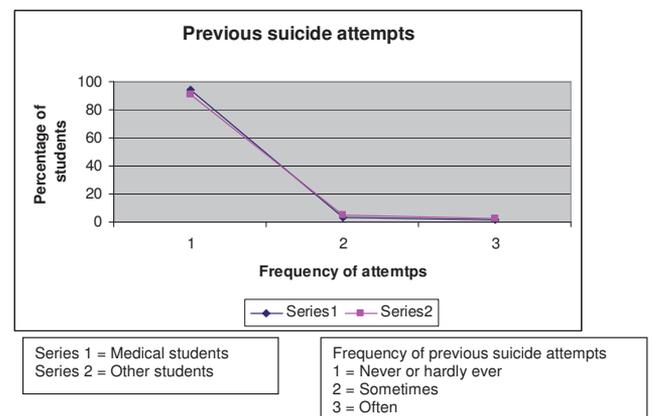
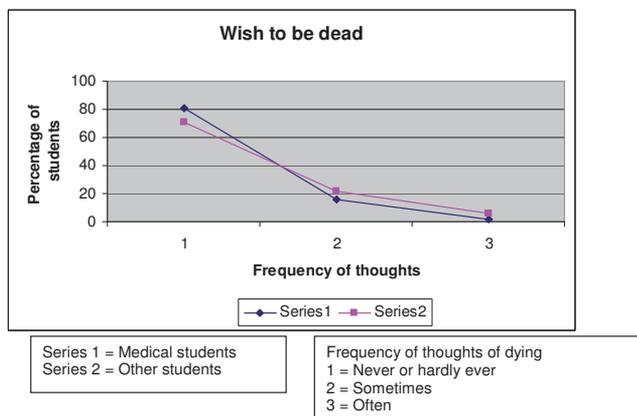


Fig. 4. Subjective feelings of hopelessness.

Fig. 6. Previous suicide attempts.

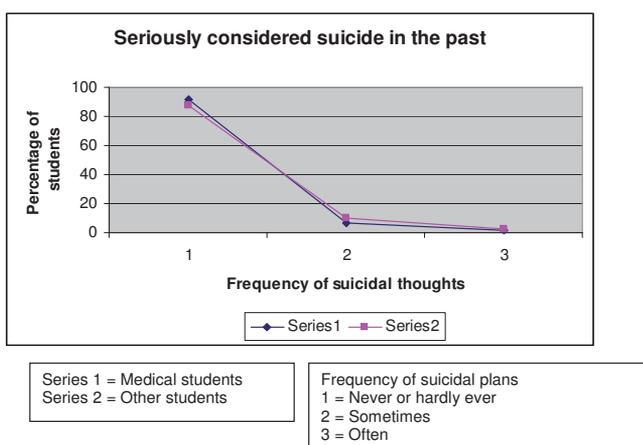


Fig. 5. Suicidal ideation.

among medical students than the general population, they did not differ from students studying for other degrees at the university. The frequencies of 3.3% for often thinking of suicide, and 1.6% for previous suicide attempts reported by our medical students are, however, higher than those found by Tyssen *et al.*<sup>3</sup> Students studying for other degrees reported even higher rates of suicidal ideation and previous attempts than the medical students. Although Mueller and Waas<sup>6</sup> reported a much higher rate of suicidal ideation, they did not differentiate between degrees of suicidal ideation, and only asked for a yes/no response, which makes a comparison with our study difficult. Medical students were more likely to use mood-enhancing medication, which may be a reflection of their particular field of study.

attempts than their counterparts studying other courses, and that this might be owing to factors such as tiredness, a higher work load and feelings of hopelessness. However, this study did not bear out the hypothesis.

It is notable that medical students perceive their studies as becoming more difficult in later years. This may indicate a lack of preparation for the shift from more academic work to more clinical work. It may also be an indication that students find the taking of more responsibility stressful. The same trend might have been found if young people in their first year of

The results of this study suggested that, although the rate of depression and suicidal ideation is seemingly higher

Table III. Comparison of degrees of suicidal ideation

		MB ChB (N=416)	Others (N=250)	p-value
Wish to be dead	Never/hardly ever	80.7% (335)	71.2% (178)	0.39
	Sometimes	16.1% (67)	22% (55)	
	Often	1.9% (8)	5.6% (14)	
Seriously consider suicide	Never/hardly ever	91.3% (379)	87.6% (219)	0.46
	Sometimes	6.7% (28)	9.6% (24)	
	Often	1.4% (6)	2.4% (6)	
Previous suicide attempt	Never/hardly ever	94.2% (391)	91.2% (228)	0.48
	Sometimes	3.4% (14)	4.8% (12)	
	Often	1.7% (7)	2.8% (7)	

employment had also been included, rather than only students studying other courses.

There were limitations to these findings. Students were all asked to complete the questionnaire during exam time and, in the case of the medical students, just before writing an exam when they were all at one venue rather than at the multitude of venues of clinical rotations. Distributing the questionnaire in this way served the purpose of ensuring maximum student response, but the exam conditions might have elicited negative responses related to exam pressures and anxiety. Nevertheless, this method of distribution could have the advantage of exposing underlying feelings, as the students' defences might have been lowered during exam times. Whether this was a limitation could be examined by repeating the study during a less stressful period.

Another limitation was that two-thirds of the junior medical students (i.e. the 2nd and 3rd years) were not included in the study. Their inclusion might have biased the results for which year medical students perceived as the most difficult. However, since the more senior medical students often indicated more than one year as being the most stressful, this factor may be negligible.

The study was further limited in that it did not examine the influence of students working after hours to sustain themselves. It was known to us that a number of medical students worked after hours, often doing night shifts, to pay for their studies. This may be a factor contributing towards medical students reporting feelings of tiredness more than other students – if medical students differ from other students in this respect.

## Conclusion

Currently, the University of Pretoria offers a psychological support team and a student-based mentorship programme, as well as academic and financial support services. All medical students are informed of these support services and how to access them in their first year of study. The mentorship programme is run under the guidance of full-time medical personnel at the teaching hospitals.

The small percentage of students aware of these support structures, and the hesitance to use them, are of concern. Support structures can only be utilised effectively if students are aware of them and are willing to use them. Tyssen *et al.*<sup>3</sup> concluded in their study that preventive efforts should

be directed at: (i) reducing the effects of time constraints; (ii) improving stress-coping strategies; and (iii) ensuring proper mental health services. Although the University of Pretoria has support systems in place that address all of these points, this study indicates a widespread unwillingness to make use of the systems. If this cannot be rectified, support services rendered by the university cannot be fully effective.

This study did not address the reasons for the hesitance among students to make use of support services, which calls for a follow-up study. Nevertheless, in an attempt to increase both awareness and utilisation of support services, medical students have recently launched a website for students where information and contact details are easily accessible and anonymously available.

By looking after the mental wellbeing of our medical students, we may prevent unnecessary suffering associated with suicide ideation, and even suicide. The university setting provides the ideal opportunity to sensitise people to their own mental health needs and enables them to get the necessary help and support. Studies such as these may guide the provision of appropriate services for vulnerable students.

The initiative for this study came from a group of (then) 4th-year students who were looking for a way to prevent similar tragedies to that of their classmate. The students conceptualised and planned the study as well as doing the data collection. They subsequently initiated, negotiated and set up a website for medical students in an effort to facilitate help-seeking. Their empathy and initiative should be acknowledged.

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