New Hampshire
Behavioral Risk Factor Surveillance System

Depression and Anxiety Disorder Among NH Adults, 2006 -- Issue Brief

Introduction

In 2006, the New Hampshire Behavioral Risk Factor Surveillance System (NH BRFSS) included questions regarding symptoms of current depression, and diagnosis of depression or anxiety disorder during a respondent's lifetime (lifetime diagnosis). The NH Bureau of Behavioral Health (BBH) and the federal Substance Abuse and Mental Health Services Administration (SAMHSA) sponsored these questions. The questions were developed from the PHQ – 9 a questionnaire used by mental health clinicians to screen for depression.[1,2,3]

The NH BRFSS is part of a national system of state-based telephone surveys of adults used to monitor health status and the prevalence of health behaviors related to the leading causes of death.

Prevalence

The 2006 BRFSS found that 6.8% of NH adults reported symptoms of current depression (Table 4), representing an estimated 60,000 NH adults.

The prevalence of current depression varied by demographic characteristics. Men were significantly less likely than women to report symptoms of current depression (Figure 1). The prevalence of current depression was also significantly lower among adults aged 65 or older (Figure 2), adults with higher levels of education, adults with higher incomes (Figure 3 and 4) and among adults who were currently married (Table 4). The prevalence of current depression was significantly higher among adults who were currently out of work or unable to work (Table 4).

In 2006, 17.2% of NH adults reported ever being diagnosed with depression by a health care provider and 12.8% reported ever being diagnosed with an anxiety disorder (Table 4). Prevalence of a lifetime diagnosis of depression or anxiety disorder was significantly lower among men, older adults, adults with higher incomes, higher educational levels and those who were married. Prevalence was significantly higher among adults out of work or unable to work (Figures 1 through 4 and Table 4).

Figure 1. Prevalence of current depression and lifetime diagnosis of depression or anxiety disorder by sex, 2006 NH BRFSS
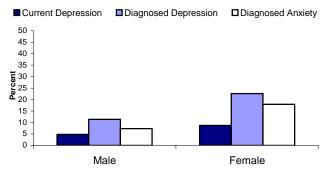

Figure 2. Prevalence of current depression and lifetime diagnosis of depression or anxiety disorder by age, 2006 NH BRFSS
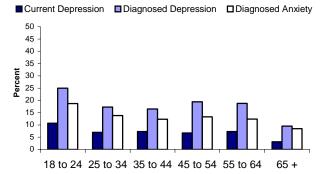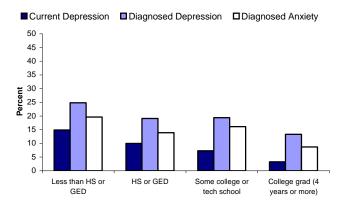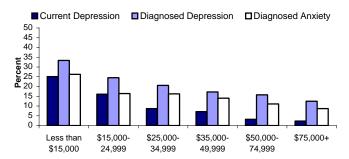

Figure 3. Prevalence of current depression and lifetime diagnosis of depression or anxiety disorder by education, 2006 NH BRFSS

New Hampshire Behavioral Risk Factor Surveillance System
NH Department of Health and Human Services
Division of Public Health Services
Bureau of Disease Control and Health Statistics, Health Statistics Section
April 2008

1

Figure 4. Prevalence of current depression and lifetime diagnosis of depression or anxiety disorder, by income, 2006 NH BRFSS
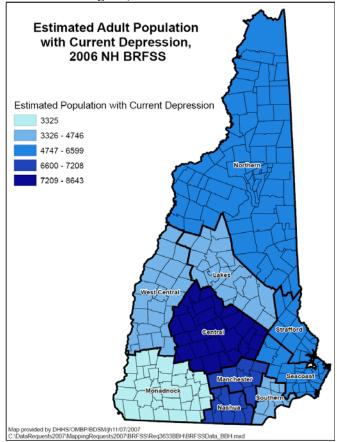

The BBH contracts with Community Mental Health Centers (CMHC) located in ten regions in NH. The CMHC provide publicly funded mental health services to individuals and families who meet certain criteria.

There were no significant differences in the prevalence of current depression, lifetime diagnosis of depression or lifetime diagnosis of anxiety disorder across the BBH geographic service regions.

Figure 5 displays the estimated number of adults with current depression within BBH regions based on 2006 NH BRFSS data.
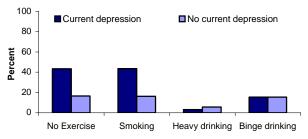
Figure 5. NH Adults With Current Depression By NH BBH Service Regions, 2006 NH BRFSS

Health Risk Behaviors

NH adults with current depression were significantly more likely to report they had not done any physical activity in the past month and that they were current smokers than adults without current depression (Figure 6) and (Table 4). There were no significant differences in the proportion of adults reporting heavy drinking or binge drinking by current depression status (Figure 6) and (Table 1).

Figure 6. Prevalence health risk behaviors by current depression status, 2006 NH BRFSS

Table 1. Prevalence health risk behaviors by current depression status, 2006 NH BRFSS

Health behaviors	Percent Current Depression		Percent without Current Depression	
	%	(95% CI)	%	(95% CI)
No Exercise	43.4	(36.8-50.1)	16.5	(15.3-17.6)
Smoking	43.6	(36.7-50.4)	16.2	(14.8-17.6)
Binge drinking	15.4	(9.7-21.1)	15.4	(14.0-16.7)
Heavy drinking	3.1	(1.3-4.9)	5.7	(4.9-6.4)

Chronic Conditions

The prevalence of lifetime diagnoses of myocardial infarction, coronary heart disease (CHD), stroke and diabetes were significantly higher among NH adults with current depression compared with adults without current depression. The prevalence of current asthma and obesity was also significantly higher among adults with current depression compared with adults without current depression (Figure 7) and (Table 2). Obesity was defined by a Body Mass Index (BMI) of 30 or higher. BMI was calculated from the respondents reported height and weight.

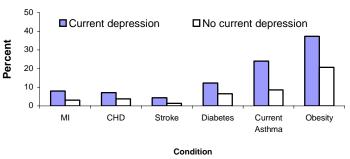**Figure 7. Prevalence of chronic conditions by current depression, 2006 NH BRFSS**

Table 2. Prevalence of Chronic Conditions by Current Depression Status, 2006 NH BRFSS

Condition	Percent Current Depression %	95% CI	Percent without Current Depression %	95% CI
Heart attack (MI) diagnosis	8.0	(5.3-10.8)	3.1	(2.5-3.7)
Angina or CHD diagnosis	7.1	(4.4-9.9)	3.8	(3.3-4.4)
Stroke diagnosis	4.4	(2.2-6.6)	1.4	(1.1-1.8)
Diabetes	12.3	(8.8-15.8)	6.5	(5.7-7.3)
Current asthma	24.0	(18.4-29.7)	8.6	(7.6-9.6)
Obesity (BMI greater than 30)	37.3	(30.6-43.9)	20.7	(19.2-22.3)

Health Care Access

NH adults with current depression were significantly more likely to report they did not have health insurance and that, in the previous year, they had been unable to obtain needed medical care because of cost compared with adults without current depression. There were no significant differences by depression status in the percentage of NH adults reporting they had a personal health care provider or had a routine checkup in the last year (Table 3).

NH adults with current depression were more likely to report ever having an HIV test than those without current depression.   There were no significant differences in the prevalence of recent sigmoidoscopy or colonoscopy or recent influenza shot by depression status (Table 3).

Table 3. Prevalence of Selected Health Access Indicators by Current Depression Status, 2006 NH BRFSS

Health Care Access indicators	Current depression % (95% CI)		No current depression % (95% CI)	
Health insurance	73.8	(66.9-80.6)	90.0	(88.7-91.1)
Personal health provider	87.1	(82.2-92.0)	89.0	(87.6-90.4)
Could not afford medical care	37.6	(30.8-44.6)	7.0	(6.0-7.9)
Routine checkup, last year	68.0	(61.5-74.5)	73.2	(71.6-74.8)
Sigmoidoscopy or colonoscopy, last 5 years, adults 50 or older	49.9	(41.2-58.5)	55.6	(53.5-57.8)
Flu shot, last year	33.2	(26.9-39.5)	34.8	(33.0-36.6)
Ever tested for HIV, adults 18 to 64 years	48.0	(40.8-55.6)	31.0	(29.1-33.0)

Limitations To This Study

Estimates of current depression provided by the NH BRFSS may be lower than the actual prevalence of current depression among NH adults. There are at least three reasons for this.

- The NH BRFSS is a telephone survey of non-institutionalized adults. These results do not include adults residing in group quarters such as hospitals, nursing homes or prisons.

- The NH BRFSS is limited to adults with landline telephones. There is some evidence that adults in cell phone only households are younger and have lower incomes. They may also differ in some health indicators such as smoking, alcohol abuse and health insurance coverage.[4]

- For this analysis, responses from adults who did not answer all eight questions used to define current depression were excluded from the analyses of current depression.   There is evidence that those respondents who chose not to answer one or more of these questions may have been more likely to have some mental health problems.[3]   For example, in the 2006 NH BRFSS, respondents excluded from the current depression analysis because they did not answer one or more of the current depression questions were significantly more likely to report frequent mental distress earlier in the questionnaire. Frequent mental distress was defined as 14 or more day in the past 30 when mental health was not good.

Conclusions

In 2006, the NH BRFSS found that the prevalence of current depression, lifetime diagnosis of depression and lifetime diagnosis of anxiety disorder varied by demographic characteristics with NH adults at lower socio-economic levels having higher prevalence rates. Adults who were unmarried, out of work or unable to work also had higher prevalence rates of current depression, lifetime diagnosis of depression and lifetime diagnosis of anxiety disorder.

There were no significant differences in the prevalence of current depression or lifetime diagnosis of depression or anxiety disorder across NH BBH service regions.

NH adults with current depression were more likely to report diagnoses of heart attack, coronary heart disease, stroke, diabetes, current asthma and to report obesity. NH adults with current depression were significantly more likely to not take part in leisure time exercise and to smoke, behaviors that increase the risk of chronic disease.

NH adults with current depression were significantly less likely to report having health insurance and more likely to report being unable to afford needed medical care.

For more information about the NH BBH, visit: www.dhhs.nh.gov/DHHS/BBH/. Or call 603-271-5000 or 800-852-3345 x5000.

For more information about the BRFSS, visit http://www.cdc.gov/brfss or http://www.dhhs.nh.gov/DHHS/HSDM/behavioral-risk.htm or call 603-271-8425 or 800-852-3345 x8425.

New Hampshire Behavioral Risk Factor Surveillance System
NH Department of Health and Human Services
Division of Public Health Services
Bureau of Disease Control and Health Statistics, Health Statistics Section
April 2008

3

Table 4. Prevalence of Current Depression, Lifetime Diagnosis of Depression and Lifetime Diagnosis of Anxiety Disorder, by Demographic Characteristics, 2006 NH BRFSS

| | *Current Depression* | | *Ever diagnosed with depression* | | *Ever diagnosed with Anxiety Disorder* | |
| | Total Sample size = 5230 | | Total Sample size = 5592 | | Total Sample size = 5604 | |
Characteristic	Percent	95% CI	Percent	95% CI	Percent	95% CI
Total	6.8	(5.9-7.8)	17.2	(15.8-18.6)	12.8	(11.6-14.0)
Sex						
Male	4.8	(3.7-6.0)	11.4	(9.7-13.2)	7.3	(5.9-8.7)
Female	8.7	(7.3-10.1)	22.6	(20.7-24.6)	17.9	(16.2-19.7)
Age						
18 to 24	10.7	(5.4-16.0)	25.0	(17.6-32.5)	18.7	(12.1-25.4)
25 to 34	7.0	(4.5-9.6)	17.3	(13.7-20.8)	13.8	(10.6-16.9)
35 to 44	7.3	(5.6-9.1)	16.5	(13.9-19.0)	12.3	(10.2-14.5)
45 to 54	6.7	(5.3-8.0)	19.4	(17.0-21.7)	13.3	(11.4-15.3)
55 to 64	7.3	(5.5-9.0)	18.8	(16.2-21.3)	12.4	(10.3-14.6)
65 and older	3.1	(1.9-4.3)	9.5	(7.7-11.3)	8.5	(6.8-10.3)
Education						
Less than HS or GED	14.9	(9.6-20.2)	24.8	(18.7-30.9)	19.6	(14.5-24.7)
HS or GED	10.0	(7.6-12.3)	19.1	(16.5-21.6)	13.9	(11.6-16.3)
Some college or tech school	7.3	(5.6-9.1)	19.4	(16.6-22.1)	16.1	(13.5-18.6)
College grad	3.3	(2.5-4.1)	13.3	(11.7-14.8)	8.7	(7.4-10.1)
Income						
Less than $15,000	25.1	(19.4-30.8)	33.4	(27.4-39.5)	26.2	(21.2-31.3)
$15,000- 24,999	16.1	(11.2-21.0)	24.5	(19.6-29.4)	16.4	(11.9-20.9)
$25,000- 34,999	8.7	(5.8-11.6)	20.6	(16.4-24.7)	16.2	(12.5-19.9)
$35,000- 49,999	7.1	(4.8-9.5)	17.2	(13.7-20.8)	14.0	(10.5-17.5)
$50,000- 74,999	3.2	(1.6-4.7)	15.7	(12.8-18.6)	11.1	(8.6-13.7)
$75,000+	2.3	(1.3-3.3)	12.5	(10.4-14.7)	8.7	(7.0-10.5)
Employment						
Employed for wages	4.6	(3.6-5.6)	14.5	(13.0-16.1)	10.7	(9.3-12.0)
Self-employed	3.6	(1.6-5.5)	14.3	(11.1-17.4)	8.3	(6.0-10.7)
Out of work	29.1	(18.3-39.8)	34.9	(24.7-45.1)	29.4	(19.4-39.3)
A homemaker	5.0	(1.9-8.2)	17.5	(12.6-22.4)	13.7	(9.4-18.0)
A student	7.2	(1.7-12.7)	25.1	(12.6-37.7)	15.0	(5.4-24.6)
Retired	3.6	(2.4-4.8)	11.3	(9.3-13.3)	8.9	(7.1-10.6)
Unable to work	45.5	(37.3-53.8)	62.5	(55.4-69.5)	52.4	(44.8-60.1)
Married						
Married	4.9	(4.1-5.7)	13.4	(12.0-14.7)	9.9	(8.8-11.1)
Not married	10.3	(8.3-12.3)	23.8	(21.2-26.3)	17.5	(15.1-19.8)

References
1. Spitzer RL, Williams JBW, Kroenke K, Hornyak R, McMurray, J. Validity and utility of the PRIME-MD Patient Health Questionnaire in assessment of 3000 obstetric-gynecologic patients: The PRIME-MD Patient health Questionnaire Obstetrics-Gynecology Study. Am J Obstet Gynecol. 2000; 183:759-69.
2. Kroenke K, Spitzer RL, Williams JB. The PHQ-9 Validity of a brief depression severity measure. J Gen Intern Med. 2001;16:606-613.
3. Communication with CDC, Behavioral Surveillance Branch (BSB)
4. Blumberg SJ, Luke JV, Cynamon ML. Telephone Coverage and Health Survey Estimates: Evaluating the Need for Concern About Wireless Substitution. Am J Public Health. 2006;96:926-931.
5. Communication with CDC, BSB

4

New Hampshire Behavioral Risk Factor Surveillance System
NH Department of Health and Human Services
Division of Public Health Services
Bureau of Disease Control and Health Statistics, Health Statistics Section
April 2008