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## **Effect of Socio-Demographics, Health-Related Problems, and Family Structure on Chronic Absenteeism Among Children**

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### **ABSTRACT**

**Purpose/Background:** From 5 to 7.5 million school children are chronically absent, defined as missing  $\geq 15$  days of school within a year. Students miss schools due to various reasons such as health, socioeconomic status, and environmental factors. We examined child's health and behavior, family structure, and socio-demographics to understand chronic absenteeism.

**Materials & Methods:** The population included children ages 6 to 17 years from the Medical Expenditure Panel Survey (MEPS) years 2008-2013. Multivariable logistic regressions were used to identify the risk factors of chronic absenteeism, adjusting for the complex sampling design.

**Results:** Among socio-demographic variables, age  $\geq 14$  years, race/ethnicity, lower-income family, public health insurance, US-born, and speaking English at home were associated with chronic absenteeism. Asians, Mexican Hispanics, and blacks have lower chronic absenteeism than whites. Among health-related variables, children using an inhaler for asthma, having behavioral problems, and less healthy than other children were more likely to be chronically absent. Among family variables, a smaller family size was a risk factor for chronic absenteeism.

**Discussion/Conclusion:** Asthma and behavioral problems were highly associated with chronic absenteeism. The identification of children at risk for chronic absenteeism will help the educational professionals identify the barriers to academic achievements and develop integrated educational interventions and policies to support disadvantaged children.

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Table 1. Subject Characteristics and Percentage of Chronic Absenteeism

| Variable                          | Total        |                 | Chronic Absenteeism |   | Total        |                 | Chronic Absenteeism |
|-----------------------------------|--------------|-----------------|---------------------|---|--------------|-----------------|---------------------|
|                                   | Unweighted N | Weighted % (SE) | Weighted % (SE)     |   | Unweighted N | Weighted % (SE) | Weighted % (SE)     |
| <b>Socio-Demographic Variable</b> |              |                 |                     | <b>Family Structure Variable</b>        |              |                 |                     |
| Age                               |              |                 |                     | Family Type                             |              |                 |                     |
| 6-13 yrs.                         | 15,815       | 68.3 (0.4)      | 1.7 (0.1)           | Two-parent                              | 22,524       | 69.4 (0.8)      | 1.8 (0.1)           |
| 14-17 yrs.                        | 6,696        | 31.7 (0.4)      | 3.1 (0.3)           | Single-parent                           | 12,236       | 27.9 (0.8)      | 3.0 (0.2)           |
| Sex                               |              |                 |                     | No-parent                               | 1,167        | 2.7 (0.2)       | 3.4 (0.8)           |
| Boy                               | 11,524       | 51.0 (0.5)      | 2.1 (0.1)           | Family Size                             |              |                 |                     |
| Girl                              | 10,987       | 49.0 (0.5)      | 2.3 (0.2)           | ≤4                                      | 18,632       | 58.2 (0.9)      | 2.5 (0.2)           |
| Race/Ethnicity                    |              |                 |                     | >4                                      | 17,295       | 41.8 (0.9)      | 1.7 (0.2)           |
| White                             | 7,342        | 56.4 (1.3)      | 2.6 (0.2)           | # of Elderly (≥65 yrs.)*                | 35,927       | 0.05 (0.00)     | 0.08 (0.01)         |
| Black                             | 4,992        | 14.4 (0.8)      | 1.7 (0.3)           | # of Preschool Children (≤5 yrs.)*      | 35,927       | 0.34 (0.01)     | 0.31 (0.03)         |
| Mexican                           | 5,762        | 14.8 (1.2)      | 1.4 (0.1)           | # of Adult (≥18 yrs.)                   |              |                 |                     |
| Other Hispanic                    | 2,415        | 7.0 (0.4)       | 2.4 (0.3)           | 0-1                                     | 6,255        | 15.0 (0.5)      | 2.8 (0.3)           |
| Filipino                          | 275          | 1.0 (0.2)       | 2.1 (1.1)           | 2                                       | 19,585       | 60.2 (0.7)      | 1.9 (0.1)           |
| Other Asians                      | 979          | 3.4 (0.2)       | 0.5 (0.2)           | ≥3                                      | 10,087       | 24.8 (0.6)      | 2.5 (0.2)           |
| AI/AN/NHPI                        | 330          | 1.3 (0.3)       | 3.5 (0.8)           | <b>Health/Behavior Variable</b>         |              |                 |                     |
| Other                             | 416          | 1.8 (0.2)       | 2.1 (0.7)           | Asthma & Medication                     |              |                 |                     |
| Highest Education in Family       |              |                 |                     | No Asthma                               | 19,522       | 87.0 (0.3)      | 1.8 (0.1)           |
| ≤High School                      | 9,828        | 31.7 (0.9)      | 2.6 (0.2)           | Both Inhaler and Preventive Medicine    | 1,496        | 6.5 (0.2)       | 4.1 (0.7)           |
| Some College                      | 6,358        | 28.6 (0.6)      | 2.4 (0.2)           | Inhaler Only                            | 125          | 0.7 (0.1)       | 1.5 (0.9)           |
| Bachelor's                        | 3,689        | 21.8 (0.7)      | 1.8 (0.3)           | Preventive Medicine Only                | 931          | 4.0 (0.2)       | 5.2 (1.3)           |
| ≥Graduate                         | 2,622        | 17.9 (0.8)      | 1.5 (0.3)           | Neither Inhaler nor Preventive Medicine | 417          | 1.8 (0.1)       | 11.7 (2.2)          |
| Income                            |              |                 |                     | ADHD                                    |              |                 |                     |
| Poor                              | 8,815        | 25.0 (0.8)      | 3.1 (0.2)           | Yes                                     | 2,194        | 10.7 (0.4)      | 2.0 (0.1)           |
| Low                               | 4,195        | 15.6 (0.4)      | 2.4 (0.3)           | No                                      | 20,314       | 89.3 (0.4)      | 3.8 (0.4)           |
| Middle                            | 5,833        | 32.0 (0.7)      | 2.2 (0.2)           | Obesity                                 |              |                 |                     |
| High                              | 3,668        | 27.4 (0.9)      | 1.3 (0.2)           | Normal                                  | 13,771       | 83.1 (0.5)      | 2.2 (0.1)           |
| Insurance                         |              |                 |                     | Overweight                              | 2,240        | 11.5 (0.4)      | 2.5 (0.3)           |
| Any Private                       | 10,168       | 61.0 (1.0)      | 1.8 (0.1)           | Obese                                   | 1,197        | 5.4 (0.2)       | 4.8 (0.8)           |
| Public Only                       | 10,666       | 32.4 (1.0)      | 3.1 (0.2)           | Behavioral Problem                      |              |                 |                     |
| Uninsured                         | 1,677        | 6.6 (0.4)       | 1.3 (0.4)           | CIS<15                                  | 19,636       | 86.4 (0.4)      | 1.6 (0.1)           |
| Born in US                        |              |                 |                     | CIS≥15                                  | 2,875        | 13.6 (0.4)      | 6.1 (0.5)           |
| No                                | 6,522        | 17.3 (0.9)      | 0.8 (0.2)           | Number of Dental Care Visits*           | 22,511       | 1.38 (0.03)     | 1.53 (0.19)         |
| Yes                               | 15,981       | 82.7 (0.9)      | 2.3 (0.1)           | Less Healthy Than Other Child           |              |                 |                     |
| Language at Home                  |              |                 |                     | No                                      | 20,720       | 93.0 (0.2)      | 1.6 (0.1)           |
| Other                             | 1,542        | 4.7 (0.2)       | 1.2 (0.1)           | Yes                                     | 1,776        | 7.0 (0.2)       | 10.1 (0.8)          |
| English                           | 20,952       | 95.3 (0.2)      | 2.4 (0.1)           |   |              |                 |                     |

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