Factors Affecting Adolescent Happiness in the United States

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Background:

- Happiness has been shown to be vital to health and subjective well-being.1,2
- Teenage happiness is not as well understood3 and not very widely studied.
- Literature has shown that happiness is related to biological sex, physical activity, sedentary behavior, sleep habits, parental relationships, perceived quality of friendship, peer acceptance, and religiosity.4,5,14-16
- Hypothesis: The effect of parental relationships and religiosity on happiness is achieved through substance use control and prohibition of deviant behaviors.

Methods:

- This study is a secondary analysis of the 1994 National Longitudinal Study of Adolescent to Adult Health (ADD Health).
- The survey had >6000 respondents and an overall response rate of 79%.2
- Dependent variable: Happiness – a scale was created to measure level of happiness quantitatively. Three variable were used to evaluate: happiness, depression, and life satisfaction. Each of the variables was scaled, and responses were given corresponding point values, and then were z-score standardized.
- The suicide and quanitatively, Three variable looked at were suicidal tendency, depression, and life satisfaction.
- Similar scales were made for Religiosity, Peer Acceptance, and Mother/Father Relationship.
- Religiosity was measured through the Survey of Religiosity, a 9-item Likert scale.
- Friendship was measured through the Survey of Friendship, a 20-item Likert scale.
- Mother/Father Relationship was measured through the Survey of Parental Relationships, a 20-item Likert scale.

Results:

There were slightly more women than men in the survey (51.6% vs. 48.39%) and the survey overrepresented minorities (compared to 1994 US Census Data) as was the intention of the purposive selection process. Bivariate analysis of each independent variable with the happiness scale showed very significant associations (p-values <0.001). For example, men scored higher on the happiness index than expected. Also, those who reported “Excellent” or “Very Good” health were more likely to score above average on the happiness index while those who reported “Good” or “Poor” health were more likely to score below average.

In the first multivariate analysis, religiosity, mother relationship quality, and father relationship quality were significantly positively associated (p-values <0.001) with increased happiness (Coeff. 0.20, 0.28, and 0.27 respectively) with an R² of 0.3060. When substance use and deviance were added to the analysis, religiosity, mother relationship quality, and father relationship quality were still significantly positively associated; however, their coefficients fell (Coeff. 0.0149, 0.0173, and 0.011 respectively) while the R² value increased to 0.3938.

Conclusions:

- As our hypothesis predicted, parental relationships and religiosity both had significant positive associations with the happiness index.
- When substance use and deviance were added to the multivariate linear regression, the coefficients for parental relationships and religiosity fell, while the total variance explained by the analysis increased (R²).
- This suggests that parental relationships and religiosity affect happiness, at least partly, via the prohibition of substance use and deviant behaviors.
- Future research should explore this mediation further to determine if this relationship holds true with today’s adolescents and to determine if the causal pathway leads from happiness to less substance use/deviance or vice versa.

Limitations:

- The data is from over 20 years ago and may not be generalizable to current U.S. adolescents.
- The ADD Health survey did not use standardized question sets for variables such as depression, so the validity of these measures may be imperfect.
- This data-set is cross-sectional in nature and cannot show how these factors affect happiness over time.

References:


Table 1. Multivariate Without Substance Use or Deviance

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Confidence Interval</th>
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<tbody>
<tr>
<td>Male (vs. Female)</td>
<td>0.42376</td>
<td>&lt;0.001</td>
<td>0.3380 - 0.5175</td>
</tr>
<tr>
<td>Age</td>
<td>-0.015607</td>
<td>0.263</td>
<td>-0.0429 - 0.0117</td>
</tr>
<tr>
<td>Race (vs. White)</td>
<td>-0.1340752</td>
<td>0.028</td>
<td>0.0144 - 0.2537</td>
</tr>
<tr>
<td>Native American</td>
<td>-0.0184831</td>
<td>0.937</td>
<td>-0.4742 - 0.4373</td>
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<tr>
<td>Asian/Pacific Islander</td>
<td>-0.29998</td>
<td>0.026</td>
<td>-0.5634 - 0.0865</td>
</tr>
<tr>
<td>Multiple</td>
<td>-0.081465</td>
<td>0.418</td>
<td>0.0016 - 0.1525</td>
</tr>
<tr>
<td>Other</td>
<td>-0.2425595</td>
<td>0.018</td>
<td>-0.4431 - 0.0420</td>
</tr>
</tbody>
</table>

General Health (vs. Excellent):

- Very Good: 0.409693 - 0.5477 - 0.3727
- Good: -0.902079 - 0.011 - 0.8618
- Fair: -1.663112 - 0.011 - 1.8702 - 1.4560
- Poor: -2.065284 - 0.011 - 2.7780 - 1.3450

Exercise per week (vs. None):

- 1-2 Times: 0.0331154 - 0.646 - 0.1083 - 0.1747
- 3-4 Times: 0.0049215 - 0.953 - 0.1441 - 0.1531
- 5+ Times: -0.0265429 - 0.403 - 0.2092 - 0.0842
- Sleep per Night: 0.1339458 - 0.001 - 0.1006 - 0.1675
- Friendship Quality: 0.4584914 - 0.001 - 0.4764 - 0.4741
- Religiosity: 0.0378877 - 0.001 - 0.0377 - 0.0481
- Mother Relationship: 0.0284041 - 0.001 - 0.0323 - 0.0336
- Father Relationship: 0.0182887 - 0.001 - 0.0141 - 0.0224

Figure 1. Alcohol Use with the Dichotomized Happiness Index

Figure 2. Self-Reported Health with the Dichotomized Happiness Index