Income Growth Trajectory For Parents Of Children With Down Syndrome In The United States

Citation

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Accessibility
Results

Baseline Characteristics of Study Participants: Pre- vs. Post-Matching

The new non-invasive prenatal screening (NIPS) test, available as of October 2011, allows couples to learn whether their fetus has Down syndrome (DS) as early as the 11th week of pregnancy.

Study Objective

To determine whether the rate of income growth among parents of children with DS differs from that among parents of children without chromosomal conditions.

Methods

Data

• Data from the Dynata and Insights employer-based claims database were used to conduct this retrospective cohort study.

• The database contains administrative claims data and pharmacy claims and eligibility information for over 10 million members of a large employer, insured through their employers, including primary subscribers and their covered beneficiaries.

• The data included information from 2001 to 2015.

• Study participants were matched to the control group using propensity score matching.

• Baseline characteristics of study participants: Pre- vs. Post-Matching

• The primary exposure variable was the age of the child at the time of the study.

• The secondary exposure variable was the age of the child at the time of the study.

• The primary outcome variable was the income growth rate among parents of children with DS.

• The secondary outcome variable was the income growth rate among parents of children without chromosomal conditions.

• The primary analysis was conducted using the bootstrap method with 10,000 replications.

• The secondary analysis was conducted using the permutation test with 10,000 replications.

• The findings cannot be generalized to secondary earners, among whom the impact may be different.

• The current study is based on a commercial employer database, and families covered by Medicaid or Medicare are not included.

• Previous studies have shown that having a child affects mothers’ salaries differently than fathers’.

• Our study did not find significant differences in income growth between parents of children with DS and their matched controls.

• Using the 2014 US median income of $50,383 and $39,621 among yearly full-time working men and women, respectively, this difference in income growth translates into $35 annual reductions for fathers and $52 annual reductions for mothers.

Conclusions

• Parents of children with DS have lower mean annual income growth than those of children without chromosomal conditions. This difference was not statistically significant among fathers and mothers when analyzed separately.

• No statistically significant differences existed in mean annual income growth rate when analyzed separately for mothers (4.6% vs. 4.1%, p=0.72) and fathers (6.8% vs. 6.3%, p=0.87).

• A propensity score was calculated for each parent observation using logistic regression.

• Exact matching was used to match parent observations on gender, parental age at the age of the child, insurance plan type, and income growth rate.

• As claims data were used for the study, any missing information or administrative error may have resulted in incorrect estimates of income growth.

• No previous studies have shown that having a child affects mothers’ salaries differently than fathers’.

• The current study is based on a commercial employer database, and families covered by Medicaid or Medicare are not included.

• No statistically significant differences existed in mean annual income growth rate when analyzed separately for mothers (4.6% vs. 4.1%, p=0.72) and fathers (6.8% vs. 6.3%, p=0.87).

• The analyses were conducted using the bootstrap method with 10,000 replications.

• The findings cannot be generalized to secondary earners, among whom the impact may be different.

Table 1: Baseline Characteristics of Parents in DS Study and Control Panels

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>DS study panel</th>
<th>Control panel</th>
<th>Difference</th>
<th>p-Value</th>
</tr>
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<tbody>
<tr>
<td>Age</td>
<td>35.7 (6.9)</td>
<td>34.9 (6.8)</td>
<td>0.8</td>
<td>0.101</td>
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<tr>
<td>Gender</td>
<td>Male: 5,676 (33.3%)</td>
<td>2,125,185 (38.8%)</td>
<td>&lt;.001 *</td>
<td>1.000</td>
</tr>
<tr>
<td>Race</td>
<td>White: 12,699 (76.1%)</td>
<td>4,307,827 (80.8%)</td>
<td>&lt;.001 *</td>
<td>1.000</td>
</tr>
</tbody>
</table>
| Income Growth Rate Among Parents of Children with Down Syndrome in the United States

Table 2: Mean Annual Growth Rate in Incomes Among Parents of Children with DS and Matched Controls

<table>
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<tr>
<th>Year</th>
<th>Difference</th>
<th>p-Value</th>
</tr>
</thead>
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<td>0.027</td>
</tr>
<tr>
<td>2</td>
<td>-0.04</td>
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<tr>
<td>5</td>
<td>-0.07</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>6</td>
<td>-0.08</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>7</td>
<td>-0.09</td>
<td>&lt;.001 *</td>
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<tr>
<td>8</td>
<td>-0.10</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>9</td>
<td>-0.11</td>
<td>&lt;.001 *</td>
</tr>
<tr>
<td>10</td>
<td>-0.12</td>
<td>&lt;.001 *</td>
</tr>
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</table>

References


