Gender, Educational Attainment and the Clustering of Health Risk Behavior among U.S. Young Adults

Julie Skalamera and Robert A. Hummer
The University of Texas at Austin

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Research Questions

- What patterns of health risk behavior emerge among U.S. young adult women and men?
- To what extent is educational attainment associated with health risk behavior clusters?
Significance

• Focus on young adults
  • US young women’s health profile poor compared to peer nations; men’s health profile comparatively poor as well
  • Widening education-health disparities across recent birth cohorts

• Patterns of risk behaviors
  • Research elucidating gender disparities in health behavior often treats behaviors individually rather than as a package, or cluster, of behaviors that individuals actually engage in

• Educational disparities in health behavior vary by gender
  • To what extent is high/low education associated with clusters of health behavior for young women and men?
A Note on Theory (or lack thereof)...

• Exploratory analysis
• Let the data speak...at least for now
• Looking for feedback on the idea of gendered health behavior clusters and educational disparities in such clustering
Data

• National Longitudinal Survey of Adolescent to Adult Health (Add Health)
• Wave I (ages 12-18) and Wave IV (ages 24-32)
• Sample limited to respondents with valid longitudinal Wave IV sampling weight
• Excluded pregnant women and those who gave birth during the 6 months prior to the Wave IV interview
• $N = 9,108$
  • $N = 4,829$ women
  • $N = 4,279$ men
Measures

• Health risk behaviors (8, detailed on next slide)
  • Reported at Wave IV interview (ages 24-32)

• Educational attainment
  • Educational attainment at time of Wave IV interview (<HS, HS/GED, Some College, College Degree, Professional/Graduate Degree)

• Socio-demographic covariates
  • Age (Wave IV)
  • Region of residence (Wave IV)
  • Race/Ethnicity (Wave I)
  • Family structure in adolescence (Wave I)
  • Parental education (Wave I)
  • Family income in adolescence (Wave I)
Health Risk Behaviors

• Behaviors dichotomized so that they all indicate higher risk for poor health:
  • Binge drank at least once in past week
  • Smoked cigarettes at least once in past 30 days
  • Used other tobacco products in past 30 days
  • No vigorous physical activity in past week
  • Marijuana use in past 30 days
  • No preventive doctor check-up in past year
  • No preventive dentist visit in past year
  • Ate at least one fast food meal in past week
Methods

• Latent Class Analysis (gender-specific) used to identify clustering of health behavior; a range of fit statistics used to identify clusters

• Multinominal logistic regression used to estimate associations between educational attainment and the health risk behavior clusters for each gender

• Models control for the demographic, socioeconomic, and family background confounders
Latent Class Analysis of Health Risk Behavior: Young Women

Latent Profiles of Health Risk Behavior: Women

Unhealthy Smokers (21.43%)
Most Healthy (13.15%)
Sedentary Fast Food Eaters (65.42%)

Proportion Exhibiting Health Risk Behavior

Unhealthy Smokers: Binge drinker, Cigarette smoker, Other tobacco user, No exercise, Marijuana user, No doctor, No dentist, Fast food eater
Most Healthy: Binge drinker, Cigarette smoker, Other tobacco user, No exercise, Marijuana user, No doctor, No dentist, Fast food eater
Sedentary Fast Food Eaters: Binge drinker, Cigarette smoker, Other tobacco user, No exercise, Marijuana user, No doctor, No dentist, Fast food eater
Latent Class Analysis of Health Risk Behavior: Young Men

Latent Profiles of Health Risk Behavior: Men

Unhealthy Smokers (30.82%)
Mixed Healthy/ Unhealthy (53.47%)
Unhealthy Drinkers (15.70%)

Proportion Exhibiting Health Risk Behavior

Binge drinker | Cigarette smoker | Other tobacco user | No exercise | Marijuana user | No doctor | No dentist | Fast food eater
Educational Attainment and Health Risk Behavior Profile

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>Young Adult Women</th>
<th>Young Adult Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unhealthy Smokers</td>
<td>Most Healthy</td>
</tr>
<tr>
<td>Less than high school</td>
<td>7.43</td>
<td>2.11</td>
</tr>
<tr>
<td>High school graduate</td>
<td>15.69</td>
<td>7.03</td>
</tr>
<tr>
<td>Post HS/ some college</td>
<td>46.61</td>
<td>33.22</td>
</tr>
<tr>
<td>College graduate</td>
<td>19.91</td>
<td>26.89</td>
</tr>
<tr>
<td>Post-baccalaureate</td>
<td>10.37</td>
<td><strong>30.76</strong></td>
</tr>
</tbody>
</table>
Odds Ratios from Multinomial Logistic Regression Predicting Educational Attainment by Profile Membership

<table>
<thead>
<tr>
<th>Education Attainment (ref: HS grad)</th>
<th>Young Women (Reference profile: Most Healthy)</th>
<th>Young Men (Reference profile: Mixed Healthy/Unhealthy)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unhealthy Smokers</td>
<td>Sedentary Fast Food</td>
</tr>
<tr>
<td>Less than HS</td>
<td>1.481</td>
<td>1.556</td>
</tr>
<tr>
<td>Post HS</td>
<td>0.568 *</td>
<td>0.654 †</td>
</tr>
<tr>
<td>Bachelor's</td>
<td>0.337 ***</td>
<td>0.452 **</td>
</tr>
<tr>
<td>Post-baccalaureate</td>
<td>0.188 ***</td>
<td>0.268 ***</td>
</tr>
</tbody>
</table>

Note: †p < .10, * p < .05, ** p < .01, *** p < .001; Models control for age, income, parent’s education, family structure, race/ethnicity, and region.
Results Summary

• Health risk behavior clusters were clearly present in our sample of young adults; 3 clusters each for women and men.

• Only one small cluster of women (13%) exhibited mostly favorable health behavior; the other 2 clusters of women and all 3 clusters of men exhibited relatively/very high levels of risk behavior.

• Educational attainment above the high school degree level was associated with much more positive health behavior profiles, particularly for women.
Conclusion

• Considering behaviors as clusters rather than isolated practices illustrates that health risk behaviors tend to cluster among individuals.

• Only one group of US young adults stood out as exhibiting overall healthy behavior: the “Most Healthy” group of women.
  • Only 13% of women exhibited this positive all-around profile.
  • This cluster of women also had, by far, the highest educational composition and most favorable background characteristics.
  • No particularly healthy group emerged among young men.

• Educational attainment seems to operate differently by gender.
  • High attainment very strongly related to much lower odds of unhealthy risk behavior clustering among women.
  • High attainment strongly related to lower odds of being in the “Unhealthy Smoker” category among men.
Next Steps

• More thoroughly consider measurement issues for each health risk behavior...e.g., weekly versus monthly versus yearly measures. Many sensitivity tests needed.

• Consider “sub-clusters” of risk behavior...e.g., smoking/tobacco related, nutrition/exercise related, health utilization, etc.

• Consider how clusters develop and change across the early portion of the life course

• Consider a broader range of confounders for the education-behavior associations, including genetic, personality, and marriage/employment confounders
Acknowledgements

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Thank you!