



Helen M Stallman

DClinPsych, is a clinical psychologist, Health and Medical Services, Student Support Services, Queensland University of Technology, Queensland. helen@psy.uq.edu.au

Prevalence of psychological distress in university students

Implications for service delivery

Background

Mental health problems are one of the leading causes of disability in Australia. General practitioners are often the first and only point of service for people suffering mental health problems, while many do not access services at all. University students can face numerous stressors in addition to academic demands that can contribute to the development or exacerbation of mental health problems.

Objective

The aim of this study was to identify the prevalence of psychological symptoms in students who were patients at a university health service to enable appropriate planning of services to meet the needs of students.

Methods

Participants were 384 students attending a university health service in urban Queensland over a period of 4 weeks during semester. At their first visit, patients completed the Kessler Psychological Distress Scale, a measure of psychological distress.

Results

Results showed there were significantly more patients experiencing high levels of distress compared with the general population and, consistent with the general population, almost two-thirds had not sought assistance for this distress. Increased distress was associated with increased disability among students.

Discussion

Within a university setting, co-location of specialist mental health services can promote a team approach to mental health care, with GPs, psychiatrists and clinical psychologists working together to increase the availability of care to students in need. The recent introduction of Medicare items for psychological treatment also facilitates greater access to clinical psychologists and other mental health professionals.

■ **Mental health problems are among the 10 leading causes of disability, reduced quality of life, and reduced productivity in Australia.¹ People affected by mental health problems are at increased risk of morbidity and mortality and poorer general health. Approximately 20% of Australian adults reported suffering from a mental health problem within a 12 month period, 14% within the previous month,^{2,3} and around 10% reported having a long term mental or behavioural problem.⁴ Although women are more likely to report mental health problems than men,¹ the highest prevalence of psychological problems is found in young adults 18–24 years of age (27%) – the age of onset of many major mental health disorders – with 75% having an onset before 25 years of age.^{5,6}**

People with mental health problems are three times more likely to report fair/poor general health than people without.¹ This can result in part from an increased risk of exposure to health damaging behaviours such as alcohol consumption, tobacco smoking and physical inactivity. Mental health problems can also make it difficult for people to engage in their normal day-to-day activities. In the National Health Survey,⁴ 45% of people reporting mental health or behavioural problems reported profound or severe core activity limitations; 29% had mild or moderate limitations and 59% had schooling or employment restrictions. The number of comorbid disorders predicted disability, distress and service utilisation.^{7,8}

University students can face numerous stressors in addition to academic demands that can contribute to the development or exacerbation of mental health problems.⁹ For younger students, these can include developmental challenges including increased freedoms, decision making, challenging family beliefs by engaging in risky behaviours, or pressure to do well.¹⁰ For mature age students, there may be competing demands between study, family and work commitments.

There are also financial pressures with the majority of Australian students contributing to the cost of tertiary education either through upfront or deferred payments or being full fee paying overseas and domestic students.¹¹ International students also face the challenges of cultural and language differences in addition to social isolation. The widening of participation in tertiary education over the past decade has increased the number of students who may be more vulnerable to pressures inherent in higher education, such as students from culturally and linguistically diverse backgrounds, students with physical or mental disabilities, or those from backgrounds where they are the first family member to attend university.^{9,12,13} A national review of the health of college students in the United States of America found that five of the top six health related problems affecting academic performance were psychological in nature.¹⁴

Only a minority of people with mental health problems seek professional assistance. For example, in an Australian national probability sample, Andrews et al² found that only 35% of people meeting the criteria for a mental health problem in the past 12 months had sought assistance. Even fewer (22%) receive effective treatments.¹⁵ The high rate of not consulting among those with disability and comorbidity is an important public health problem.²

In Australia, general practitioners are the primary source of service accessed by people with mental health problems, with three-quarters of those seeking assistance going to their GP.² Half of those consulting a GP also reported seeing another service provider, usually a mental health specialist such as a psychiatrist, psychologist or mental health team. Another study found that compared with GPs (71%), relatively few people nominated that they would see a counsellor (9%), clinical psychologist (5%) or psychiatrist (2%) if they suffered depression.¹⁶ Along with counselling services, GPs are readily accessible to students on university campuses. This highlights the importance of GPs as a gateway for students for assessment and treatment of mental health problems.

The identification and management of mental health problems in general practice can be challenging. Data from two Australian clinical audits of selected general practices assessed actual experiences of care among people aged 16–25 years.¹⁷ The study found that mental health disorders were very common among young people presenting to GPs (up to 37.8% syndromal and 29.1% subsyndromal). However, a mental health diagnosis and treatment was given in only about half of the patients with syndromal conditions and few (14.8%) were referred to another mental health service.

Methods

Participants

Participants were 384 patients of the health service at a large Queensland urban university across two campuses. The majority of patients were female (84.1%), undergraduate (86.9%) and full time students (94.7%). Roughly the same percentage of patients were international students (14.4%), as in the general student population at the university (12%). The age of the sample was positively skewed

with the majority of patients aged 18–24 years ($M=22.5$ years, $SD=4.97$ years). There was a significant difference between the mean age of males and females attending the health service, $F(1, 309) = 24.50$, $p < 0.001$ with males on average being older than females (25.11 years vs. 21.77 years). Students from each faculty were represented in the sample with the highest proportion coming from health (22.7%) and the lowest from humanities and human services (2%). No faculty was more than 10% under- or over-represented compared with the general student population; average 5.7% variation.

Measures

The health services student survey comprised demographic questions, a measure of psychological distress, a measure of disability resulting from psychological distress, and a measure of the role of physical illness contributing to psychological distress.

Demographics

Demographic questions included gender, age, attendance (full time, part time), student type (domestic, international) and level of study (undergraduate or postgraduate).

Psychological distress

The Kessler Psychological Distress Scale (K10), a nonspecific psychological distress scale with a 10 item measure which asks respondents how frequently they experienced symptoms of psychological distress during the past 4 weeks.¹⁸ The scale was developed for use in the USA National Health Interview Survey and has been used in a number of population health surveys in Australia.^{3,4,19,20} It has been found to be a good predictor of mental illness and psychological distress²¹ and provides an estimate of the needs of the general population for community mental health services.²² Scores range from 10–50, with high scores indicating high levels of distress. There are a number of cut offs developed for the K10. Cut offs for this study were based on the 2001 National Health Survey.²¹

Disability

The number of days disabled is similar to a measure used in the National Comorbidity Survey.²³ It asks two questions: 'In the last 4 weeks, how many days were you totally unable to work, study, or manage your day-to-day activities because of these feelings? And, '(Aside from those days), in the last 4 weeks, how many days were you able to work, study, or manage your day-to-day activities but had to cut down on what you did because of these feelings?' Responses to these questions were analysed separately, and are referred to as days out of role (DOR), and days cut back (DCB), respectively.

Service utilisation

Service utilisation was measured by asking patients how many times during the past 4 weeks they had seen a doctor or health care professional about the feelings reported on the K10.

Table 1. General demographic profile of psychological distress

	Low or moderate psychological distress			High or very high psychological distress		
	n	%	95% CI	n	%	95% CI
Gender						
Male	46	79.3	68.6–89.4	12	20.7	10.6–31.4
Female	222	73.3	68.1–77.9	81	26.7	22.1–31.9
Attendance						
Full time	247	73.1	68.3–77.7	91	26.9	22.3–31.7
Part time	13	68.4	47.0–87.0	6	31.6	11.0–53.0
Status						
Domestic	191	72.1	66.5–77.5	74	27.9	22.5–33.5
International	43	79.6	69.4–90.6	11	20.4	9.4–30.6
Level						
Undergraduate	161	76.7	71.3–82.7	49	23.3	17.3–28.7
Postgraduate	24	77.4	62.1–91.9	7	22.6	8.1–37.9
Age group in years						
Less than 18	7	77.8	51.0–100	2	22.2	0–49.0
18–24	218	76.8	72.1–81.9	66	23.2	18.1–27.9
25–34	39	62.9	51.0–75.0	23	37.1	25.0–49.0
35–44	7	53.8	27.0–81.0	6	46.2	19.0–73.0
45–54	2	100	N/A	0	0	N/A
Overall	278	73.4	68.5–77.5	101	26.6	22.5–31.5

NB: Missing data due to participants leaving questions blank

Table 2. Level of psychological distress compared with the National Health Survey

Level of psychological distress	University sample		2001 National Health Survey	
	Males	Females	Males	Females
Low (10–19)	65.5	44.9	85.8	79.6
Moderate (20–24)	13.8	28.4	8.3	10.6
High (25–29)	12.1	16.2	3.1	5.5
Very high (30–50)	8.6	10.6	2.7	5.4

Attribution of psychological distress

In order to try to assess the contribution of physical illness to psychological distress, patients were asked to rate on a 5 point scale, 'In the past 4 weeks how often have physical health problems been the main cause of these feelings?'

Procedure

The student survey was administered as part of the health services quality assurance practice to assess the mental health needs of its patients. This followed the introduction of a clinical psychologist into the service to enable service planning to be responsive to patient needs. Each consecutive student who visited the university health service from week 10 to week 13 of the academic semester was asked by reception staff to complete the survey with a resultant 100% response rate. Students who had multiple visits to the service within the month only completed the questionnaire on their first visit. Completed questionnaires were anonymously placed in a box in the reception area.

Results

Differences between groups

Overall categories of psychological distress using the K10 were analysed by a number of demographic variables and are shown in *Table 1*. There was no significant difference between patients' scores on gender ($\chi^2 (1, 361) = 0.93, p > 0.05$), attendance ($\chi^2 (1, 357) = 0.20, p > 0.05$), student level ($\chi^2 (1, 241) = 0.01, p > 0.05$), or status domestic/international ($\chi^2 (1, 319) = 1.31, p > 0.05$). A significantly greater proportion of patients over 24 years of age reported experiencing high levels of psychological distress than younger students ($\chi^2 (1, 1) = 6.59, p < 0.05$).

Table 2 presents comparison data from this sample with the National Health Survey²¹ sample, by level of psychological distress. Compared with the National Health Survey,²¹ the university health service sample had a significantly greater percentage of students across each level of distress. More than half of the patients attending

the health service reported a significant level of psychological distress (53.0%). Just over a quarter of students (26.4%, n=100) reported levels that suggested a mild mental disorder, 15.8% (n=60) a moderate disorder, and 10.8% (n=41) a severe mental disorder.

In comparison with results from the National Health Survey,²¹ the university health service patients showed a much higher prevalence of very high levels of psychological distress for all ages and genders (Table 3). Of students reporting high or very high levels of psychological distress, only 8.8% attributed most or all of their psychological distress symptoms to physical illness. Students with somatic attributions for psychological distress were more likely to have visited a health professional regarding their distress than those who did not ($r=0.21$, $p<0.05$).

There was a differential rating by students on the items measuring distress. Except for the items relating to tiredness and restlessness, all other items were significantly skewed with the majority of patients rating the item at the lower end of the scale. The K10 items most highly endorsed by the student sample were tiredness, restlessness, nervousness and feeling that everything is an effort.

Psychological distress and disability

A MANOVA with Bonferroni correction was used to assess for differences between different levels of psychological distress and

the number of days out of role (DOR) and days cut back (DCB). There was a significant difference in level of disability dependent on level of psychological distress $F(6, 690) = 6.12$, $p<0.001$. Post hoc pairwise comparisons shown in Table 4 demonstrated that DOR were significantly higher at each level of psychological distress except for between medium and high levels of distress, which did not differ from each other. Days cut back increased significantly from low levels of distress to medium and high, however there was no significant difference in DCB between patients reporting high and very high levels of psychological distress.

Service utilisation

Health care service utilisation relating to psychological distress ranged from zero to eight consultations in the previous 4 weeks. Overall, only 36.3% of patients reporting high or very high levels of psychological distress over the previous 4 weeks had consulted a health care professional for assistance.

Discussion

This study provides preliminary data highlighting the high levels of psychological distress in university students accessing a campus primary care service, with more than half of students presenting experiencing mild to very high levels of psychological distress in weeks 6–13 of the academic calendar. Levels of very high psychological distress were much higher than in the general population and for age matched peers.

Consistent with the general population⁷ and primary care samples,⁸ increased levels of psychological distress in the student health service sample was associated with increased disability and reduced capacity to carry out normal activities. Students experiencing very high levels of distress were on average unable to work or study for 8 days within the previous 4 weeks and had on average another 9 days of reduced capacity for work resulting in some impairment for around 60% of time. This has the potential to significantly reduce the capacity of these students to meet their educational and other commitments, placing a further increase of pressure to catch up, and consequently increasing their psychological distress.

Despite greater access to counselling services than the general population, only a minority of students (36.3%) experiencing high or very high levels of psychological distress had received treatment relating to their distress, which is similar to the general population rate of 35%.² The high prevalence of psychological distress of students accessing the health service and not receiving treatment highlights an unmet need for identification and appropriate interventions for students to minimise serious disruptions to their education and emotional development.

This study highlights the importance of GPs working with tertiary students, within a university or community setting, to be aware that many students presenting with physical problems may also be experiencing mental health problems. When students present with physical symptoms, GPs could take the lead to enquire about

Table 3. Comparison of very high levels of psychological distress between National Health Survey results and sample based on age groups

Age group	University sample		2001 National Health Survey	
	Males %	Females %	Males %	Females %
18–24 years	8.6	8.4	2.7	5.4
25–34 years	6.7	17.4	2.1	4.6
35–44 years	14.3	50.0	2.5	4.2
45–54 years	0	0	3.7	5.5

Note: less than 18 years of age are not reported as no comparison sample was available

Table 4. Pairwise comparisons of psychological distress levels on disability

Disability measure		Contrast (t statistic)		
		Low	Medium	High
Unable to work	Low	–	–	–
	Medium	–3.20*	–	–
	High	–5.21*	–2.28	–
	Very high	–11.36*	–8.53*	–6.08*
Reduced activities	Low	–	–	–
	Medium	–3.81*	–	–
	High	–7.64*	–4.02*	–
	Very high	–7.23*	–4.28*	–0.80

* $p<0.05$

psychological issues in addition to physical functioning. This may help enhance the willingness of young people to discuss psychological problems. There are a number of appropriate brief mental health screening tools, such as the K10, that can be used to detect mental health problems.

Within a university setting, co-location of specialist mental health services can promote a team approach to mental health care, with GPs, psychiatrists and clinical psychologists working together to increase the availability of care to students in need. The recent introduction of Medicare items for psychological treatment also facilitates greater access to clinical psychologists and other mental health professionals.

The large percentage of health service patients identified in this sample as 'likely having a mental health problem' can be overwhelming to manage in the general practice setting. As identified by Andrews et al,²⁴ given the high prevalence of psychological distress, prevention and self help interventions are important in reducing the overall burden of mental health problems. These could include fact sheets and provision of access to specific e-health strategies.¹⁷ These could be beneficial for many students reporting medium to high levels of distress, which includes 42.2% of this health service sample. Additionally, prevention and self help interventions need to reach students less likely to disclose distress to their GP or other health care provider, for example by placing engaging resources in areas such as the health service waiting room and common areas (real and virtual) within the university.

Limitations of this study

There are three main limitations to this study. First, it is a primary care sample and therefore not generalisable to university students in general. A large population study is needed to identify the prevalence of psychological distress of students in general as well as predictors of psychological distress. Second, this survey provides a snapshot of psychological distress in health service patients at one point in time and may not be indicative of psychological distress of students across the entire academic year. This study was done in the second half of the second semester and may reflect distress related to assignment deadlines, sleep deprivation and increasing examination anxiety. Replication of the study at different times in the semester would provide a picture of how stable the level of psychological distress in health service patients is. Finally, this study focused on psychological distress rather than diagnoses. Psychological distress in this population may represent distinct groups, those with mental illness and those who experience transient distress related to situational demands. This would require further research to elucidate.

Conclusion

This study provides some preliminary and concerning data on the psychological wellbeing of students attending a university health service. It has implications for GPs, highlighting the need of asking about psychological issues with students presenting for physical

issues; the need for appropriate mental health practitioners to refer patients to; and the possible role of e-health in engaging students who might otherwise not access services. If GPs can engage students in discussions around psychological wellbeing, they can collaboratively identify acceptable treatment pathways.

Conflict of interest: none declared.

References

1. Australian Bureau of Statistics: Mental Health in Australia: A Snapshot, 2004–05, cat no. 4824.0. Canberra: ABS; 2006.
2. Andrews G, Henderson S, Hall W: Prevalence, comorbidity, disability and service utilisation. *Br J Psychiatry* 2001;178:145–53.
3. Australian Bureau of Statistics: Mental health and wellbeing: Profile of adults, Australia 1997, cat no. 4326.0. Canberra: ABS; 1998.
4. Australian Bureau of Statistics: National Health Survey: Summary of Results 2004–05, cat no. 4364.0. Canberra: ABS; 2006.
5. Kim-Cohen J, Caspi A, Moffitt TE, Harrington H, Milne BJ, Poulton R. Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. *Arch Gen Psychiatry* 2003;60:709–17.
6. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62:593–602.
7. Andrews G, Slade T, Issalodoso C. Deconstructing current comorbidity: data from the Australian National Survey of Mental Health and Well-Being. *Br J Psychiatry* 2002;181:306–614.
8. Olsson M, Fireman B, Weissman MM, et al. Mental disorders and disability among patients in a primary care group practice. *Am J Psychiatry* 1997;154:1734–40.
9. Royal College of Psychiatrists: The mental health in students in higher education. London: Royal College of Psychiatrists; 2003.
10. Kadison R, DiGeronimo TF. College of the overwhelmed: The campus mental health crisis and what to do about it. San Francisco: Jossey-Bass; 2004.
11. Australian Bureau of Statistics: Year Book Australia, 2005, cat no. 1301.0. Canberra: ABS; 2006.
12. Connell J, Barkham M, Mellor-Clark J. CORE-OM mental health norms of students attending university counselling services benchmarked against an age-matched primary care sample. *Br J Guid Counc* 2007;35:41–57.
13. Karmel T, Nguyen N. Australia's tertiary education sector. Paper presented to the Centre for the Economics of Education and Training 7th National Conference: 2003. Melbourne: National Centre for Vocational Education Research; 2003.
14. American College Health Association. National college health assessment: Reference Group executive summary, Fall 2006. Baltimore: American College Health Association; 2007.
15. Andrews G, Henderson S: Unmet need in psychiatry. Cambridge: Cambridge University Press; 2000.
16. Jorm AF, Kelly CM. Improving the public's understanding and response to mental disorders. *Aust Psychol* 2007;42:81–9.
17. Hickie IB, Fogarty AS, Davenport TA, Luscombe GM, Burns J. Responding to experiences of young people with common mental health problems attending Australian general practice. *Med J Aust* 2007;187:S47–52.
18. Kessler RC, Andrews G, Colpe LJ, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychol Med* 2002;32:959–76.
19. Department of Human Services. Victorian Population Health Survey 2001: Selected findings. State of Victoria, Department of Human Services; 2002.
20. Health Department of Western Australia. Health and wellbeing survey 2000: Psychological distress in the Western Australian population. Health Department of Western Australia; 2001.
21. Australian Bureau of Statistics. Information paper: Use of the Kessler Psychological Distress Scale in ABS health surveys, Australia 2001. Cat no. 4817.0. Canberra: ABS; 1998.
22. Andrews G, Slade T. Interpreting scores on the Kessler Psychological Distress Scale. *Aust N Z J Public Health* 2001;25:494–7.
23. Kessler RC, Frank RG. The impact of psychiatric disorders on work loss days. *Psychol Med* 1997;27:861–73.
24. Andrews G, Issakidis C, Carter G. Shortfall in mental health service utilisation. *Br J Psychiatry* 2001;179:417–25.

AFP CORRESPONDENCE afp@racgp.org.au