



Chronic Conditions

Depression

**As measured by the
Centre for Epidemiological Studies
Depression Scale (CES-D)**

Stage 2

Epidemiological Series Report # 2007-06

April 2007

Introduction

The following overview presents the prevalence of depression, as measured by the Centre for Epidemiologic Studies Depression Scale (CES-D), among the participants of the North West Adelaide Health Study, and demographics, chronic conditions and risk factors associated with depression. Prevalence of depression was only included at Stage 2 of the study (conducted from 2004 to 2006).

Measurement and definition of depression

The prevalence of depression was calculated using data obtained from the self report telephone interview using the Centre for Epidemiologic Studies Depression Scale (CES-D)¹. Participants were asked 20 items which were scored together to identify depression in this population. A score of 16 or higher classified persons as having “depressive symptoms”.

Prevalence of depression – Stage 2

The prevalence of depression as measured by the CES-D is shown in Table 1. In Stage 2, **12.4%** (95% CI 11.3-13.5) of study participants had depression.

Table 1: Prevalence of a depression (CES-D)

	Stage 2	
	n	%
No depression	3057	87.6
Depression	431	12.4
Total	3488	100.0

Note: (Stage 2) 14 participants did not provide responses to questions and were excluded

Classification of depression

The depression status of participants, assessing mild or moderate according to the self report questionnaire from in Stage 2 is shown in Table 2. When cutoffs for the subtypes of depression are used, 8.5% (95% CI 7.6-9.5) of participants experienced mild depression and 3.9% (95% CI 3.3-4.6) experienced moderate to severe depression².

Table 2: Depression Classification in Stage 2 (CES-D)

	Stage 2	
	n	%
No depression (CES-D < 16)	3057	87.6
Mild depression (CES-D ≥ 16 and ≤ 26)	296	8.5
Moderate to severe depression (CES-D > 26)	135	3.9
Total	3488	100.0

Note: (Stage 2) 14 participants did not respond to the questions and were excluded

The prevalence of having depression in Stage 2 was 12.4%.

The prevalence of having mild depression in Stage 2 was 8.5%, and 3.9% of participants had moderate to severe depression.

¹ Radloff LS. The CES-D Scale: a self report depression scale for research in the general population. *Applied Psychological Measurement* 1977; 1: 385 - 401.

² Blumenthal JA, Lett HS, Babyak MA, et al. Depression as a risk factor for mortality after coronary artery bypass surgery. *Lancet* 2003; 362: 604-609.

Demographic profile of depression as measured by CES-D

The prevalence of depression as measured by the CES-D was statistically significantly higher among females, adults living alone or in a step or sole parenting arrangement, separated or divorced, or those unemployed, working part-time, casually employed or a student. Respondents with a higher than secondary level of education, or those earning above \$20,000 were significantly less likely to have depression as determined by the CES-D (Table 3).

Table 3: Univariate Odds Ratios for demographic variables associated with depression (CE D)

Variable	n	%	OR	(95% CI)	p value
Sex					
Male	156/1712	9.1	1.00		
Female	275/1777	15.5	1.82	(1.48-2.24)	<0.001
Age group					
20 to 24 years	36/295	12.1	1.00		
25 to 34 years	107/701	15.3	1.31	(0.87-1.97)	0.19
35 to 44 years	97/711	13.6	1.14	(0.76-1.73)	0.52
45 to 54 years	78/618	12.7	1.05	(0.69-1.61)	0.81
55 to 64 years	54/475	11.4	0.94	(0.60-1.47)	0.77
65 to 74 years	31/352	8.9	0.71	(0.43-1.17)	0.18
75 years and over	28/337	8.2	0.65	(0.39-1.10)	0.11
Highest education level obtained*					
Secondary	204/1409	14.5	1.00		
Trade/apprenticeship/cert/diploma	135/1182	11.5	0.76	(0.61-0.96)	0.02
Bachelor degree or higher	38/559	6.8	0.43	(0.30-0.62)	<0.001
Gross annual household income*					
Up to \$20,000	104/587	17.8	1.00		
\$20,001- 40,000	98/728	13.4	0.72	(0.53-0.97)	0.03
\$40,001- 60,000	61/691	8.8	0.45	(0.32-0.62)	<0.001
More than \$60,000	102/1065	9.6	0.49	(0.37-0.66)	<0.001
Family structure*					
Family & children, 2 biological/adoptive parents	123/1199	10.3	1.00		
Adult living with partner, no children	93/873	10.6	1.04	(0.78-1.38)	0.80
Adult living alone	52/412	12.7	1.27	(0.90-1.79)	0.18
Adults – related/unrelated, living together	49/330	14.7	1.51	(1.06-2.16)	0.02
Step/sole/shared parenting & other	62/341	18.2	1.94	(1.39-2.71)	0.001
Marital status*					
Married or living with partner	228/2156	10.6	1.00		
Separated/divorced	54/269	20.3	2.16	(1.55-2.99)	<0.001
Widowed	24/196	12.4	1.20	(0.77-1.88)	0.42
Never married	74/567	13.1	1.28	(0.97-1.69)	0.09
Work status*					
Full time employed	137/1467	9.4	1.00		
Part time/casual employed	85/539	15.7	1.81	(1.35-2.42)	<0.001
Unemployed	21/75	27.7	3.71	(2.17-6.35)	<0.001
Home duties/retired	101/953	10.6	1.14	(0.87-1.50)	0.33
Student/other	36/150	24.2	3.10	(2.05-4.67)	<0.001

*Not stated category not reported

Those with depression were more likely to be:

- female;
- adults living together or step or sole parenting arrangement;
- separated or divorced;
- employed part time, casually, unemployed, or a student.

Depression was statistically significantly more likely among those who were current smokers, obese, had a high waist hip ratio or waist circumference.

People with depression have significantly lower quality of life scores for all dimensions of the SF-36.

Chronic condition and risk factor profile of depression

Depression was statistically significantly more likely among those who were current smokers, obese, had a high waist hip ratio, or waist circumference than in those without these risk factors. Depression was statistically significantly less likely in those who undertook exercise (Table 4).

Table 4: Univariate Odds Ratios for chronic condition and risk factor variables associated with depression (CES-D)

Variable	n	%	OR	(95% CI)	p value
COPD					
No COPD	357/2963	12.1	1.00		
COPD	14/145	9.5	0.77	(0.44-1.35)	0.36
Asthma					
No asthma	311/2650	11.7	1.00		
Asthma	69/511	13.4	1.17	(0.88-1.55)	0.28
Smoking					
Non-smoker	127/1465	8.7	1.00		
Ex-smoker	118/1088	10.8	1.28	(0.98-1.66)	0.07
Current smoker	135/640	21.2	2.82	(2.17-3.67)	<0.001
Physical activity					
Sedentary	138/834	16.5	1.00		
Undertakes exercise	213/2075	10.3	0.58	(0.46-0.73)	<0.001
BMI					
Underweight/Normal (<25.0)	112/1041	10.7	1.00		
Overweight (25.0 to 29.9)	123/1180	10.4	0.97	(0.74-1.27)	0.81
Obese (30 and over)	144/933	15.5	1.52	(1.17-1.98)	0.002
Waist/hip ratio (>1.0 men, >0.85 women)					
Normal	265/2404	11.0	1.00		
High	112/724	15.4	1.48	(1.16-1.87)	0.001
Waist Circumference(>95cm men, >80cm women)					
Normal	114/1125	10.1	1.00		
High	263/2003	13.1	1.34	(1.06-1.70)	0.01

Quality of life profile of depression

Figure 1 shows the mean scores of the SF-36 subscales for those with and without depression as measured by the CES-D. People with depression scored statistically significantly lower on all dimensions of the SF-36 when compared with those in who did not have depression.

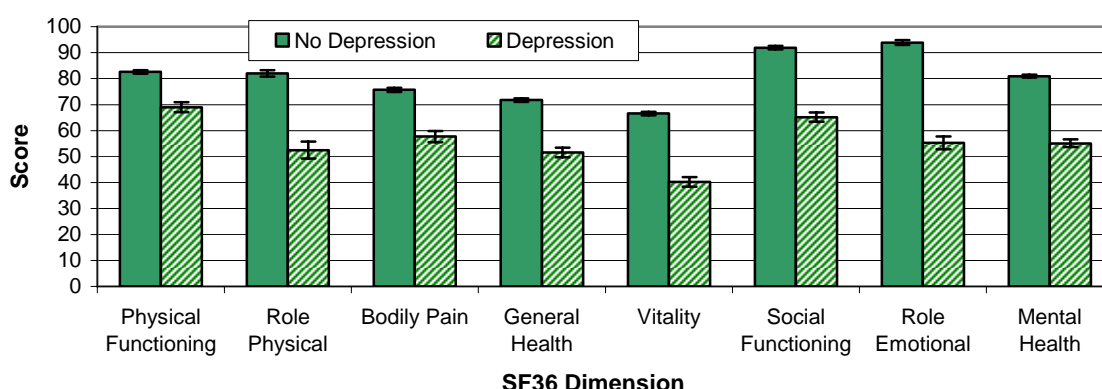


Figure 1: SF-36 mean scores for participants with and without depression

This document is one of a series of reports concerning Stage 2 of the North West Adelaide Health Study. Please see website for other reports in the series - www.health.sa.gov.au/pros/

CONTACT DETAILS:

Population Research & Outcome Studies Unit – South Australian Department of Health
 PO Box 287 Rundle Mall Level 8 CitiCentre, 11 Hindmarsh Square, Adelaide SA 5000
 Telephone (08) 8226 7042 Facsimile (08) 8226 6244
 Email: pros@health.sa.gov.au

Acknowledgment is made of the contribution to the success of the study by research, clinic and recruiting staff, and for the generosity of the NWAHS participants in the giving of their time and effort.