Screening for social anxiety disorder in first year university students

A pilot study

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Social anxiety disorder (SAD) is characterised by fear of negative evaluation.[1] Sufferers become anxious when they perceive themselves as the centre of attention, finding it difficult to speak in public, attend social events and deal with authority figures. It is common, with an annual prevalence of 2.7% in Australia,[2] but elsewhere in the western world it is higher (3–4%) and has a lifetime incidence of 7–13%.[3] It has significant impact on education and employment, with lower levels of educational achievement and lower incomes.[4]

There are several screening tests for social anxiety disorder. The 24 question Liebowitz Social Anxiety Scale is reliable, but requires a significant verbal introduction.[5,6] The Social Anxiety Scale for Adolescents is a 13 question self report scale but has no documented cut-scores.[7] The abbreviated version of the Social Phobia Inventory (Mini-SPIN) needs only three questions, making it suitable for clinical practice.[8] Each response can range 0–4 (from 'not at all' to 'extremely'). A cut-score of 6 (out of a possible 12) is used to indicate social anxiety disorder (although it cannot differentiate different types) with a sensitivity of 88.7% and specificity of 90.0%. These were derived in only one study of adults (where the positive predictive was 52.5%, and negative predictive value 98.5%), so validation has not been adequately established.[8]

I wondered if it was feasible to screen for social anxiety disorder among adolescents, and settled on first year university students as a convenient sample.

Table 1. Numbers of students and prevalence of SAD using Mini-SPIN

Bachelors degree	n	Number of screen positive responses for given Mini-SPIN cut score, n (%)			
		6	7	8	9
Arts	69	26 (38)	19 (28)	15 (22)	12 (17)
Commerce	17				
Computing science	8				
Economics	3				
Engineering	216	61 (28)	32 (15)	24 (11)	13 (6)
Environmental studies	1				
Finance	3				
Food tech and management	1				
Health science	33	12 (36)	8 (24)	5 (15)	3 (9)
International studies	8				
Law	17				
Mathematics and computer science	15				
Media	5				
Medicine	49	8 (16)	6 (12)	5 (10)	2 (4)
Psychology (Hons)*	21				
Science	184	55 (30)	30 (16)	20 (11)	8 (4)
Social science	9				
Not stated	8				
Total	666	202 (30)	118 (18)	87 (13)	49 (7)

* 4 year undergraduate degree resulting in honours degree in psychology

Method

I wrote to the executive deans of each of the five faculties, seeking access to first year students. At the end of introductory lectures I briefly introduced the project, and invited first time university students to complete a one page questionnaire which contained demographic data and the three Mini-SPIN questions. Responses from students who indicated that this was not their first year at university, and those over the age of 25 years were discarded.

Analysis was carried out using SPSS (version 12 for Windows). Mini-SPIN scores were dichotomised to presence or absence of SAD, using scores of 6 and higher as indicative of SAD, and after examining the

results, higher cut-scores. Prevalence of SAD was calculated for each degree and gender. Comparisons between groups were made using the Mann-Whitney U test.

The Human Research Ethics Committee of the University of Adelaide granted approval.

Results

Of the 4368 commencing undergraduate students, responses were received from 710 (16.3%) students aged 16–46 years (almost 80% 17 or 18 years of age). After discarding ineligible students, the total was 666 adolescents. Of these 348 (52.3%) were male.

The overall prevalence using a cut-score of 6 was just over 30% (*Table 1*). Higher rates were seen in students studying for degrees in arts (38%) and health sciences (36%), while lower rates were seen in science (28%), engineering (28%) and medicine (16%). The differences between students studying medicine versus health science and versus arts were significant ($p<0.05$).

There was a large difference in the number of respondents reporting Mini-SPIN scores of 6 and 7. Using the cut-score of 7 reduced the prevalence to 18.3% (*Table 1*).

Discussion

These results confirm that the Mini-SPIN still requires further work to set the cut-point and validate the instrument: the cut-point of 6 or 7 seems to overestimate the prevalence of social anxiety disorder, although I used no gold standard to test this. Until a reliable instrument is validated, it will be difficult to mass screen in general practice.

Implications of this study for general practice

- Social anxiety disorder is common in adolescents.
- It may have important impact on education and employment.
- The Mini-SPIN screening instrument seemed to grossly overestimate its prevalence in university students.
- A suitable screening test has yet to be developed.

Conflict of interest: none declared.

References

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