

## Chapter 5: Outcomes of Better Access care for consumers

### Changes on outcome measures from pre- to post-treatment

Tables 18, 19 and 20 present outcome data for participating consumers who were recruited by clinical psychologists, registered psychologists and GPs, respectively. We used paired t-tests to examine the difference between mean pre- and post-treatment scores on the range of outcome measures, excluding consumers who did not have a “matched pair” of pre- and post-treatment scores.

**Table 18: Outcome data for consumers seen by clinical psychologists through Better Access**

	Participating consumers for whom pre-and post-treatment outcome data were available <sup>1</sup>			
	Pre-treatment mean (s.d.)	Post-treatment mean (s.d.)	Mean difference (s.d.)	P-value
<b>K-10 (n=193)</b>	28.63 (7.57)	19.09 (6.96)	9.53 (7.84)	0.000
<b>DASS_Depression (n=205)</b>	21.02 (11.00)	9.66 (9.63)	11.37 (10.92)	0.000
<b>DASS_Anxiety (n=205)</b>	14.75 (9.44)	7.58 (7.32)	7.17 (8.73)	0.000
<b>DASS_Stress (n=205)</b>	22.85 (8.58)	12.93 (8.48)	9.93 (9.50)	0.000

1. Received care through Better Access between 1 Oct 2009 and 31 Oct 2010

**Table 19: Outcome data for consumers seen by registered psychologists through Better Access**

	Participating consumers for whom pre-and post-treatment outcome data were available <sup>1</sup>			
	Pre-treatment mean (s.d.)	Post-treatment mean (s.d.)	Mean difference (s.d.)	P-value
<b>K-10 (n=192)</b>	29.44 (7.33)	18.86 (7.13)	10.58 (8.83)	0.000
<b>DASS_Depression (n=204)</b>	20.41 (10.58)	8.96 (8.99)	11.46 (11.43)	0.000
<b>DASS_Anxiety (n=204)</b>	15.34 (9.59)	6.55 (7.01)	8.78 (10.09)	0.000
<b>DASS_Stress (n=204)</b>	23.91 (9.41)	12.22(9.28)	11.69 (11.01)	0.000

1. Received care through Better Access between 1 Oct 2009 and 31 Oct 2010

**Table 20: Outcome data for consumers seen by GPs through Better Access**

	Participating consumers for whom pre-and post-treatment outcome data were available <sup>1</sup>			
	Pre-treatment mean (s.d.)	Post-treatment mean (s.d.)	Mean difference (s.d.)	P-value
<b>K-10 (n=177)</b>	30.89 (7.94)	22.88 (8.54)	8.01 (8.72)	0.000

1. Received care through Better Access between 1 Oct 2009 and 31 Oct 2010

Consumers who were recruited by all three types of provider shifted from having high or very high levels of psychological distress to having much more moderate levels of psychological distress (as assessed by the K-10). Consumers who were recruited by clinical psychologists and registered psychologists shifted from having moderate or severe levels of depression, anxiety and stress to having normal or mild levels of these conditions (as assessed by the DASS-21).

These outcomes are of a similar level of magnitude to those experienced by consumers who receive care from psychologists through the Access to Allied Psychological Services component of the Better Outcomes in Mental Health Care program,<sup>5</sup> and to those experienced by consumers who receive care through virtual clinic operated by the Clinical Research Unit for Anxiety and Depression (CRUFAD).<sup>6</sup> They also correspond with the sorts of effects seen by major primary mental health care programs overseas, like the Improving Access to Psychological Therapies initiative in the United Kingdom.<sup>7</sup>

As an aside, it is worth considering differences in scores on the K-10 and the DASS-21, both of which were completed by consumers who saw clinical psychologists and registered psychologists. In each case, pre-treatment scores on the K-10 put these consumers in the “high” range, whereas pre-treatment scores on the DASS-21 put them in the “moderate” range. Similarly, post-treatment scores on the K-10 placed them in the “moderate” range, whereas post-treatment scores on the DASS-21 placed them in the “normal” range. The strong likelihood is that the instruments are measuring different, though related constructs. The K-10 assesses non-specific psychological distress, whereas the DASS-21 assesses symptoms of depression, anxiety and stress. Support for this contention comes from the results of a separate analysis we conducted which combined data from consumers recruited by clinical and registered psychologists, and examined correlations between the K-10 and the sub-scales of the DASS-21 taken at the same point in time. The correlations between the K-10 and each of the DASS-21 subscales were around 0.6-0.8 and statistically significant, both at pre-treatment and at post-treatment. These findings are consistent with a separate analysis we conducted of 805 consumers who received care from psychologists through the ATAPS program.<sup>8</sup> They are also consistent with pooled analyses from three randomised controlled trials conducted at the Clinical Research Unit for Anxiety and Depression (CRUFAD) which included 283 consumers.<sup>9</sup>

## **Predictors of improvement on outcome measures**

We conducted three linear regression analyses (one for consumers recruited by each of the three provider groups) using scores on the K-10 outcome of interest. The full range of socio-demographic, clinical and treatment variables described in Chapter 4 were used as covariates; pre-treatment scores were also included as a co-variate. Tables 21, 22 and 23 show the results for consumers recruited by clinical psychologists, registered psychologists and GPs, respectively.

Those with comparatively higher pre-treatment K-10 scores (i.e., worse baseline manifestations of psychological distress) demonstrated greater levels of improvement than those with lower pre-treatment scores. For consumers recruited by clinical psychologists, improvements rose at a rate of 0.58 points per each additional one-point increase on the pre-treatment score. For consumers recruited by registered psychologists and GPs, the equivalent figures were 0.81 and 0.53, respectively. In other words, for all three groups of consumers, those with worse baseline manifestations of psychological distress demonstrated greater levels of improvement than those with lower pre-treatment scores. This finding is consistent with a recent study by Prytys et al<sup>10</sup> which found that those who were above clinical cut-offs on given measures of depression benefited more from CBT workshops than those who scored below this threshold at presentation. Our finding is at odds, however, with a review by Hamilton and Dobson<sup>11</sup> which found that, on balance, individuals with more extreme symptoms of depression appeared to be less responsive to CBT. One explanation for the pattern we observed may be that those with higher original scores may have greater opportunities to improve before they hit a “floor” score. Another explanation may be that, arguably, they have more “invested” in treatment.

For consumers recruited by clinical psychologists, no other factors were predictive of levels of gain in K-10 scores.

For consumers recruited by registered psychologists, two other variables were significant predictors of outcome. The first of these was treatment completion was also a significant predictor; those who had completed treatment or were still in treatment experienced improvements 5.98 points higher than those for whom treatment was incomplete. This is perhaps not surprising given that, according to the interviews/surveys, those who dropped out of treatment prematurely did so because they felt it was not doing them any good or because they did not have a sufficiently good rapport with the therapist.

The second significant variable for consumers who were recruited by registered psychologists was region. Those who were in metropolitan areas showed lesser improvement than their rural counterparts, on average gaining 2.44 points less. This finding is difficult to interpret and requires further exploration.

For consumers who were recruited by GPs, two additional variables were associated with positive outcomes. The first was the number of sessions of care received. Six sessions were optimal; lesser improvements were achieved when the consumer had fewer sessions, and equivalent sessions were achieved when they had more sessions. This finding is difficult to interpret because these consumers may have seen the GP in isolation, or may have been referred to a psychologist or another allied health professional for additional sessions of psychological care. Therefore, the total number of sessions with the GP may not be representative of the total number of sessions of care they received.

The second important factor for consumers who were recruited by GPs was whether they had previously received mental health care. Those who had not received previous mental health care showed levels of improvement that were 3.77 points higher than those who had done so. One interpretation of this finding might be that a considerable proportion of those who are new to the system may have had difficulties accessing services in the past, and these people may be particularly likely to be compliant with treatment now that they have been given the opportunity to access care. A second interpretation might be that these people have less chronic conditions, and may therefore have less entrenched symptoms. A third and related interpretation might be that intervention is occurring earlier for these people.

**Table 21: Coefficients and 95% confidence intervals predicting change in K-10 scores for consumers seen by clinical psychologists**

Covariate		Coefficient (95% CI)	P-value
Gender	Male	1.00	0.704
	Female	-0.42 (-2.64-1.80)	
Age	<30	1.00	0.754
	30-49	0.96 (-1.63-3.55)	
	50-69	1.40 (-1.48-4.28)	
	>69	2.40 (-3.81-8.60)	
Region	Metropolitan	0.31 (-2.26-2.87)	0.810
	Rural	1.00	
Socio-economic disadvantage	Quintile 5 (Least)	-2.65 (-7.54-2.23)	0.400
	Quintile 4	0.19 (-4.55-4.92)	
	Quintile 3	-1.10 (-5.41-3.20)	
	Quintile 2	-2.70 (-7.75-2.34)	
	Quintile 1 (Most)	1.00	
Diagnosis	Depression and anxiety	4.37 (-0.18-8.92)	0.227
	Depression without anxiety	4.00 (0.01-7.99)	
	Anxiety without depression	2.90 (-1.70-7.49)	
	Other	1.00	
Previous history of mental health care	No previous history of mental health care	1.70 (-0.92-4.33)	0.360
	Previous history of mental health care	1.00	
	Unknown	-3.08 (-9.81-3.65)	
Number of sessions	1-3	1.20 (-1.98-4.39)	0.099
	4-5	2.35 (-0.64-5.33)	
	6	1.00	
	7-12	0.08 (-2.53-2.70)	
	13 or more	-2.92 (-6.58-0.73)	
Treatment received	Received CBT in at least one session <sup>8</sup>	0.12 (-2.46-2.70)	0.926
	Received no CBT in any session <sup>9</sup>	1.00	
Treatment completion	Treatment incomplete	1.00	0.067
	Treatment completed or ongoing	6.62 (-0.48-13.72)	
Copolyment	Paid co-payment in at least one session	0.39 (-2.02-2.79)	0.747
	Did not pay co-payment in any session	1.00	
Pre-treatment K-10 score		.58 (0.40-0.76)	0.000
Intercept		-18.10 (-29.25- -6.96)	0.002

**Table 22: Coefficients and 95% confidence intervals predicting change in K-10 scores for consumers seen by registered psychologists**

Covariate		Coefficient (95% CI)	P-value
Gender	Male	1.00	0.519
	Female	-0.56 (-2.28-1.17)	
Age	<30	1.00	0.498
	30-49	0.79 (-3.65-5.22)	
	50-69	2.07 (-1.91-6.06)	
	>69	1.04 (-3.82-5.92)	
Region	Metropolitan	-2.44 (-4.88- -0.01)	0.010
	Rural	1.00	
Socio-economic disadvantage	Quintile 5 (Least)	-2.00 (-5.55-1.56)	0.062
	Quintile 4	0.60 (-2.80-4.00)	
	Quintile 3	-1.99 (-5.63-1.64)	
	Quintile 2	-2.43 (-6.70-1.84)	
	Quintile 1 (Most)	1.00	
Diagnosis	Depression and anxiety	-1.70 (-4.42-1.02)	0.609
	Depression without anxiety	-0.99 (-3.79-1.81)	
	Anxiety without depression	-0.15 (-3.49-3.20)	
	Other	1.00	
Previous history of mental health care	No previous history of mental health care	2.64 (0.34-4.93)	0.667
	Previous history of mental health care	1.00	
	Unknown	-1.18 (-6.66-4.31)	
Number of sessions	1-3	1.03 (-2.31-4.38)	0.187
	4-5	-0.36 (-3.23-2.52)	
	6	1.00	
	7-12	1.13 (-2.25-4.50)	
	13 or more	3.86 (-0.02-7.75)	
Treatment received	Received CBT in at least one session	-0.24 (-4.29-3.82)	0.907
	Received no CBT in any session	1.00	
Treatment completion	Treatment incomplete	1.00	0.022
	Treatment completed or ongoing	5.98 (0.93-11.03)	
Copayment	Paid co-payment in at least one session	0.19 (-1.87-2.25)	0.853
	Did not pay co-payment in any session	1.00	
Pre-treatment K-10 score		0.81 (0.64-0.97)	0.000
Intercept		-17.56 (-27.43- -7.68)	0.001

**Table 23: Coefficients and 95% confidence intervals predicting change in K-10 scores for consumers seen by GPs**

Covariate		Coefficient (95% CI)	P-value
Gender	Male	1.00	0.938
	Female	0.10 (-2.59-2.79)	
Age	<30	1.00	0.520
	30-49	0.84 (-2.81-4.49)	
	50-69	2.27 (-1.23-5.77)	
	>69	2.86 (-2.49-8.22)	
Region <sup>4</sup>	Metropolitan	0.67 (-2.85-4.19)	0.701
	Rural	1.00	
Socio-economic disadvantage <sup>5</sup>	Quintile 5 (Least)	2.80 (-4.07-9.66)	0.596
	Quintile 4	3.91 (-2.80-10.61)	
	Quintile 3	0.92 (-6.05-7.89)	
	Quintile 2	2.00 (-5.05-9.05)	
	Quintile 1 (Most)	1.00	
Diagnosis	Depression and anxiety <sup>6</sup>	1.17 (-2.90-5.25)	0.793
	Depression without anxiety <sup>6</sup>	2.37 (-2.61-7.35)	
	Anxiety without depression <sup>6</sup>	1.71 (-3.50-6.91)	
	Other <sup>7</sup>	1.00	
Previous history of mental health care	No previous history of mental health care	3.77 (1.32-6.21)	0.017
	Previous history of mental health care	1.00	
	Unknown	7.79 (1.47-14.10)	
Number of sessions	1-3	-5.12 (-7.58- -2.65)	0.000
	4-5	-3.89 (-7.50- -0.29)	
	6	1.00	
	7-12	-1.35 (-9.72-7.03)	
	13 or more	-	
Treatment received	Received CBT in at least one session <sup>8</sup>	-0.44 (-3.34-2.46)	0.762
	Received no CBT in any session <sup>9</sup>	1.00	
Treatment completion	Treatment incomplete	1.00	0.140
	Treatment completed or ongoing	2.72 (-0.94-6.38)	
Copayment	Paid co-payment in at least one session	-1.56 (-4.09-0.97)	0.218
	Did not pay co-payment in any session	1.00	
Pre-treatment K-10 score		0.53 (0.36-0.71)	0.000
Intercept		-11.62 (-23.44-0.21)	0.054