

Perceived Socioeconomic Status among Young Adults with Developmental Physical Disabilities: Findings from a Longitudinal Study

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Introduction

Disabilities are prevalent health conditions that usually impose a large burden on affected individuals, their families, and society. Data from the National Health Interview Survey reveal an increase in overall disability rates among all age groups from 11.7% in 1970 to 15% in 1994.¹ Disabilities can adversely affect human capital accumulation, which is acquiring knowledge, experience, and skills necessary to produce economic value.² One indicator of human capital accumulation is self-perception of social position in the society. Differently from education attained and income, perception of socioeconomic status (SES) is a subjective measure of social status. This measure is based on the MacArthur scale of subjective social status, which is strongly linked to several SES domains (e.g., educational level, individual income, and occupation).^{3,4}

Adulthood is typically represented by achievement of specific milestones, such as educational attainment, a full-time job, and marriage or childbearing.⁵ These milestones are directly related to human capital. Transition into adulthood can be challenging for any adolescent, but for adolescents with disabilities and their families, this transition may be even more difficult.⁶ There is currently little knowledge about how to improve the long-term outcomes of individuals with disabilities. Better understanding of human capital accumulation of adults with disabilities is needed to identify factors that may be targeted by policies and early life interventions to improve the socioeconomic outcomes of affected individuals.⁷

Objective

This research examines how early life disabilities are associated with human capital accumulation in young adulthood focusing on educational attainment, employment status, occupation, income, wage rate, and perceived socioeconomic status. We present here preliminary data on subjective perception of socioeconomic status for a group of individuals with physical disabilities only.

Hypothesis

We hypothesized that: (1) young adults with physical disabilities would rank themselves in lower levels of a subjective SES ladder when compared to individuals without disabilities; and (2) individuals with less severe levels of impairment would rank themselves in higher levels of the SES ladder when compared with those with less severe impairment.

Material and Methods

Data

The National Longitudinal Study of Adolescent Health (Add Health) is a nationally representative sample of adolescents in grades 7 to 12 (12 to 19 years of age) in the 1994-5 school year. Adolescents were followed after baseline and studied at three other points in time (Waves II, III and IV), with the most recent round of in-home interviews occurring in 2008, when the sample was 24 to 32 years of age.⁸

A total of 20,745 adolescents answered the in-depth home questionnaire at Wave I (1994-1995). A total of 15,701 individuals participated in Wave IV (2008). From these 15,701 participants of Wave IV, we included data from in-home and parents interviews with valid Wave IV weights and no missing data in the study variables (n = 9,730).

Measures

The data set used in this study adopted the World Health Organization framework for classification of health and disability, the International Classification of Functioning, Disability and Health (ICF).⁹ **Physical disabilities** were measured in terms of functional limitation and activity restriction.¹⁰ A Physical Disability Index (PDI) was developed for the Add Health data based on a combination of parents' and adolescents' responses at Wave I. The PDI has four categories representing multiple severities including: nondisabled, minimally disabled, mildly disabled, and more severely disabled.¹¹ **Subjective perception of own socioeconomic status (subjective SES)** was measured by asking respondents to mark their SES level on a 10-step ladder by picking the number for the step that shows where they thought to stand at that time in their life, relative to other people in the United States.

Statistical analysis

Subjective perception of socioeconomic status was analyzed as an ordinal variable using ordinal logistic regression.¹² The data were analyzed using the software Stata 11.2 (College Station, TX) and survey commands were used to adjust for Add Health's complex survey design and to apply sampling weights to obtain national population estimates.

Results

Males represented nearly 51% of the sample. 58% came from a family of 2 biological parents, and nearly 53% of the mothers had some education beyond high school. In terms of race/ethnicity, 72% were White non-Hispanic, 13% African American non-Hispanic, 11% Hispanic, and 4% were classified in Other categories. Approximately **6% of participants had a developmental physical disability**; of the total analysis sample, levels of impairment were none (94.0%), minimal (3.7%), mild (1.2%), and severe (1.1%). As seen in Table 1, compared to respondents without disabilities, only individuals with mild impairment ranked themselves as significantly lower on the social ladder (OR = 0.64; 95% CI [0.43, 0.94]).

Discussion & Conclusions

We evaluated the association between having a developmental physical disability and young adults' satisfaction with current position at society using nationally representative sample of adolescents.

Contrarily to expected, we found that only individuals with mild impairment ranked themselves as significantly lower on the social ladder when compared to their peers without a disability on these outcomes.

Amartya Sen's defined Capability as "the alternative combination of things a person is able to do or be – the various "functionings" he or she can achieve."¹³ These functionings are key elements to the nature of one's well-being – which could roughly be represented in our study by subjective perception of own socioeconomic status. Even if these individuals have transitioned to adulthood in several aspects, there are probably some indicators, like education achieved, that may contribute to their reduced satisfaction with their position in life. This framework, then, partially helps to understand why some individuals with physical disabilities were less likely to put themselves in higher ranks at the subjective SES ladder compared to those without disabilities. Nonetheless, more studies need to be done to understand our non-linear finding, which contradicted the study's initial hypothesis of the direction of the association between perception of socioeconomic status and impairment level.

These early dissertation findings suggest that long-term effects of disabilities on perceived human capital accumulation are not linear. Understanding these patterns, and how they intersect with objective measures of human capital, is urgently needed to improve socioeconomic outcomes of individuals with disabilities.

References

1. Kaye HS, LaPlante MP, Carlson D, Wenger BL. Trends in disability rates in the united states, 1970-1994. *Disability Statistics Abstract*. 1996;17.
2. Becker GS. *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: The University of Chicago Press; 1993.
3. Adler NE, Epel ES, Castellazzo G, Ickovics JR. Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychol*. 2000;19(6):586-592.
4. Ostrove JM, Adler NE, Kuppermann M, Washington AE. Objective and subjective assessments of socioeconomic status and their relationship to self-rated health in an ethnically diverse sample of pregnant women. *Health Psychol*. 2000;19(6):613-618.
5. Wells TDP, Sandefur GD, Hogan DP. What happens after the high school years among young persons with disabilities? *Social forces*. 2003;82(2):803-832.
6. Blomquist KB, Brown G, Peersen A, Presler EP. Transitioning to independence: Challenges for young people with disabilities and their caregivers. *Orthop Nurs*. 1998;17(3):27-35.
7. Lindsay S. Employment status and work characteristics among adolescents with disabilities. *Disabil Rehabil*. 2010. doi: 10.3109/09638288.2010.514018.
8. Harris KM, Halpern CT, Whitsel E, et al. The national longitudinal study of adolescent health: Research design <http://www.cpc.unc.edu/projects/addhealth/design>. Updated 2009. Accessed November, 11, 2010.
9. World Health Organization. *International classification of functioning, disability and health: ICF*. Geneva: World Health Organization; 2001.

10. World Health Organization. *International classification of impairments, disabilities, and handicaps: A manual of classification relating to the consequences of disease*. Geneva: World Health Organization; 1980.
11. Cheng MM, Udry JR. Sexual behaviors of physically disabled adolescents in the united states. *J Adolesc Health*. 2002;31(1):48-58.
12. Heeringa S. *Applied survey data analysis*. Boca Raton, FL: Chapman & Hall/CRC; 2010.
13. Sen A. Capability and well-being. In: Nussbaum MC, Sen A, World Institute for Development Economics Research., eds. *The quality of life [electronic resource]*. Oxford: Clarendon; 1993:1-32.

Table 1: Adjusted odds ratios from ordinal logistic regression model of subjective socioeconomic status among young adults with a physical disability as compared to the group without a disability.

Predictors	OR (95% CI)
Minimal physical disability	0.83 (0.64, 1.08)
Mild physical disability	0.64 (0.43, 0.94)*
Severe physical disability	0.96 (0.57, 1.63)
Female	0.99 (0.90, 1.10)
African American, Non-Hispanic	0.85 (0.74, 0.98)*
Asian, Non-Hispanic	1.30 (0.92, 1.85)
Native American, Non-Hispanic	0.52 (0.30, 0.90)*
Hispanic, All Races	1.18 (0.97, 1.44)
Other, Non-Hispanic	0.86 (0.53, 1.40)
High school graduate	1.36 (1.13, 1.62)*
Some education beyond high school	1.52 (1.26, 1.85)**
College graduate or higher	2.73 (2.20, 3.39)**
Other 2-parents	0.68 (0.61, 0.77)**
Other family structure	0.70 (0.61, 0.79)**

Table presents results of ordered logistic regression model comparing outcome between young adults with a physical disability with those without a disability (reference category: Highest position on the SES ladder), controlling for gender, race/ethnicity, and highest maternal education (reference categories: males, White non-Hispanic, less than high school, and 2 biological parents). OR= odds ratio; CI= confidence interval. * p < .05; **p < .01

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