Frequency and quality of mental health treatment for affective and anxiety disorders among Australian adults

[We require] strategies to increase the use of evidence-based interventions, and to ensure these are delivered in sufficient doses

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Abstract

Objectives: To describe the frequency, type and quality of mental health treatment among Australian adults with past-year affective and/or anxiety disorders.

Design, setting and participants: Retrospective analysis of data for 8831 adults aged 16–85 years interviewed for the 2007 National Survey of Mental Health and Wellbeing, of whom 17% ($n = 1517$) met International Classification of Diseases, 10th revision (ICD-10) criteria for a past-year affective and/or anxiety disorder.

Main outcome measures: Three levels of mental health treatment received in the past year: (1) any consultation with a health professional for mental health; (2) any evidence-based intervention (antidepressant medication, mood stabiliser medication, cognitive behaviour therapy and/or psychotherapy); and (3) minimally adequate treatment (a "dose" of an evidence-based intervention above a minimum threshold, consistent with treatment guidelines).

Results: Of participants with past-year affective and/or anxiety disorders, 39% sought professional help for mental health, 26% received an evidence-based treatment, and 16% received minimally adequate treatment. After controlling for clinical factors including type and severity of disorder, the odds of all levels of treatment were lower among younger adults (16–29 years) compared with middle-aged adults, and the odds of receiving an evidence-based treatment or minimally adequate treatment were lower among people who consulted a general practitioner only compared with a mental health professional.

Conclusions: Closing the gap in treatment quality requires strategies to increase the use of evidence-based interventions, and to ensure these are delivered in sufficient doses. Research to elucidate why some patients are at increased risk of inadequate treatment, and the aspects of treatment that contribute to inadequate care, is indicated.

Each year, 6% of Australian adults meet criteria for an affective disorder and 14% for an anxiety disorder.[1] These disorders accounted for 52% of the burden of mental and substance misuse disorders and 7% of the overall burden of disease in Australia in 2010.[2] Despite efficacious pharmacological and psychological interventions, this burden persists, partly because treatment coverage and quality are suboptimal.[3] Monitoring treatment quality for these disorders may identify opportunities to improve health system performance and highlight populations at risk of inadequate care.

Reports from Australia's first National Survey of Mental Health and Wellbeing (NSMHWB) showed that, in 1997, 60% of adults with affective disorders and 35% with anxiety disorders had consulted a health professional for mental health in the previous year. Just over half of consultees reported receiving medicine or tablets (not further defined) or cognitive behaviour therapy (CBT).[3] One-third of consultees saw a general practitioner only.[4] Sociodemographic factors including male sex, socioeconomic disadvantage and rurality were shown to influence the likelihood and type of mental health care received, independent of diagnosis.[4-8]

In the decade following 1997, two major mental health reforms designed to improve treatment access and quality were introduced: in 2001, the Access to Allied Psychological Services (ATAPS) program; and, in 2006, the Better Access to Psychiatrists, Psychologists and General Practitioners through the Medicare Benefits Schedule (Better Access) initiative. These programs provide government subsidies for evidence-based psychological services delivered mainly by psychologists and other allied health providers. Information-based initiatives such as *beyondblue* were introduced to improve mental health literacy and demand for necessary mental health services.[9] Reports from the second NSMHWB in 2007 documented a shift in provider mix since 1997, notably a doubling of psychologist care,[10] and increased levels of met and perceived need, suggesting improvements in treatment access or effectiveness and willingness to seek treatment.[11] However, population mental health did not improve, possibly due to inadequate treatment.[9]

Population levels of minimally adequate treatment (a "dose" of an evidence-based intervention above a minimum threshold consistent with treatment guidelines) for affective and anxiety disorders have been measured elsewhere,[12-14] but Australian estimates are lacking. Using 2007 NSMHWB data, we examined the frequency, type and adequacy of mental health treatment among Australian adults with affective and anxiety disorders; how these estimates differ across the health sectors consulted; and the factors associated with treatment.

Methods

We analysed data from the 2007 NSMHWB,[1,15] a nationally representative household survey of 8841 Australians aged 16–85 years conducted in late 2007. Respondents were selected from a stratified, multistage area sample of private dwellings. Face-to-face interviews of 90 minutes average duration were conducted by trained lay interviewers. The response rate was 60%.

The University of Queensland Behavioural and Social Sciences Ethical Review Committee approved this study.

Clinical measures

As defined by the International Classification of Diseases, 10th revision (ICD-10), affective disorders (depression, dysthymia and bipolar affective disorder) and anxiety (panic disorder, agoraphobia without panic, social phobia, generalised anxiety disorder, obsessive–compulsive disorder and post-traumatic stress disorder) experienced in the past year were assessed using a modified World Mental Health Survey Initiative Composite International Diagnostic Interview 3.0. Severity of disorder (mild, moderate or severe) was determined via an algorithm that incorporated disorder-specific role impairment and other clinical information. Past-year substance misuse disorder(s) and chronic physical conditions were also assessed.

Health care sectors consulted

Respondents were asked whether they had consulted a health professional for mental health in the past year. Those who had were interviewed further about the types of professionals consulted, and the frequency, average duration and means of payment for these consultations. Using this information, past-year consultations for mental health were grouped into sectors relevant to Australia's mental health care system:

- GP only (seeing a GP but no other health professional);
- primary care allied health (seeing a psychologist or a professional such as a social worker, occupational therapist or counsellor providing specialist mental health services, except those whose services were provided within public sector mental health services — with or without a GP or other providers);
- specialised mental health (seeing either: a psychiatrist or mental health nurse, or a psychologist or other professional providing specialist mental health services, whose services were provided within public sector mental health services — with or without a GP or other providers); or
- other health (seeing: a professional such as a social worker, occupational therapist, counsellor providing general services; a specialist doctor or surgeon other than a psychiatrist; or a complementary or alternative medicine provider — but not seeing a GP only, a primary care allied health provider or a specialised mental health provider).

Sectors were largely mutually exclusive, other than 55 respondents who consulted both of the second two sectors.

Interventions received

Respondents who reported past-year consultations for mental health were asked to identify interventions received in those consultations from a list including: information; medicine or tablets (not further specified); talking therapies including CBT, psychotherapy and counselling; social intervention; and skills training. Respondents were also asked to name up to five medications they had taken in the previous 2 weeks for mental health and how long they had been taking each; interviewers checked available medication packaging.

Levels of treatment

We defined three levels of treatment received in the past year:

- any consultation — one or more consultations with any health professional for mental health, regardless of the interventions provided;
- an evidence-based intervention — either pharmacotherapy, specifically an antidepressant or mood stabiliser, or psychological therapy, namely CBT or psychotherapy;
- minimally adequate treatment[12] — either: taking an antidepressant or mood stabiliser for 1 month or longer, plus four or more consultations with any medical practitioner for mental health; or receiving CBT or psychotherapy, plus six or more consultations of 30 minutes or longer average duration with any health professional (except a complementary or alternative medicine therapist) for mental health. We adapted existing minimally adequate treatment criteria[12] that were based on treatment guidelines and considered appropriate to the Australian health care system.

Sociodemographic measures

The survey elicited information about respondents' age, sex, marital status, employment status, education, main income source, country of birth, urbanicity and relative socioeconomic disadvantage.

Statistical analysis

We analysed 2007 NSMHWB Basic Confidentialised Unit Record File (April 2009) data using Stata, version 11 (StataCorp). Replicate weights were applied to the data to account for the differential probability of survey selection and to ensure conformity to known population distributions. Standard errors and 95% confidence intervals were calculated using jackknife repeated replication to accommodate the complex survey design. In the subsample who met criteria for past-year affective and/or anxiety disorders, multivariate logistic regression analyses were used to identify clinical, sociodemographic and health sector correlates of each of the three levels of treatment. Of the 8841 respondents, 10 with missing data were excluded, leaving 8831 respondents in our analysis.

Results

Treatment of past-year affective and/or anxiety disorder

In the 2007 survey, 17% of Australian adults met criteria for a past-year affective and/or anxiety disorder. Of these, 39% had consulted a health professional for mental health in the past year (Box 1). The proportion of participants who consulted a health professional varied by disorder. For example, there was a 2.5-fold variation between those with anxiety disorder(s) only (27%) and those with comorbid affective and anxiety

1 Prevalence of past-year affective and/or anxiety disorder among 8831 adult participants of the 2007 Australian National Survey of Mental Health and Wellbeing, and level of treatment received, by disorder type and severity

	Distribution of past-year affective and/or anxiety disorders in the Australian population [a]*		Percentage of [a] who consulted for mental health [b]†	Percentage of [b] who received:	
				An evidence-based intervention [c]†	Minimally adequate treatment [d]†‡
	n	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Any affective and/or anxiety disorder	1517	17% (16%–18%)	39% (35%–42%)	67% (61%–72%)	41% (35%–47%)
Disorder type					
Anxiety only	966	11% (10%–12%)	27% (23%–32%)	61% (53%–69%)	31% (21%–41%)
Affective only	226	3% (2%–3%)	46% (36%–56%)	61% (48%–74%)	30% (19%–41%)
Comorbid affective and anxiety	325	4% (3%–4%)	67% (60%–75%)	77% (69%–84%)	59% (51%–67%)
χ^2 (*P*)§		na	67.7 (< 0.001)	10.0 (0.01)	25.1 (< 0.001)
Severity					
Mild	570	7% (6%–8%)	20% (15%–25%)	61% (48%–75%)	25% (10%–40%)
Moderate	580	6% (6%–7%)	43% (37%–48%)	66% (58%–75%)	36% (28%–45%)
Severe	367	4% (3%–5%)	64% (56%–73%)	71% (62%–79%)	55% (47%–62%)
χ^2 (*P*)§		na	73.7 (< 0.001)	1.7 (0.44)	19.3 (0.003)

All percentages are weighted. na = not applicable. * As represented by the study population (*n* = 8831). † Percentage of respondents within each disorder type or severity group. ‡ Because data on the frequencies of consultation with each type of professional were only available in grouped form, minimally adequate treatment status was deemed for 55 respondents with affective or anxiety disorders using available data regarding their possible range of eligible consultations. § df = 2. ◆

disorders (67%), and a threefold variation between those with mild (20%) and severe (64%) disorders.

Of those who consulted a health professional, two-thirds (67%) received an evidence-based treatment but only 41% received minimally adequate treatment. This equates to 26% and 16%, respectively, of all consultees with a past-year affective or anxiety disorder. There was a gradient in the likelihood of receiving an evidence-based treatment according to disorder type, and in the likelihood of receiving adequate treatment according to disorder type and severity.

Of the consultees who received an evidence-based treatment, about two-thirds received a psychological therapy and two-thirds received pharmacotherapy. The likelihood of receiving an evidence-based psychological therapy was lower among people with affective disorder(s) only (Appendix 1).

Of the consultees who received minimally adequate treatment, about equal proportions (two-thirds) received an adequate "dose" of psychological therapy and/or of pharmacotherapy (Appendix 1).

Health sectors consulted

Of those who consulted a health professional (620), 28% consulted only a GP, 43% consulted the primary care allied health sector, 31% consulted the specialised mental health sector, and 9% consulted the other health sector. Consultation with the specialised mental health sector was significantly more common among people with severe, relative to mild or moderate, disorders. Further details are shown in Appendix 2.

Treatment level by sector

Among people consulting the primary care allied health sector, receipt of an evidence-based intervention was more common among people with severe disorders and receipt of adequate treatment was more common among people with severe or comorbid disorders. Further details are shown in Appendix 3.

Correlates of treatment

In analyses controlling for clinical factors including type and severity of disorder, the odds of all levels of treatment were lower for younger, compared with middle aged, adults (Box 2). The odds of receiving an evidence-based treatment were lower among married compared with never married respondents. The odds of receiving an evidence-based treatment or minimally adequate treatment were two and six times greater, respectively, among those consulting the primary care allied health and/or specialised mental health sector(s) compared with those consulting only a GP.

Discussion

In the 2007 NSMHWB, of all people with past-year affective and/or anxiety disorders, 39% sought professional help for mental health, 26% received an evidence-based intervention, and 16% received minimally adequate treatment. Younger adults were less likely to receive any treatment, and people who consulted a GP only were less likely to receive evidence-based or minimally adequate treatment than those who consulted a mental health professional.

Potential sources of bias should be considered. First, treatment quality indicators are not universally agreed and vary across studies. In this study, adequate psychological therapy required six sessions of treatment to best fit the grouped consultation data in the NSMHWB. Although lower than the threshold of

2 Multivariate analysis* of predictors of consultation for mental health among adult participants with past-year affective and/or anxiety disorder, 2007 Australian National Survey of Mental Health and Wellbeing

	Consulted for mental health†		Received an evidence-based intervention if consulted for mental health‡		Received minimally adequate treatment if consulted for mental health‡§	
	AOR (95% CI)	*P*¶	AOR (95% CI)	*P*¶	AOR (95% CI)	*P*¶
Female	1.5 (1.0–2.4)	0.08	1.3 (0.7–2.4)	0.46	1.3 (0.6–2.5)	0.52
Age group						
16–29 years (reference)	1.0		1.0		1.0	
30–39 years	1.6 (1.0–2.6)	0.04	2.7 (1.1–6.3)	0.03	2.8 (1.2–6.3)	0.02
40–59 years	1.5 (0.8–2.6)	0.11	2.8 (1.1–7.1)	0.03	2.7 (1.1–6.3)	0.03
60 years and over	1.0 (0.5–1.9)	0.89	2.0 (0.6–6.4)	0.23	1.8 (0.5–6.2)	0.36
Marital status						
Never married (reference)	1.0		1.0		1.0	
Married	0.9 (0.6–1.5)	0.78	0.5 (0.2–1.0)	0.04	0.9 (0.4–1.8)	0.70
Previously married	1.2 (0.7–2.2)	0.46	0.7 (0.3–1.5)	0.37	0.7 (0.3–1.7)	0.41
Employed	1.1 (0.7–1.7)	0.61	1.8 (0.6–5.3)	0.27	1.9 (0.7–5.0)	0.21
Post-school qualification	0.9 (0.6–1.4)	0.65	1.3 (0.7–2.5)	0.37	1.4 (0.8–2.7)	0.27
Main source of income, government benefit	1.4 (0.9–2.2)	0.10	0.8 (0.3–2.0)	0.57	0.8 (0.3–2.0)	0.64
Disorder type						
Comorbid affective and anxiety (reference)	1.0		1.0		1.0	
Anxiety only	0.4 (0.2–0.6)	< 0.001	0.5 (0.3–0.9)	0.03	0.4 (0.2–0.8)	0.01
Affective only	0.6 (0.3–1.0)	0.04	0.5 (0.2–1.1)	0.07	0.4 (0.2–0.8)	0.02
Comorbid substance use disorder	0.8 (0.5–1.4)	0.50	0.9 (0.4–2.1)	0.82	1.2 (0.5–2.9)	0.66
Two or more chronic physical disorders**	1.4 (1.0–2.0)	0.08	0.8 (0.4–1.4)	0.35	1.2 (0.8–2.0)	0.38
Severity of disorder						
Mild (reference)	1.0		1.0		1.0	
Moderate	2.2 (1.4–3.5)	0.001	1.2 (0.6–2.4)	0.64	1.6 (0.7–3.8)	0.28
Severe	3.8 (2.1–6.7)	< 0.001	0.8 (0.3–2.0)	0.63	1.8 (0.7–4.6)	0.22
Sector consulted						
General practitioner only (reference)	na		1.0		1.0	
Primary care allied health and/or specialised mental health sector(s)			1.9 (1.1–3.5)	0.03	6.0 (3.0–12.0)	0.001
Other health			0.4 (0.2–1.2)	0.09	1.2 (0.4–3.3)	0.79

AOR = adjusted odds ratio. na = not applicable. * Country of birth, urbanicity, and relative socioeconomic disadvantage were assessed for inclusion in the models but did not reach $P = 0.05$ in univariate analyses. † Denominator is 1517 respondents with past-year affective or anxiety disorders. ‡ Denominator is 620 respondents with past-year affective or anxiety disorder who consulted for mental health in the previous 12 months. § Because data on the frequencies of consultation with each type of professional were only available in grouped form, minimally adequate treatment status was deemed for 55 respondents with affective or anxiety disorders using available data regarding their possible range of eligible consultations. ¶ *P* for Wald χ^2 test of association. ** Chronic physical disorders in past year included musculoskeletal conditions, cardiovascular conditions, respiratory disorders, diabetes, cancer, stroke, emphysema, anaemia, epilepsy, fluid problems, hernias, kidney problems, migraine, psoriasis, gastrointestinal ulcer, thyroid problems and tuberculosis. ◆

eight sessions commonly used,[12] both a meta-regression and a patient-level analysis have shown little increase in benefit beyond seven sessions.[16,17] Adequate pharmacotherapy relied on reports of medications taken in the past 2 weeks and required at least 1 month of medication use to fit the grouped duration data available, rather than the 2-month threshold commonly used.[12] Medication dose was not available. We were able, to some extent, to specify types of psychological therapy, although psychotherapy is an umbrella term and may have included some therapies that are not evidence-based. Notwithstanding methodological and service system differences, studies have generally returned similar findings regarding the shortfall in treatment quality and variations between health sectors.[12-14]

Second, cross-sectional data have limitations for this purpose. The temporal relationship between clinical and treatment variables could not be established. As detail was gathered only about past-year consultations, adequate treatment for respondents who commenced treatment before, or late in, the past year may be underestimated. However, there is no reason to believe this would bias the patterns or correlates of treatment quality.[13] It was not possible to examine the validity of the indicators of treatment quality; however, positive associations between similarly derived

indicators of treatment quality and outcomes have been reported.[18]

Third, the criteria for minimally adequate treatment represent a minimum threshold for adequacy, but do not necessarily equate to optimal, individually tailored care. The criteria will require revision as the evidence base for interventions evolves.

There are many possible reasons why people who seek professional help might not receive an adequate dose of treatment. In this study, the attrition between the frequency of evidence-based and minimally adequate treatment suggests a need for strategies to improve treatment adherence. Options include quality improvement strategies to support systematic and proactive monitoring of patient adherence and outcomes.[19] Little is known about the content of interventions in office-based practice; professional bodies could take a role in monitoring and providing education regarding effective practices. Educating consumers regarding the benefits of psychological therapies and what constitutes an adequate course may be helpful.[13] Dissemination of psychological treatments via the internet may help reduce barriers to care and increase treatment fidelity. Most work in this area has occurred since 2007 so could not be included in our model. Internet therapies are efficacious and effective for mild, moderate and severe anxiety and depression, acceptable to patients and providers, and probably more cost-effective than face-to-face therapies.[20,21]

The frequencies of evidence-based and adequate pharmacotherapy and psychological therapy were similar across disorder and severity groups, except that fewer people with affective disorder(s) only received adequate psychological treatment. These patterns are inconsistent with treatment guidelines that, generally, recommend psychological therapy as first-line treatment for anxiety disorders and milder depression, and medications as an adjunct to psychological therapies for more severe depression. Further investigation of the patterns of treatment according to individual disorders is needed, but these initial findings are concerning given that CBT (face-to-face or internet) can achieve improvements for one in 2–3 patients (depending on disorder) within 6 weeks, and has about 80% adherence.[20] In contrast, selective serotonin reuptake inhibitors (the most commonly prescribed antidepressants) take up to 6 weeks to reach potency and require continuation for 6 months to reduce relapse, and adherence is poor.[22]

In our study, as elsewhere,[14] frequency and type of treatment received varied by health sector. People with more complex and/or severe disorders were most likely to receive all levels of treatment and to consult the specialised mental health sector. This suggests that treatment resources are being allocated according to need, although coverage and quality could be improved. The relatively lower frequency of evidence-based and adequate treatment among those who only consulted a GP, compared with those consulting a mental health professional, may reflect provider factors (competing demands, lack of specialised training or experience) and patient factors (poorer adherence and acceptability of mental health treatments among patients consulting this sector).[4,12,13] In Australia, the 20-minute average duration of GP encounters for depression or anxiety,[23] reflecting the Medicare Benefits Schedule item structure, limits GPs' capacity to meet the threshold for adequate psychological treatment. Onsite psychotherapy and use of treatment algorithms in primary care settings have been associated with higher-quality care for depression[14,24] but not improved outcomes.[18] It has been suggested that the gap in treatment quality overall is more important than the differences between sectors,[19] and that quality improvement strategies[19] and improved collaborative care models[4] should be prioritised. Research to identify the treatment elements (eg, number or duration of sessions) that contribute to poorer adequacy, within each sector, is indicated.

Further research is needed to investigate the reasons for the age-related differentials in treatment that occur along the pathway to adequate treatment; these likely involve patient and provider factors.[7]

Data for this study were collected in 2007. Direct evidence of changes in treatment quality is lacking, and there have been no major reforms since 2007 likely to have affected quality at a population level. A previous study estimated that treatment access for any mental disorder may have improved by 23% between the 2006–07 and 2009–10 financial years, primarily due to uptake of Better Access services.[25] Applying our estimates of minimally adequate treatment to the estimated proportions of people consulting various health sectors in 2009–10,[25] we might speculate that 19% of consultees with affective and/or anxiety disorders received adequate treatment in 2009–10, compared with 16% in 2007 (details upon request). A proposed third NSMHWB should allow an updated assessment of mental health treatment access and quality.

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