



# New Hampshire

## Behavioral Risk Factor Surveillance System

### Serious Psychological Distress Among NH Adults, 2007 -- Issue Brief

#### Introduction

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.

In 2007, the New Hampshire Behavioral Risk Factor Surveillance System (NH BRFSS) included questions regarding serious psychological distress and suicide ideation.

The NH Bureau of Behavioral Health (BBH) and the federal Substance Abuse and Mental Health Services Administration (SAMHSA) sponsored these questions on the NH BRFSS. The questions were developed from the Kessler 6 Scale, used by mental health clinicians to screen for Serious Psychological Distress (SPD), an indicator of serious mental illness.<sup>1,2</sup>

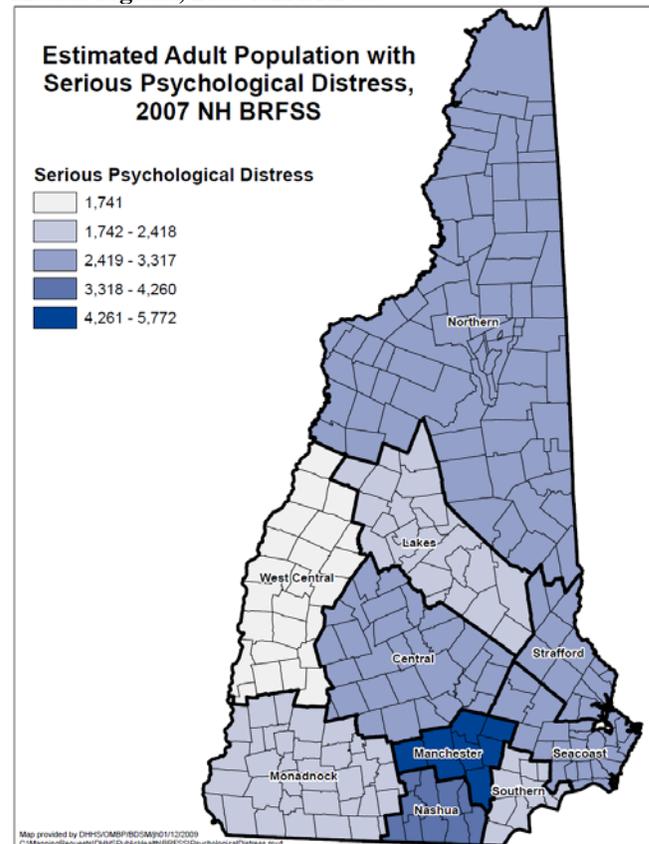
BRFSS respondents were asked six questions regarding their mental and emotional health in the past 30 days. Questions are included at the end of this Brief. Response choices of “all, most, some, a little, and none” were scored as 4, 3, 2, 1 and 0. Scores were totaled across all six questions. Respondents with scores of 13 or more were considered to have Serious Psychological Distress (SPD).<sup>3</sup>

#### Prevalence of SPD

The BRFSS found the prevalence of SPD among NH adults to be 3.2%, (95% CI: 2.6% – 3.8%) representing an estimated 30,700 adults.

The prevalence of SPD did not vary significantly by BBH service regions. Figure 1 illustrates the estimated number of adults with SPD within each BBH region.

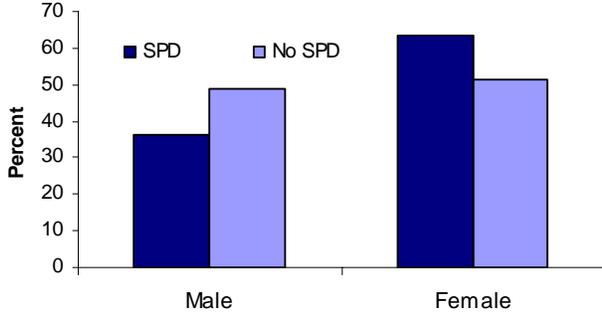
**Figure 1. Estimated number of adults with serious psychological distress within NH Bureau of Behavioral Health regions, 2007 NH BRFSS**



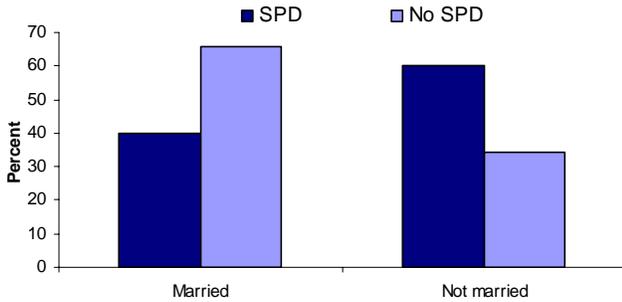
**Characteristics of NH Adults with SPD Symptoms**

NH BRFSS found that 63.6% of adults with SPD were women, and 60% were unmarried (Figure 2, Figure 3 and Table 10).

**Figure 2. Proportion of males and females by SPD status, 2007 NH BRFSS**

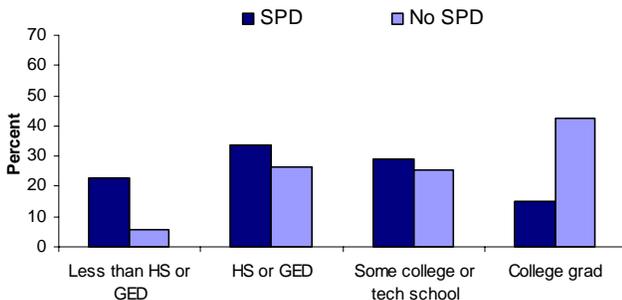


**Figure 3. Proportion of married and unmarried adults by SPD status, 2007 NH BRFSS**



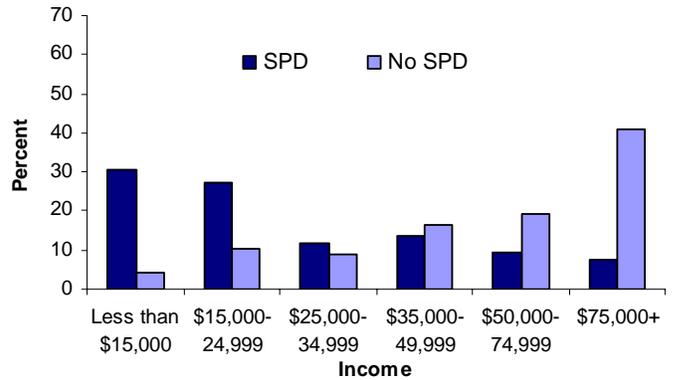
Among adults with SPD, 22.7% reported having less than a high school education compared to 5.8% of adults without SPD while 14.9% of adults with SPD reported a college degree compared to 42.5% of NH adults without SPD (Figure 4 and Table 10).

**Figure 4. Percent of adults with various levels of education by SPD status, 2007 NH BRFSS**



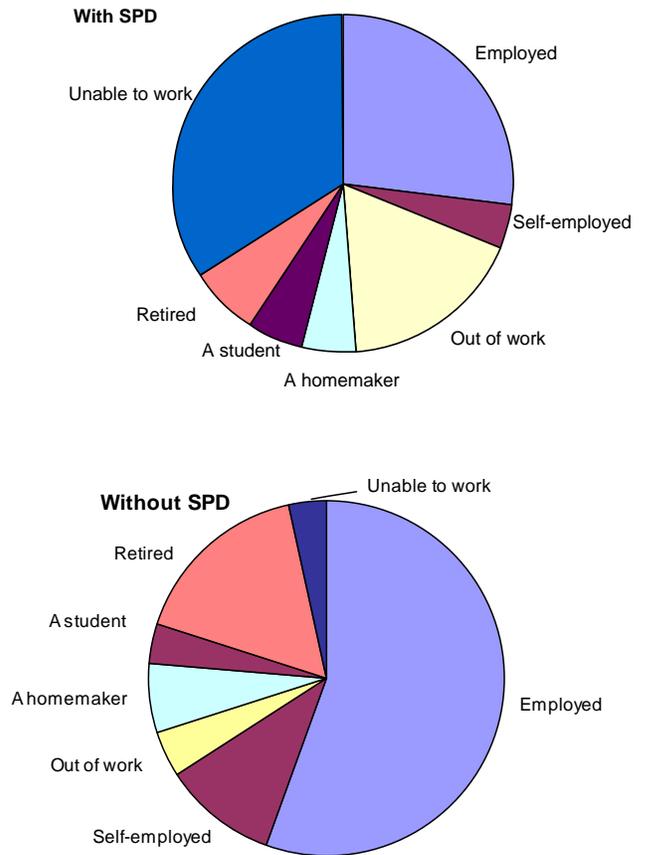
Overall, household incomes were lower among adults with SPD with 31% reporting incomes of less than \$15,000 compared to 4.3% of adults without SPD (Figure 5 and Table 10).

**Figure 5. Proportion of adults with various levels of household income, by SPD status, 2007 NH BRFSS**



Among adults with SPD, 34.2% reported being unable to work and 17.4% reported they were unemployed compared to 3.4% and 4.1% of adults without SPD (Figure 6 and Table 10).

**Figure 6. Employment status among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

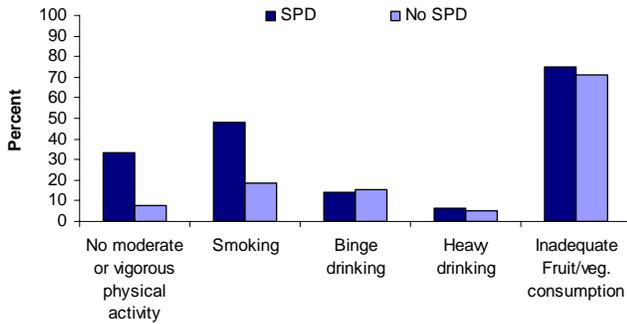


**Health Risk Behaviors**

A significantly higher proportion of NH adults with SPD reported they did not engage in moderate or vigorous physical activity and that they were current smokers compared to adults without SPD (Figure 7 and Table 1).

No significant differences were found in the proportion of adults with SPD reporting heavy drinking or binge drinking compared to adults without SPD (Figure 7 and Table 1). Nor was there any difference between adults with SPD and those without in the proportion reporting they consumed fruit and vegetables less than five times a day (Figure 7 and Table 1).

**Figure 7. Prevalence of health risk behaviors by SPD status, 2007 NH BRFSS**



**Table 1. Prevalence of health risk behaviors among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

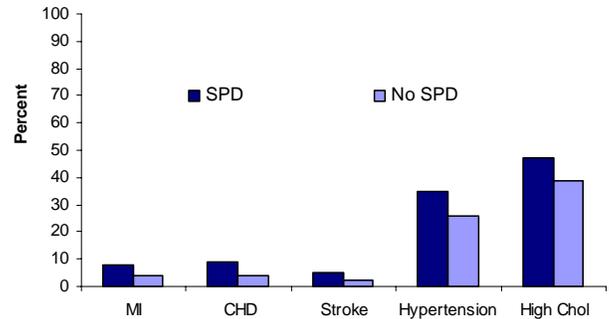
Health behaviors	Percent among those with SPD		Percent among those without SPD	
	%	(95% CI)	%	(95% CI)
No moderate or vigorous physical activity	33.2	(23.9-42.6)	7.5	(6.7-8.4)
Smoking	47.8	(38.6-57.0)	18.4	(17.0-19.7)
Binge drinking	14.3	(7.3-21.4)	15.3	(13.9-16.6)
Heavy drinking	6.3	(2.6-9.9)	5.4	(4.7-6.2)
Inadequate Fruit/veg. consumption	75.3	(67.5-83.1)	71.3	(69.8-72.8)

**Chronic Conditions**

The prevalence rates of lifetime diagnosis of coronary heart disease (CHD), arthritis, hypertension, diabetes and current asthma were significantly higher among adults with SPD compared to adults without SPD. Adults with SPD also reported a higher prevalence of disability compared to those without SPD. Disability was defined as being limited in any way in any activities because of physical, mental, or emotional problems (Figures 8 and 9 and Tables 2 and 3).

No significant difference was found by SPD status in the percentage of NH adults reporting a diagnosis of myocardial infarction (MI or heart attack), stroke or high cholesterol (Figure 8 and Table 2).

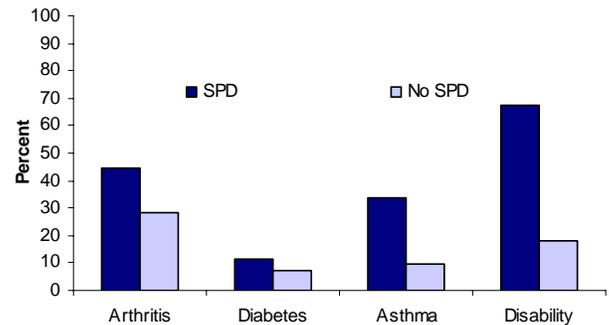
**Figure 8. Prevalence of heart-related chronic conditions by SPD status, 2007 NH BRFSS**



**Table 2. Prevalence of heart-related chronic conditions among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Condition	Percent among those with SPD		Percent among those without SPD	
	%	95% CI	%	95% CI
Heart attack (MI) diagnosis	7.7	(4.0-11.4)	4.1	(3.5-4.7)
Angina or CHD diagnosis	8.8	(4.9-12.8)	4.1	(3.6-4.6)
Stroke diagnosis	4.8	(2.1-7.6)	2.1	(1.7-2.5)
Hypertension	35.1	(26.8-43.3)	26.1	(24.7-27.4)
High Cholesterol	47.4	(37.6-57.2)	38.8	(37.2-40.5)

**Figure 9. Prevalence of other chronic conditions among adults with SPD compared to adults without SPD, 2007 NH BRFSS**



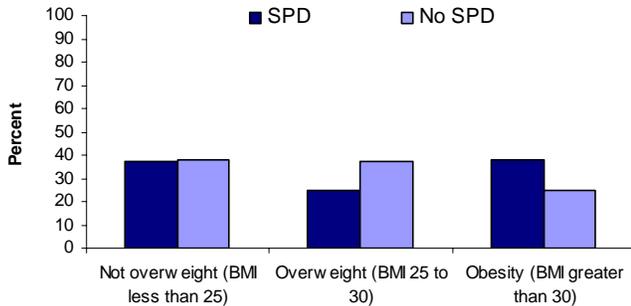
**Table 3. Prevalence of other chronic conditions among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Condition	Percent among those with SPD		Percent among those without SPD	
	%	95% CI	%	95% CI
Current asthma	33.6	(25.0-42.3)	9.5	(8.5-10.5)
Diabetes	11.7	(7.1-16.2)	7.0	(6.3-7.8)
Arthritis	44.4	(35.5-53.2)	28.2	(26.8-29.6)
Disability	67.6	(58.6-76.5)	18.3	(17.1-19.5)

The BRFSS defines obesity as a Body Mass Index (BMI) of 30 or higher. BMI was calculated from respondents' self-reported height and weight.

The prevalence of obesity among adults with SPD was significantly higher than among adults without SPD while the pattern for prevalence of overweight was reversed with adults with SPD having a significantly lower prevalence compared to adults without SPD (Figure 10 and Table 4).

**Figure 10. Prevalence of obesity and overweight among adults with SPD compared to adults without SPD, 2007 NH BRFSS**



**Table 4. Prevalence of obesity and overweight among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Condition	Percent among those with SPD		Percent among those without SPD	
	%	95% CI	%	95% CI
Not overweight (BMI less than 25)	36.9	(27.2-46.6)	37.9	(36.2-39.6)
Overweight (BMI 25 to 30)	24.9	(17.3-32.4)	37.1	(35.5-38.8)
Obesity (BMI greater than 30)	38.2	(29.4-47.1)	25.0	(23.5-26.4)

### Health Care Access and Use

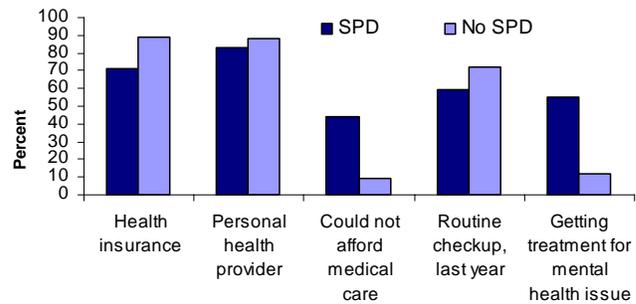
Among adults with symptoms of SPD, 55.3% reported they were currently receiving treatment for a mental health issue (Table 5).

A significantly higher proportion of NH adults with SPD reported 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 SPD (Figure 11 and Table 5).

A significantly lower proportion of adults with SPD reported having a routine checkup in the past year compared to those without SPD (Figure 11 and Table 5).

No significant differences were found in the proportion of adults with SPD reporting they had a personal health care provider compared to adults without SPD (Figure 11 and Table 5).

**Figure 11. Prevalence of selected health access indicators among adults with SPD compared to adults without SPD, 2007 NH BRFSS**



**Table 5. Prevalence of selected health access indicators among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Health Care Access indicators	Percent among those with SPD	Percent among those without SPD
Health insurance	71.5 (62.7-80.3)	89.1 (87.9-90.4)
Personal health provider	83.2 (76.5-90.0)	88.2 (87.0-89.5)
Could not afford medical care	44.0 (34.8-53.2)	8.9 (7.8-10.0)
Routine checkup, last year	59.6 (50.1-69.0)	71.8 (70.2-73.4)
Getting treatment for mental health issue	55.3 (46.0-64.7)	12.0 (10.9-13.0)

### Perception of Treatment Effectiveness

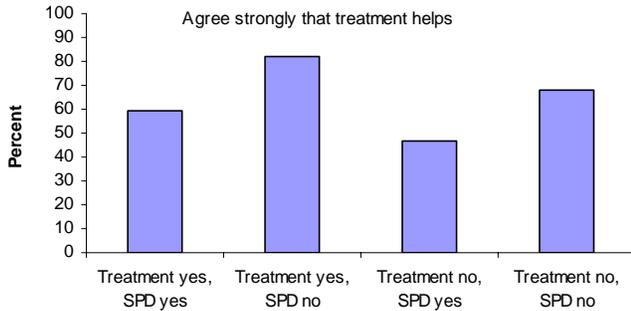
Survey respondents were asked if they thought treatment could help people with mental illness lead normal lives. Most adults (69%) agreed strongly with this statement (95% CI: 67.4 - 70.6). However the perception of treatment effectiveness varied by SPD status and treatment status.

Among those with SPD who reported treatment for a mental health condition, 59.3% agreed strongly that treatment helps (Figure 12 and Table 6).

This was significantly lower than the 82.1% of those who did not have SPD symptoms but reported receiving treatment for a mental health condition (Figure 12 and Table 6).

There was no significant difference in the proportion reporting they thought treatment helps by SPD status among those who did not report treatment.

**Figure 12. Proportion agreeing strongly that treatment helps, by SPD and treatment status, 2007 NH BRFSS**



**Table 6. Proportion agreeing strongly that treatment helps, by SPD and treatment status, 2007 NH BRFSS**

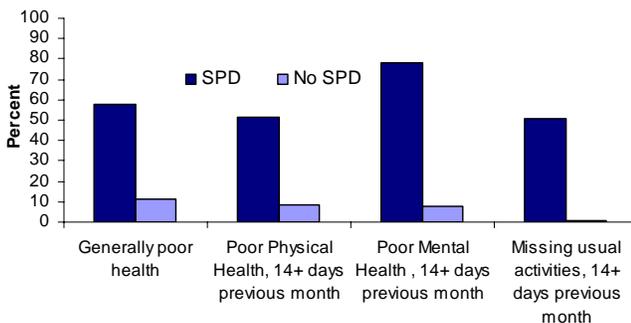
Treatment Status	Percent Agreeing Strongly, Treatment Helps SPD		Percent Agreeing Strongly, Treatment Helps Without SPD	
	Percent	95% CI	Percent	95% CI
In treatment	59.3	(47.7-70.9)	82.1	(78.2-86.0)
Not in treatment	46.6	(31.5-61.7)	67.9	(66.1-69.7)

**Health Related Quality of Life**

NH adults with SPD were significantly more likely to report fair or poor general health, poor physical health, and poor mental health, than were adults who did not have SPD. Poor physical health and poor mental health were defined as a report of 14 or more days in the last 30 days when physical health or mental health were not good (Figure 13 and Table 7).

Adults with SPD were significantly more likely to report that a mental health condition or emotional problem kept them from their usual activities or work for 14 or more days during the previous month (Figure 13 and Table 7).

**Figure 13. Prevalence of health related quality of life measures among adults with SPD compared to adults without SPD, 2007 NH BRFSS**



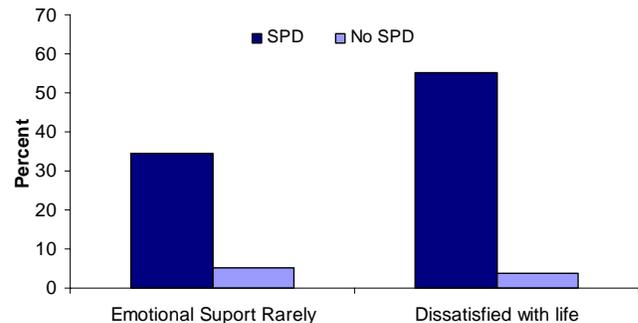
**Table 7. Prevalence of health related quality of life measures among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Condition	Percent among those with SPD		Percent among those without SPD	
	%	95% CI	%	95% CI
Generally fair or poor health	57.8	(48.6-67.0)	11.0	(9.9-12.0)
Poor Physical Health (14+ days in previous month)	51.5	(42.3-60.8)	8.4	(7.5-9.2)
Poor Mental Health (14+ days in previous month)	78.5	(71.1-85.9)	7.6	(6.6-8.5)
Missing usual activities for emotional problem (14+ days)	50.6	(41.2-59.9)	1.0	(0.6-1.4)

**Social and Emotional Support and Satisfaction with Life**

Adults with SPD were significantly more likely to report they rarely received needed social and emotional support, and to be very dissatisfied with their lives, than were adults who did not have SPD (Figure 14 and Table 8.)

**Figure 14. Emotional support and life satisfaction measures among adults with SPD compared to adults without SPD, 2007 NH BRFSS**



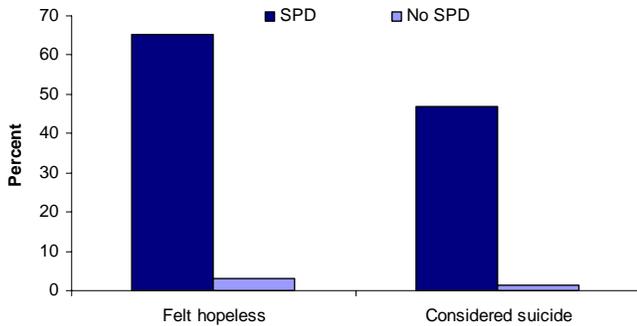
**Table 8. Emotional support and life satisfaction measures among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Condition	Percent among those with SPD	Percent among those without SPD
Rarely or never get emotional support	34.4 (25.8-43.0)	5.3 (4.6-6.0)
Dissatisfied with Life	55.1 (45.8-64.5)	3.7 (3.0-4.4)

**Suicide Ideation**

A significantly higher proportion of those with SPD reported there had been at least a two week period in the past year when they felt so sad or hopeless that they stopped doing some usual activities and that they had seriously considered attempting suicide compared to adults without SPD (Figure 15 and Table 9).

**Figure 15. Prevalence of suicide ideation among adults with SPD compared to adults without SPD, 2007 NH BRFSS**



**Table 9. Prevalence of suicide ideation among adults with SPD compared to adults without SPD, 2007 NH BRFSS**

Condition	Percent among those with SPD		Percent among those without SPD	
	%	95% CI	%	95% CI
Feel Hopeless	65.1	(56.4-73.7)	2.9	(2.3-3.5)
Considered suicide	46.9	(37.1-56.6)	1.3	(0.9-1.8)

**Conclusions**

In 2007, the NH BRFSS found that adults reporting symptoms of SPD differed significantly in demographic characteristics, health care access and in both physical and mental health status.

The NH BRFSS found a higher proportion of adults with SPD were women, unmarried, unemployed or unable to work and at lower incomes than those without SPD. While most adults with SPD had at least a high school education or GED, 22.7% of adults with SPD reported less than a high school education compared to 5.8% of adults without SPD.

A significantly higher proportion of adults reported no health insurance and that they had been unable to get needed medical care due to cost. A lower proportion of adults with SPD reported they had a routine checkup in the past year compared to adults without SPD and about half (55%) of adults with SPD reported they were currently receiving treatment for a mental health condition.

The prevalence of disability, CHD, arthritis, hypertension diabetes and current asthma was significantly higher among adults with SPD compared to adults without SPD.

A higher proportion of adults with SPD reported being current smokers and not engaging in moderate or vigorous physical activity in the past month.

Self assessment of health related quality of life was lower among those with SPD compared to those without.

A higher proportion of adults with SPD also reported missing their usual activities for 14 or more days a month due to a mental or emotional problem, rarely or never receiving needed social and emotional support; and generally feeling dissatisfied with life. A significantly higher proportion of adults with SPD reported feeling sad or hopeless and seriously considering suicide.

**Limitations To This Study**

Estimates of current SPD provided by the NH BRFSS may be lower than the actual prevalence of SPD among NH adults. Reasons for this include:

- 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 2007 NH BRFSS was limited to adults with landline telephones. There is 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.<sup>4</sup>

The NH BRFSS is a cross sectional or single point in time study. It cannot be used to draw conclusions about the causes of SPD. NH BRFSS data should be used to examine the burden of chronic conditions among non-institutionalized adults with SPD.

For more information about the NH BBH, visit: [www.dhhs.state.nh.us/DHHS/BBH/](http://www.dhhs.state.nh.us/DHHS/BBH/). Or call 603-271-5000 or 800-852-3345 x5000.

For more information about the BRFSS, visit [www.cdc.brfss.gov](http://www.cdc.brfss.gov) or [www.dhhs.state.nh.us/DHHS/HSDM/behavioral-risk.htm](http://www.dhhs.state.nh.us/DHHS/HSDM/behavioral-risk.htm) or call 603-271-4988 or 800-852-3345 x4988.

**Table 10. Prevalence of demographic characteristics by SPD status, 2007 NH BRFSS**

Characteristic	Those with SPD		Those without SPD	
	N (Sample Size)	Percent (95% CI)	N (Sample Size)	Percent (95% CI)
<i>Sex</i>				
Male	50	36.4 (26.8 - 46.0)	2,116	48.9 (47.2 - 50.6)
Female	144	63.6 (54.0 - 73.2)	3,303	51.1 (49.4 - 52.8)
<i>Age</i>				
18 to 24	11	11.9 (3.9 - 20.0)	159	8.3 (7.0 - 9.7)
25 to 34	25	24.7 (15.7 - 33.7)	467	17.1 (15.5 - 18.6)
35 to 44	34	22.1 (14.7 - 29.6)	884	20.6 (19.2 - 21.9)
45 to 54	61	22.5 (16.1 - 28.9)	1,227	21.2 (20.0 - 22.5)
55 to 64	40	12.0 (7.8 - 16.2)	1,103	15.7 (14.7 - 16.8)
65 and older	23	6.7 (3.7 - 9.8)	1,518	17.0 (16.1 - 18.0)
<i>Education</i>				
Less than HS or GED	37	22.7 (14.3 - 31.0)	308	5.8 (5.0 - 6.7)
HS or GED	78	33.5 (25.3 - 41.7)	1,477	26.3 (24.8 - 27.8)
Some college or tech school	46	29.0 (20.2 - 37.7)	1,358	25.4 (23.9 - 26.9)
College grad	33	14.9 (9.0 - 20.7)	2,265	42.5 (40.8 - 44.1)
<i>Income</i>				
Less than \$15,000	67	30.6 (22.4 - 38.8)	344	4.3 (3.7 - 4.9)
\$15,000- 24,999	42	27.2 (18.6 - 35.7)	627	10.2 (9.2 - 11.3)
\$25,000- 34,999	16	11.7 (5.4 - 18.0)	466	8.9 (7.9 - 10.0)
\$35,000- 49,999	17	13.8 (6.2 - 21.3)	807	16.4 (15.1 - 17.7)
\$50,000- 74,999	8	9.2 (2.3 - 16.2)	872	19.5 (18.0 - 20.9)
\$75,000+	11	7.6 (2.7 - 12.4)	1,597	40.7 (38.9 - 42.5)
<i>Employment</i>				
Employed for wages	45	26.9 (18.6 - 35.2)	2,627	55.6 (53.9 - 57.2)
Self-employed	10	4.3 (.9 - 7.6)	563	10.3 (9.3 - 11.2)
Out of work	25	17.4 (9.3 - 25.5)	162	4.1 (3.2 - 4.9)
A homemaker	8	5.5 (1.2 - 9.7)	337	6.5 (5.7 - 7.3)
A student	6	5.2 (0.4 - 10.0)	77	3.6 (2.7 - 4.6)
Retired	21	6.6 (3.5 - 9.7)	1,402	16.5 (15.5 - 17.5)
Unable to work	79	34.2 (26.0 - 42.4)	239	3.4 (2.9 - 4.0)
<i>Marital Status</i>				
Married	60	39.8 (30.7 - 48.9)	3,222	65.8 (64.1 - 67.5)
Not married	134	60.2 (51.1 - 69.3)	2,180	34.2 (32.5 - 35.9)

**References**

1. Kessler, R.C., Barker, P.R., Colpe, L.J., Epstein, J.F., Gfroerer, J.C., Hiripi, E., Howes, M.J, Normand, S-L.T., Manderscheid, R.W., Walters, E.E., Zaslavsky, A.M. (2003). Screening for serious mental illness in the general population *Archives of General Psychiatry*. 60(2), 184-189.
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3. Communication with CDC, BSB
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**Questions:**

Now, I am going to ask you some questions about how you have been feeling during the **past 30 days**. ..

**Mod16\_1.** About how often during the past 30 days did you feel **nervous** — would you say **all** of the time, **most** of the time, **some** of the time, **a little** of the time, or **none** of the time?

1 –All; 2 – Most; 3 – Some; 4 - A little ; 5 – None; 7 - Don't know / Not sure; 9 - Refused

**Mod16\_2.** During the past 30 days, about how often did you feel **hopeless** — **all** of the time, **most** of the time, **some** of the time, **a little** of the time, or **none** of the time?

1 –All; 2 – Most; 3 – Some; 4 - A little ; 5 – None; 7 - Don't know / Not sure; 9 - Refused

**Mod16\_3.** During the past 30 days, about how often did you feel **restless** or **fidgety**?

**[NOTE: If necessary: all, most, some, a little, or none of the time?]**

1 –All; 2 – Most; 3 – Some; 4 - A little ; 5 – None; 7 - Don't know / Not sure; 9 - Refused

**Mod16\_4.** During the past 30 days, about how often did you feel **so depressed** that nothing could cheer you up? **[NOTE: If necessary: all, most, some, a little, or none of the time?]**

1 –All; 2 – Most; 3 – Some; 4 - A little ; 5 – None; 7 - Don't know / Not sure; 9 - Refused

**Mod16\_5.** During the past 30 days, about how often did you feel that **everything was an effort**?

**[NOTE: If necessary: all, most, some, a little, or none of the time?]**

1 –All; 2 – Most; 3 – Some; 4 - A little ; 5 – None; 7 - Don't know / Not sure; 9 - Refused

**Mod16\_6.** During the past 30 days, about how often did you feel **worthless**?

**[NOTE: If necessary: all, most, some, a little, or none of the time?]**

1 –All; 2 – Most; 3 – Some; 4 - A little ; 5 – None; 7 - Don't know / Not sure; 9 - Refused

The next question asks if any type of mental health condition or emotional problem has recently kept you from doing your work or other usual activities.

**Mod16\_7.** During the past 30 days, for about how many days did a mental health condition or emotional problem **keep you from doing** your work or other usual activities?

\_\_ Record Number of days

88-Never, 77-Don't know / Not sure, 99-Refused

**[NOTE: If asked, "usual activities" includes housework, self-care, caregiving, volunteer work, attending school, studies, or recreation.]**

**Mod16\_8.** Are you now taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem?

1-Yes , 2-No, 7-Don't know/ Not sure, 9-Refused