

Data Report for Phase 2 and 3: DWH Psychosocial Assessments

During the no-cost extension, we completed analysis of results from phase 2, and collected and analyzed data from phase 3 surveillance of psychosocial needs in Louisiana communities affected by the DWH Gulf Oil Spill. These data are presented in the sections below.

Data Report: Phase 2

Approximately 1585 DWH Psychosocial Assessments have been collected—all of these have been entered into SPSS and were available for data analysis. Preliminary descriptive statistics are described below; numbers represent valid responses.

Of the 1585, 65.3% are female and 34.7% are male. Table 1 presents the frequency and percentages for race and ethnicity. The majority of respondents are over 40 years of age (51.8%) and reported being married or living in a marriage like relationship (64.9%). Table 2 presents the frequency and percentage of parish distribution; 62.0% of the participants reported living in Southeastern Louisiana for over 30 years. The majority of participants had a high school diploma or GED equivalent (34.6%); 19.8% had some education but no diploma or GED; 14.3% had a post-secondary technical certificate or associates degree; and 16.5% had a bachelor or graduate degree. Table 3 presents the frequency and percentage for participants' occupation; the majority reported being in the occupation for 10 years or less (59.8%) and that it was their occupation of choice (74.0%). The largest percentage of participants reported that their annual income for 2009 was less than \$20,000 (48.7%), 28.1% reported \$21-40,000, and 23.3% reported over \$40,000.

Oil Spill

Following the oil spill, 37.8% of participants applied for financial assistance, and 15.4% have received all of their compensation. Sixty-three percent of respondents reported that the oil spill has significantly disrupted some aspect of their work, social life and/or family responsibilities. Table 4 presents the frequency and percentages of oil spill related concerns. Additionally, 34.2% of participants endorsed being both significantly impacted by the oil spill and applied for assistance, and 29.9% of participants endorsed neither being impacted by the spill nor applying for financial assistance.

Mental and Physical Health Symptoms

Mental health and well being were assessed by standardized scales measuring symptoms of anxiety (GAD-7), depression (CESD-10), serious mental illness (K6), and posttraumatic stress (PCL-C). Approximately 1/3 of the participants met scale criteria for moderate to severe anxiety and depression, and over 19% met scale cut-offs suggesting serious mental illness and posttraumatic stress disorder (PTSD). Table 5 presents the frequency and percentages of mental health symptoms. Table 6 presents the frequency and percentages of reported physical health symptoms, where the majority of respondents (> 50%) endorsed: tiredness or low energy; headaches; back pain; trouble sleeping; and pain in arms, legs, or joints.

Substance Use

Substance use was assessed using a question regarding frequency of alcohol use. Thirteen percent of individuals reported an increase in frequency of alcohol use since the oil spill. The CAGE was also used to assess substance use problems—79 (5.9%) met the CAGE criteria for current problems (score = 2), and 99 (7.4%) met the criteria for current dependence (scores of 3 or 4).

Resiliency

Resiliency was reported using the 2-item version of the Connors-Davidson inventory consisting of questions asking about individual's ability to adapt to change and tendency to bounce back from setbacks. Over half (60.1%) of participants indicated that they were often or nearly always able to adapt to change and 63.9% indicated the tendency to bounce back from setbacks. Nearly 90% of participants endorsed that these statements are at least sometimes true for them.

Impact of Oil Spill on Mental Health, Physical Health, and Quality of Life

As afore mentioned, 63% of respondents indicated that the oil spill has significantly disrupted some aspect of their work, social life and/or family responsibilities. This group of respondents was compared to those who did not report being significantly impacted in the areas of mental health symptoms, physical health symptoms, and quality of life. Those who endorsed significant impact were found to have higher rates of mental health symptoms, particularly depression (Figure 1). They were also found to endorse more physical symptoms among the five most endorsed physical health symptoms (Figure 2). Finally, respondents who reported being significantly impacted endorsed a lower quality of life, particularly in the areas of social relationships and overall quality of life (Figure 3).

Table 1. Frequency and Percentage for Race and Ethnicity

Race and Ethnicity	Freq.	%
White	825	52.1
Black or African American	495	31.2
Asian	168	10.6
American Indian or Alaskan Native	75	4.7
Spanish, Hispanic or Latino	39	2.6

Note. Participants were allowed multiple responses.

Table 2. Frequency and Percentage of Parish Distribution

Parish	Freq.	%
St. Bernard	333	21.5
Plaquemines	275	17.7
Orleans	255	16.4
Jefferson	223	14.4
Terrebonne	198	12.8
Lafourche	115	7.4
St. Charles	50	3.2
St. Mary	45	2.9
St. Tammany	43	2.8
Other	15	1.0

Note. $N = 1552$.

Table 3. Frequency and Percentage for Occupation

Occupation	Freq.	%
Unemployed/Not currently employed	202	13.1
Other	162	10.5
Education, Training, and Library	143	9.2
Management, Business, Sales and Finance	131	8.5
Fishing	115	7.4
Home maker	117	7.6
Food Preparation and Service	101	6.5
Disability/SSI recipient	109	7.1
Community and Social Service	86	5.6
Seafood Related Industry	76	4.9
Healthcare	50	3.2
Office and Administrative Support	45	2.9
Hospitality and Tourism	40	2.6
Construction and Maintenance	41	2.7
Oil/drilling Support Industry	33	2.1
Personal Care and Service	32	2.1
Transportation and Moving	30	1.9
Cleaning and Maintenance	25	1.6
Military	5	0.3
Farming and Forestry	3	0.2

Note. N = 1585, 107 (6.8%) unemployment was unrelated to oil spill.

Table 4. Frequency and Percentage of Oil Spill Related Concerns

Concerns	Freq.	%
Health concerns about food sources from local waters	1174	80.6
Damage to wildlife and the natural environment	1166	79.6
Loss of job opportunities	1041	65.7
Loss of usual way of life	1035	65.3
Personal health effects	879	62.2
Loss of tourism	771	55.3
Loss of personal or family business	584	41.7
Needing to relocate	442	32.4
Participated in the oil spill recovery or clean up	294	21.1

Table 5. Frequency and Percentage of Mental Health Symptoms

Mental Health Symptoms	Freq.	%
Serious Mental Illness (K-6)	281	19.2
PTSD (PCL-C)	262	19.4
Depression (CESD)	520	36.2
Anxiety (GAD)		
Mild	329	22.4
Moderate	207	14.1
Severe	264	18.0

Note. Cutoff scores are as follows: K6 ≥ 13 ; PCL ≥ 50 ; CESD ≥ 11 ; GAD, Mild ≥ 5 , Moderate ≥ 10 , Severe ≥ 15 .

Table 6. Frequency and Percentage of Physical Health Symptoms

Physical Symptoms	Freq.	%
Feeling tired out or low in energy	962	64.0
Headaches	943	63.0
Back pain	908	60.4
Trouble sleeping	904	60.4
Pain in your arms, legs, or joints (knees, hips, etc.)	855	57.3
Stomach pain	653	43.5
Nausea, gas, or indigestion	642	43.2
Menstrual cramps or problems with periods (Women only)*	393	41.7
Feeling your heart pound or race	569	38.2
Constipation, loose bowels or diarrhea	533	35.9
Shortness of breath	507	33.9
Chest pain	481	32.1
Dizziness	470	31.5
Pain or problems during sexual intercourse	240	16.8
Fainting spells	205	13.8

**n* = 942 female respondents

Figure 1. Differences in Mental Health Symptoms Between Respondents Who Did and Did Not Endorse Significant Impact from the Oil Spill

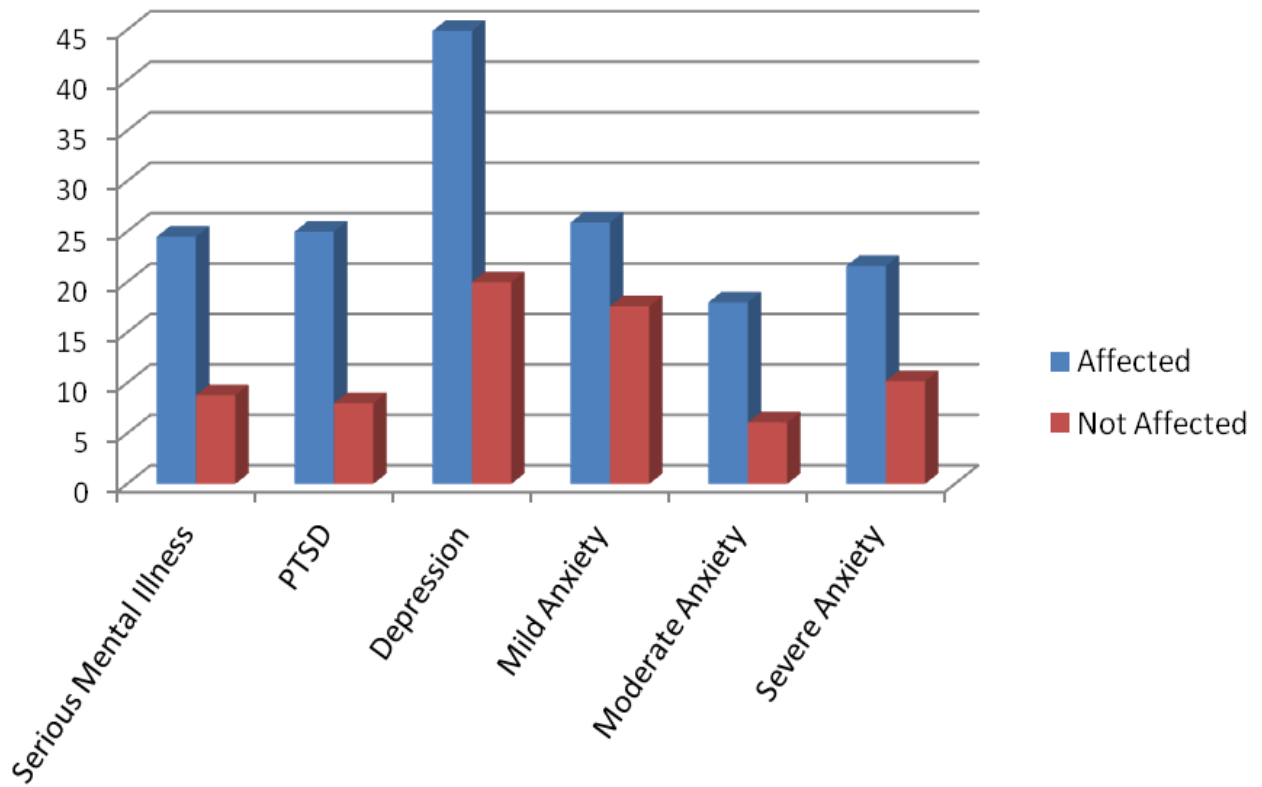


Figure 2. Differences in Physical Health Symptoms Between Respondents Who Did and Did Not Endorse Significant Impact from the Oil Spill

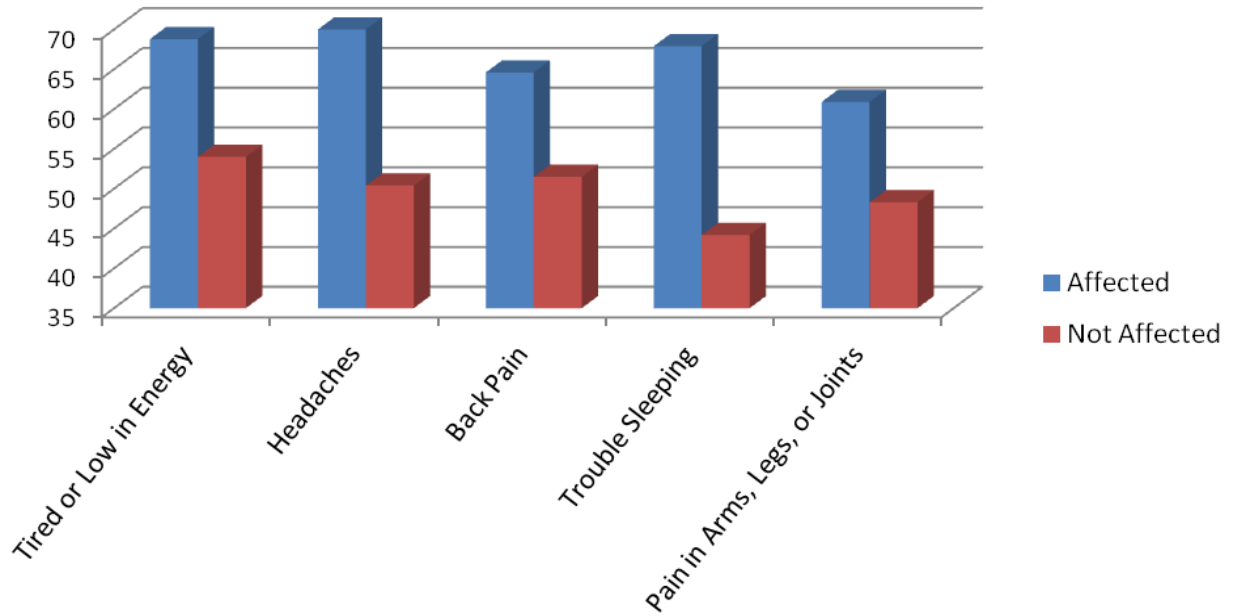
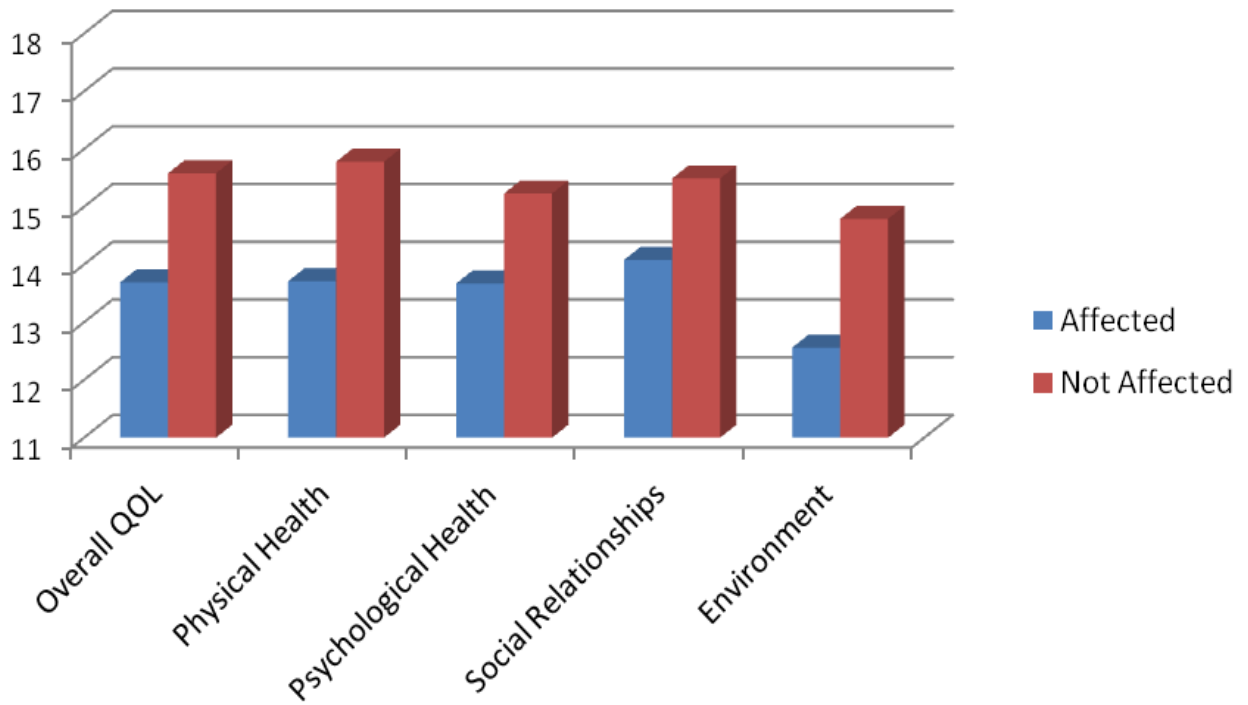


Figure 2. Differences in Quality of Life Between Respondents Who Did and Did Not Endorse Significant Impact from the Oil Spill



Data Report: Phase 3

Approximately 1671 people were contacted by phone for the DWH Psychosocial Assessments Phase 3 collection period. Of this number, 334 (20%) of those contacted, completed the assessment by phone; 479 (28.7%) people declined to participate; 456 (27.2%) people contacted did not answer the telephone after 3 attempts; and 394 (23.6%) phone numbers were disconnected. Additional surveys were mailed to participants who could not be reached by telephone; 35 of these were returned.

In total, 369 DWH Psychosocial Assessments have been collected by phone and by mail—all of these have been entered into SPSS and were available for data analysis. Preliminary descriptive statistics are described below; numbers represent valid responses.

Of the 369, 67.9% are female and 32.1% are male. Table 1 presents the frequency and percentages for race and ethnicity. The majority of respondents are over 40 years of age (71.9%) and reported being married or living in a marriage like relationship (60.1%). Table 2 presents the frequency and percentage of parish distribution. The majority of participants had a high school diploma or GED equivalent (30.6%); 12.6% had some education but no diploma or GED; 12.9% had a post-secondary technical certificate or associates degree; and 30.4% had a bachelor or graduate degree. Table 3 presents the frequency and percentage for participants' occupation; the majority reported being in the occupation for 10 years or less (56.4%) and that it was their occupation of choice (76.4%). The largest percentage of participants reported that their annual income for 2011 was less than \$20,000 (44.7%), 21.3% reported \$21-40,000, and 33.9% reported over \$40,000.

Oil Spill

Following the oil spill, 27.9% of participants applied for financial assistance, and 8.1% have received all of their compensation. Fifty-six percent of respondents reported that the oil spill has significantly disrupted some aspect of their work, social life and/or family responsibilities. Table 4 presents the frequency and percentages of oil spill related concerns. Additionally, 21.7% of participants endorsed being both significantly impacted by the oil spill and applied for assistance, and 37.7% of participants endorsed neither being impacted by the spill nor applying for financial assistance.

Approximately 10% (n=38) of respondents reported that they were participating in the BP lawsuit at the time of the survey. For these individuals, litigation stress was assessed using standardized questions about time spent with attorneys, the demands made by litigation, and unpleasant memories from the experience. Of the 38 litigants, over 60% agreed or strongly agreed that each of these experiences were stressful.

Mental and Physical Health Symptoms

Mental health and well being was assessed by standardized scales measuring symptoms of anxiety (GAD-7), depression (CESD-10), serious mental illness (K6), and posttraumatic stress (PCL-C). Approximately 1/3 of the respondents met scale criteria for moderate to severe anxiety and depression, and over 18% met scale cut-offs suggesting serious mental illness and posttraumatic stress disorder (PTSD). Table 5 presents the frequency and percentages of mental

health symptoms. Table 6 presents the frequency and percentages of reported physical health symptoms, where the majority of respondents (> 50%) endorsed: tiredness or low energy; headaches; back pain; trouble sleeping; and pain in arms, legs, or joints.

Substance Use

The CAGE was used to assess substance use problems—7 (2.1%) met the CAGE criteria for current problems (score = 2), and 4 (1.2%) met the criteria for current dependence (scores of 3 or 4). It is possible that the method of phone interview decreased positive endorsement of the CAGE questions.

Resiliency

Resiliency was reported using the 2-item version of the Connors-Davidson inventory consisting of questions asking about individual's ability to adapt to change and tendency to bounce back from setbacks. The majority (63.1%) of participants indicated that they were often or nearly always able to adapt to change, and 69.7% indicated the tendency to bounce back from setbacks. Nearly 90% of participants endorsed that these statements are at least sometimes true for them.

Impact of Oil Spill on Mental Health, Physical Health, and Quality of Life

As afore mentioned, 56% of respondents indicated that the oil spill has significantly disrupted some aspect of their work, social life and or family responsibilities. This group of respondents was compared to those who did not report being significantly impacted in the areas of mental health symptoms, physical health symptoms, and quality of life. Those who endorsed significant impact were found to have higher rates of mental health symptoms, particularly depression (Figure 1). They were also found to endorse more physical symptoms among the five most endorsed physical health symptoms (Figure 2). Finally, respondents who reported being significantly impacted endorsed a lower quality of life in the two domains assessed: environmental quality of life and overall quality of life (Figure 3).

Table 1. Frequency and Percentage for Race and Ethnicity

Race and Ethnicity	Freq.	%
White	238	64.5
Black or African American	98	26.6
Spanish, Hispanic or Latino	16	4.8
American Indian or Alaskan Native	11	3.0
Asian	9	2.4

Note. Participants were allowed multiple responses.

Table 2. Frequency and Percentage of Parish Distribution

Parish	Freq.	%
Plaquemines	68	18.6
Terrebonne	65	17.8
St. Bernard	63	17.2
Lafourche	55	15.0
Orleans	40	10.9
Jefferson	28	7.7
St. Tammany	14	3.8
St. Mary	12	3.3
St. Charles	11	3.0
Other State	10	2.7

Note. $N = 366$.

Table 3. Frequency and Percentage for Occupation

Occupation	Freq.	%
Disability/SSI recipient	50	13.7
Retired	44	12.1
Unemployed/Not currently employed	40	11.0
Education, Training, and Library	38	10.4
Home maker	28	7.7
Other	27	7.4
Management, Business, Sales and Finance	25	6.9
Healthcare	21	5.8
Fishing	17	4.7
Community and Social Service	15	4.1
Office and Administrative Support	12	3.3
Food Preparation and Service	10	2.7
Construction and Maintenance	9	2.5
Seafood Related Industry	6	1.6
Hospitality and Tourism	6	1.6
Oil/drilling Support Industry	5	1.4
Transportation and Moving	5	1.4
Cleaning and Maintenance	4	1.1
Personal Care and Service	2	0.5

Note. $N = 364$, 58 (15.7%) unemployment/retirement was unrelated to oil spill.

Table 4. Frequency and Percentage of Oil Spill Related Concerns

Concerns	Freq.	%
Damage to wildlife and the natural environment	305	86.4
Health concerns about food sources from local waters	276	77.3
Loss of usual way of life	233	65.8
Personal health effects	211	59.6
Loss of tourism	205	58.6
Loss of job opportunities	198	56.3
Loss of personal or family business	146	41.2
Participated in the oil spill recovery or clean up	100	28.7
Needing to relocate	100	28.4

Table 5. Frequency and Percentage of Mental Health Symptoms

Mental Health Symptoms	Freq.	%
Serious Mental Illness (K-6)	62	18.2
PTSD (PCL-C)	66	19.9
Depression (CESD)	116	34.5
Anxiety (GAD)		
Mild	55	16.2
Moderate	44	12.9
Severe	73	21.5

Note. Cutoff scores are as follows: K6 ≥ 13 ; PCL ≥ 50 ; CESD ≥ 11 ; GAD, Mild ≥ 5 , Moderate ≥ 10 , Severe ≥ 15 .

Table 6. Frequency and Percentage of Physical Health Symptoms

Physical Symptoms	Freq.	%
Feeling tired out or low in energy	251	72.8
Pain in your arms, legs, or joints (knees, hips, etc.)	213	61.5
Back pain	196	57.0
Trouble sleeping	196	56.8
Headaches	178	51.7
Nausea, gas, or indigestion	158	40.8
Feeling your heart pound or race	136	39.5
Stomach pain	130	37.6
Constipation, loose bowels or diarrhea	128	37.2
Shortness of breath	117	34.1
Chest pain	103	29.9
Dizziness	106	27.4
Menstrual cramps or problems with periods (Women only)*	56	26.5
Pain or problems during sexual intercourse	33	9.9
Fainting spells	23	5.9

**n* = 250 female respondents

Figure 1. Differences in Mental Health Symptoms Between Respondents Who Did and Did Not Endorse Significant Impact from the Oil Spill

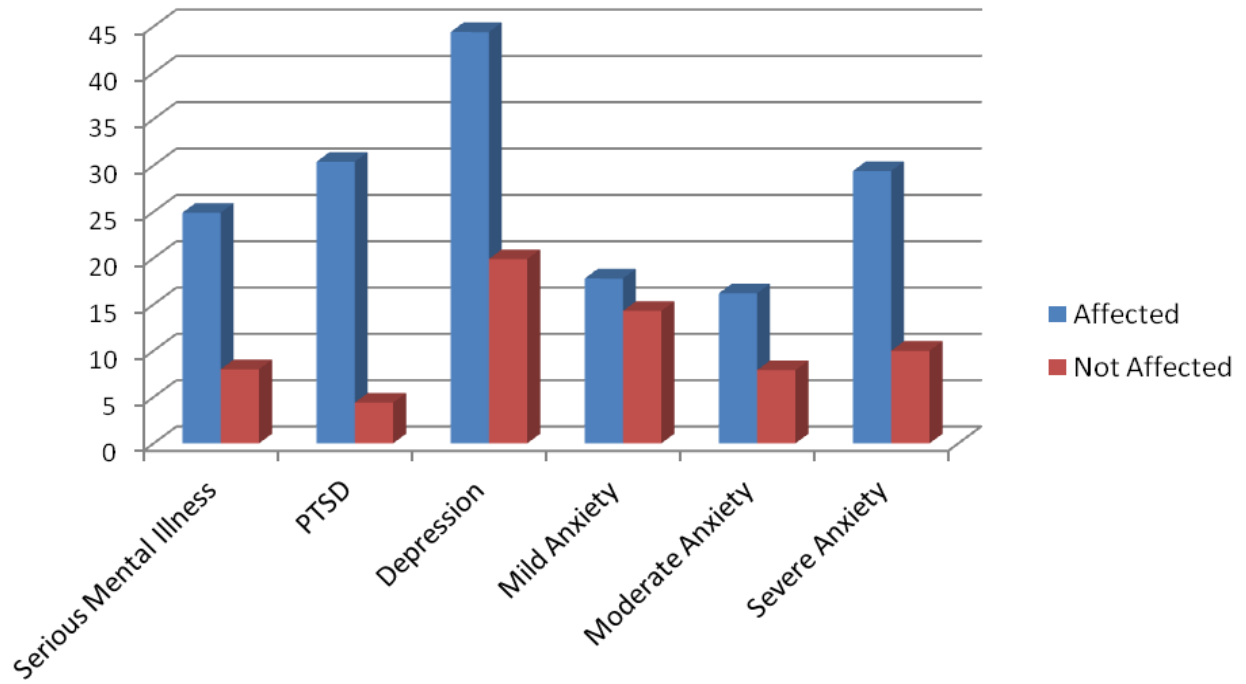


Figure 2. Differences in Physical Health Symptoms Between Respondents Who Did and Did Not Endorse Significant Impact from the Oil Spill

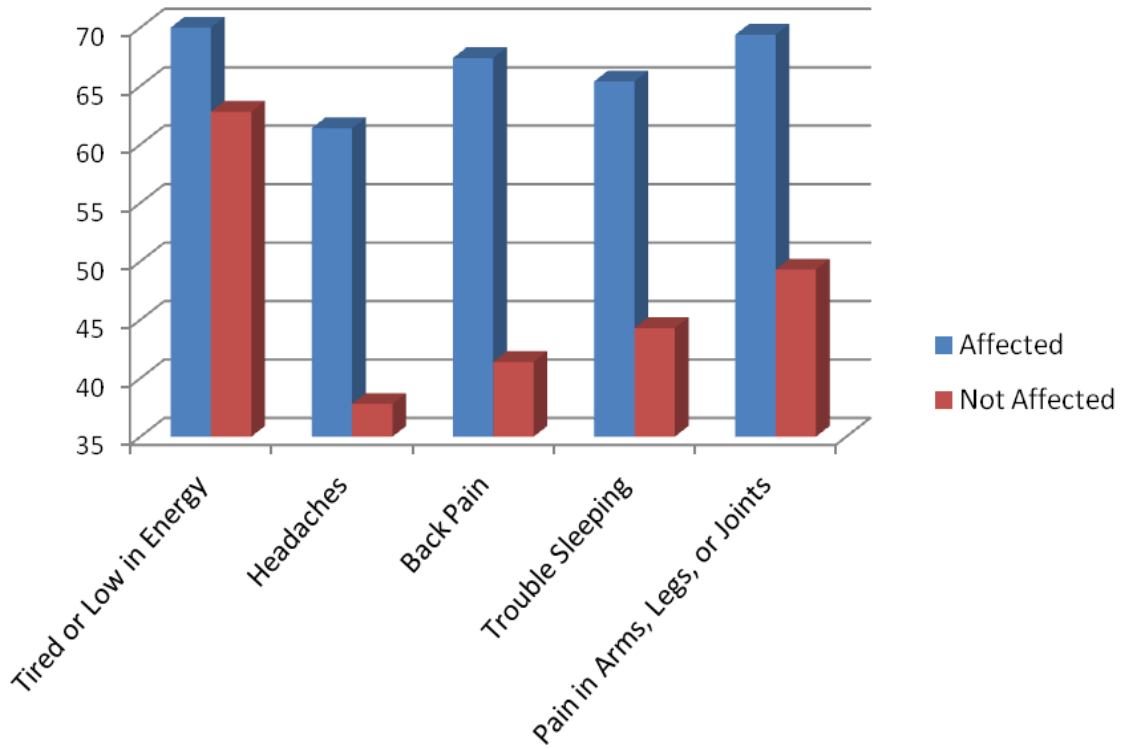
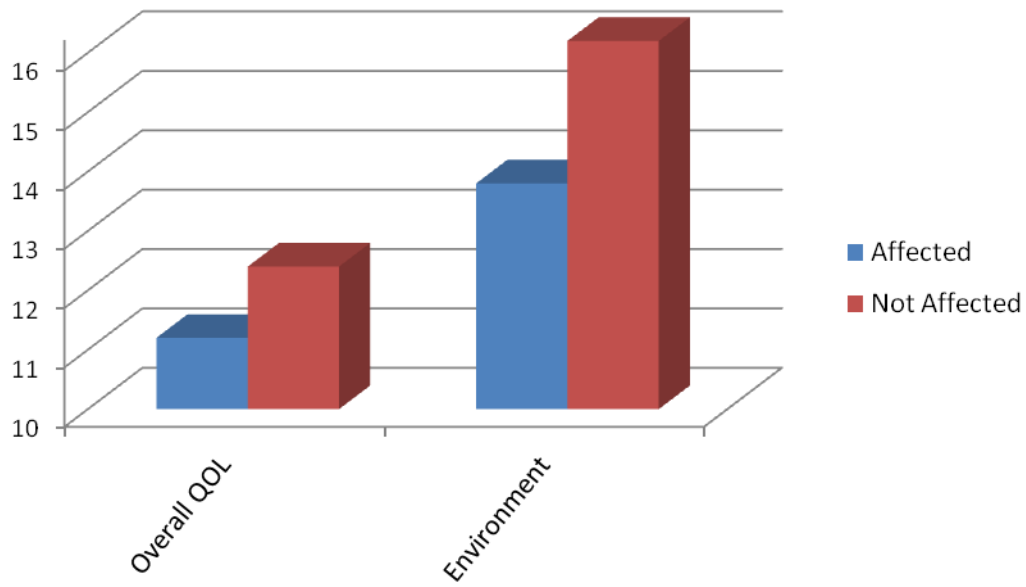


Figure 3. Differences in Quality of Life Between Respondents Who Did and Did Not Endorse Significant Impact from the Oil Spill



Data Report: Comparison of Phase 2 and 3

During Phase 2 and Phase 3 respondents were asked questions regarding oil spill related concerns, mental health symptoms, and physical symptoms. Phase 2 was conducted from June 2011 to December 2011. These same participants were contacted 1 year later to participate in Phase 3, which took place from April 2012 to June 2012. In phase 2, there were 1585 respondents; 369 of these were able to be contacted and agreed to participate in the Phase 3 survey. Descriptive statistics comparing responses during the two phases are below.

Oil Spill

When interviewed during Phase 2, 63% of the 1585 respondents reported that the oil spill has significantly disrupted some aspect of their work, social life and/or family responsibilities. When the respondents were interviewed during Phase 3, 56% of the 369 respondents reported disruptions following the oil spill. Table 1 presents the frequency and percentages of oil spill related concerns during Phase 2 and Phase 3. Additionally, 34.2% of participants in Phase 2 and 21.7% of participants in Phase 3 endorsed being both significantly impacted by the oil spill and applied for assistance.

Mental and Physical Health Symptoms

Mental health and well being were assessed using standardized scales measuring symptoms of anxiety (GAD-7), depression (CESD-10), serious mental illness (K6), and posttraumatic stress (PCL-C) during both Phase 2 and Phase 3. Approximately 1/3 of the participants met scale criteria for moderate to severe anxiety and depression, and over 18% met scale cut-offs suggesting serious mental illness and posttraumatic stress disorder (PTSD) during both phases. Table 2 presents the frequency and percentages of mental health symptoms endorsed by respondents. Table 3 presents the frequency and percentages of reported physical health symptoms, where the majority of respondents (> 50%) endorsed: tiredness or low energy; headaches; back pain; trouble sleeping; and pain in arms, legs, or joints.

Table 1. Frequency and Percentage of Oil Spill Related Concerns

Concerns	% endorsed	
	Phase 2	Phase 3
Damage to wildlife and the natural environment	79.6	86.4
Health concerns about food sources from local waters	80.6	77.3
Loss of usual way of life	65.3	65.8
Personal health effects	62.2	59.6
Loss of tourism	55.3	58.6
Loss of job opportunities	65.7	56.3
Loss of personal or family business	41.7	41.2
Participated in the oil spill recovery or clean up	21.1	28.7
Needing to relocate	32.4	28.4

Note. N=1585 for Phase 2, N=369 for Phase 3.

Table 2. Frequency and Percentage of Mental Health Symptoms

Mental Health Symptoms	% endorsed	
	Phase 2	Phase 3
Serious Mental Illness (K-6)	19.2	18.2
PTSD (PCL-C)	19.4	19.9
Depression (CESD)	36.2	34.5
Anxiety (GAD)		
Mild	22.4	16.2
Moderate	14.1	12.9
Severe	18.0	21.5

Note. Cutoff scores are as follows: K6 ≥ 13 ; PCL ≥ 50 ; CESD ≥ 11 ; GAD, Mild ≥ 5 , Moderate ≥ 10 , Severe ≥ 15 . N=1585 for Phase 2, N=369 for Phase 3.

Table 3. Frequency and Percentage of Physical Health Symptoms

Physical Symptoms	% endorsed	
	Phase 2	Phase 3
Feeling tired out or low in energy	64.0	72.8
Pain in your arms, legs, or joints (knees, hips, etc.)	57.3	61.5
Back pain	60.4	57.0
Trouble sleeping	60.4	56.8
Headaches	63.0	51.7
Nausea, gas, or indigestion	43.2	40.8
Feeling your heart pound or race	38.2	39.5
Stomach pain	43.5	37.6
Constipation, loose bowels or diarrhea	35.9	37.2
Shortness of breath	33.9	34.1
Chest pain	32.1	29.9
Dizziness	31.5	27.4
Menstrual cramps or problems with periods (Women only)*	41.7	26.5
Pain or problems during sexual intercourse	16.8	9.9
Fainting spells	13.8	5.9

Note. N=1585 for Phase 2, N=369 for Phase 3

* $n = 942$ female respondents in Phase 2, $n = 250$ female respondents in Phase 3