Satisfaction with life and income: A Secondary Data Analysis Using the BRFSS 2010 Interview Survey

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**Abstract**

The relationship between satisfaction with life and income can often be misunderstood, misrepresented, or misleading when individuals determine that income has a direct, linear relationship with life satisfaction. Nearly fifty percent of responders reported making less than $50,000 annually while slightly more reported making more than $50,000 annually. The objective of this study was to determine whether satisfaction with life was directly correlated to income in a representative sample after adjusting for sex, education level, and age. Data from the Behavioral Risk Factor Surveillance System 2010 Survey (Centers for Disease Control and Prevention, 2010) were used to perform a cross-sectional, secondary analysis on a population of 261,026 BRFSS 2010 respondents. Univariate analyses (using the Pearson Chi-Square test for independence) were also performed as well as a multivariable logistic regression to determine the odds of association between life satisfaction and income independent of sex, or education level, and age.

**Introduction**

According to the 2010 Behavioral Risk Factor Surveillance System, 261,026 respondents who answered the question “In general, how satisfied are you with your life?” (Centers for Disease Control and Prevention, 2010). This population comprised 58% of the total population of 451,075 interviewed in the BRFSS 2010 survey.

**Study Population and Data**

**Statistical Methods**

TABLE 1. Characteristics of 261,026 BRFSS 2010 Study Respondents between 18 and 65 years of age by Income.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Population  *n*(%) | | | Income < 50,000 Annually  *n*(%)  (n=129,603) | | Income > 50,000 Annually  *n*(%)  (n=131,423) | | *p* value\* |
|  |  |  |  | |  |  |  |  |
| Age in Years |  |  |  | |  |  |  | <.0001 |
| 18-35 | 39,164 | 15.0 | 22,679 | | 17.5 | 16,485 | 12.5 |  |
| 36-50 | 85,981 | 32.9 | 37,221 | | 28.7 | 48,760 | 37.1 |  |
| 51-65 | 135,881 | 52.1 | 69,703 | | 53.8 | 66,178 | 50.4 |  |
| Gender |  |  |  | |  |  |  | <.0001 |
| Male | 102,958 | 39.4 | 46,954 | | 36.2 | 56,004 | 42.6 |  |
| Female | 158,068 | 60.6 | 82,649 | | 63.8 | 75,419 | 57.4 |  |
| Education level |  |  |  | |  |  |  | <.0001 |
| Did not graduate college | 18,236 | 7.0 | 16,489 | | 12.7 | 1,747 | 1.3 |  |
| Graduated college | 242,790 | 93.0 | 113,114 | | 87.3 | 129,676 | 98.7 |  |

\* *p-*values based on Pearson chi-square test of association.

TABLE 2. Characteristics of 261,026 BRFSS 2010 Study Respondents between 18 and 65 years of age by satisfaction with life.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Population  *n*(%) | | | Satisfied with Life  *n*(%)  (n=244,738) | | Not Satisfied with Life  *n*(%)  (n=16,288) | | *p* value\* |
|  |  |  |  | |  |  |  |  |
| Age in Years |  |  |  | |  |  |  | <.0001 |
| 18-35 | 39,164 | 17.3 | 37,157 | | 15.2 | 2,007 | 12.3 |  |
| 36-50 | 85,981 | 33.6 | 80,805 | | 33.0 | 5,176 | 31.8 |  |
| 51-65 | 135,881 | 49.1 | 126,776 | | 51.8 | 9,105 | 55.9 |  |
| Gender |  |  |  | |  |  |  | <.0001 |
| Male | 102,958 | 40.3 | 96,679 | | 39.5 | 6,279 | 38.6 |  |
| Female | 158,068 | 59.8 | 148,059 | | 60.5 | 10,009 | 61.5 |  |
| Education level |  |  |  | |  |  |  | <.0001 |
| Did not graduate college | 18,236 | 7.0 | 16,114 | | 6.6 | 2,122 | 13.0 |  |
| Graduated college | 242,790 | 93.0 | 228,624 | | 93.4 | 14,166 | 87.0 |  |
| Income (annually) |  |  |  | |  |  |  | <.0001 |
| < $50,000 | 129,603 | 49.7 | 116,283 | | 47.5 | 13,320 | 81.8 |  |
| > $50,000 | 131,423 | 50.3 | 128,455 | | 52.5 | 2,968 | 18.2 |  |

\* *p-*values based on Pearson chi-square test of association.

TABLE 3. Logistic Regression Analysis comparing the Adjusted Odds of Life Satisfaction Among 216,026 Behavioral Risk Factor Surveillance Study Participants by Income and Additional Characteristics, 2010.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | Satisfied w/Life  *n*(%)  (*N*=244,738) | | Not Satisfied w/Life  *n*(%)  (*N* =16,288) | | AOR\* | 95% CI† | p-value‡ | |
|  |  |  |  |  |  |  | |  | |
| Age in Years |  |  |  |  |  |  | | <0.0001 | |
| 18-35 | 37,157 (15.2) 2,007 (12.3) | | | | 1.00 | -- | |  | |
| 36-50 | 80,805 (33.0) 5,176 (31.8) | | | | 1.46 | 1.387 – 1.544 | |  | |
| 50-65 | 126,776 (51.8) 9,105 (55.9) | | | | 1.47 | 1.399 – 1.547 | |  | |
| Gender |  |  |  |  |  |  | | <0.0001 | |
| Male | 96,679 (39.5) 6,279 (38.6) | | | | 1.00 | -- | |  | |
| Female | 148,059 (60.5) 10,009 (61.5) | | | | 0.96 | 0.94 – 0.98 | |  | |
| Education Level |  |  |  |  |  |  | | <0.0001 | |
| Did not graduate college | 16,114 (27.0) 2,122 (13.0) | | | | 1.00 | -- | |  | |
| Graduated college | 228,624 (73.0) 14,166 (87.0) | | | | 0.52 | 0.51 – 0.53 | |  | |
| Income (annually) |  |  |  |  |  | <0.0001 | | | |
| < $50,000 | 116,283 ( | (47.5) | 13,320 | (81.8) | 1.00 | -- | | | |
| > $50,000 | 128,455 | (52.5) | 2,968 | (18.2) | 0.52 | 0.51 – 0.53 | | | |

\* Odds ratios are adjusted for all other variables in the table.  
† 95% confidence intervals are for reported odds ratios.  
‡ p-value based on the Wald chi-square test statistic.