Vulnerable Youth and the Transition to Adulthood

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The transition to adulthood is increasingly recognized as a distinct developmental stage between adolescence and adulthood (Arnett 2004). Youth in this stage develop careers, find life partners, bear children, and set up new homes of their own (Arnett, 2004).

It is estimated that five to seven percent of 12 to 17 year olds in the United States will not successfully transition to adulthood by the time they are 24 years old (Wald 2005). These youth may lack the family, community, and institutional supports found to be vital in the successful preparation of youth for adulthood. To help youth without these supports find paths that lead to positive adult outcomes, research is needed to understand what happens to vulnerable youth as they become adults.

Understanding the role of vulnerabilities in influencing adult outcomes is a complicated task. The definition of "vulnerable youth" varies and the term is often used interchangeably with other terms like "at-risk." In this study, we seek to explore to what extent factors occurring during adolescence impact on early adult outcomes.

To understand the role of various factors, we divide factors into two groups, vulnerabilities and at-risk behaviors. Youth from vulnerable populations are at risk of poor adult outcomes due to circumstances such as growing up in a low-income family, growing up in a single-parent family, living in bad neighborhoods, having mental health problems, or being disabled. These factors are all exogenous to the youth, i.e., not under their control. Youth can also put themselves at risk of poor adult outcomes by engaging in risky or "at-risk" behaviors such as substance abuse, early sexual behavior, delinquent or criminal behaviors, or dropping out of school. These factors are endogenous to the youth, i.e., choices the youth makes.

While youths choose whether or not to engage in risky behaviors, or drop out of school, these choices may be influenced by their exogenous circumstances. Youth in low-income families, for example, may be more inclined to engage in risky behaviors. Therefore there is both a direct effect on adult outcomes of being in a vulnerable population and an indirect effect that operates through vulnerable youth engaging in risky behaviors.

This study seeks to understand the role of these different factors that occur in adolescence, both exogenous and endogenous, on early adult outcomes. We examine the trajectories of youth connectedness to school or work between the ages of 18 and 24 and identify the direct and indirect effects of being in vulnerable populations, accounting for the effect of risk taking and dropping out of school during adolescence.

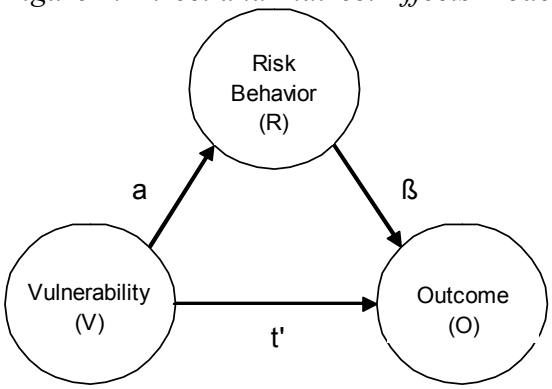
To estimate direct and indirect effects of being in a vulnerable group, consider the relationship given by:

(1) $Y=f(V, R(V,X), X),$

where Y represents a young adult outcome of interest, V represents membership in a vulnerable population, R represents at-risk behaviors, and X is a vector of individual characteristics. Young adult outcomes are posited to be a function of membership in a vulnerable population and risk-taking behaviors; in turn, risk taking behaviors are a function of membership in a vulnerable group. Being in a vulnerable group thus affects the outcome directly and indirectly through R, risk taking behaviors.

The paths implied by this framework are represented in Figure 1 below. The letter α represents the direct effect of being vulnerable on the likelihood of engaging in an at-risk behavior. The letter τ' represents the direct effect of being vulnerable on an outcome. Lastly, α * β represents the indirect relationship of vulnerabilities on outcomes, mediated by engagement in at-risk behaviors.

Figure 1. Direct and Indirect Effects Model



In this framework, R always precedes Y in time. R represents at-risk behaviors that occur as an adolescent while Y represents outcomes that occur in early adulthood. Given the time-ordered effect, we can estimate equation (1) using a recursive model (Greene 2002):

(2) $R=g(V,X)$

(3) $Y=h(V,R,X)$

If equation (2) is substituted into equation (3), one obtains equation (1) above. Thus, estimating the recursive model allows us to generate the direct and indirect effects in Figure 3. The recursive nature of the model allows us to estimate equations (2) and (3) independently. Note that the recursive model is identical to the mediating model found in the literature (MacKinnen et al. 1995).

To explore these relationships, we use the National Longitudinal Survey of Youth 1997 (NLSY97). The NLSY97 is an omnibus survey that has followed a sample of approximately 9,000 youth born in 1980-1984 on an annual basis since 1997. We

focus on the outcomes of youth who reach age 24 by 2005. The NLSY97 allows us to observe the sample on an annual basis starting in adolescence and through early adulthood. Its breadth of information provides us information on adolescent risk taking including initiation into sexual activity, initiation into alcohol and drug use, engagement in delinquency and criminal activities, and dropping out of school. It provides a complete history of school enrollment and jobs, earnings, and other outcomes such as family formation and arrests. The initial survey included an interview with a parent that provides considerable family information and childhood histories for the sample members. The immense detail in the data set allows us to control for a wide range of variables that influence the transition into adulthood.

We estimate equation (2) where the dependent variable is the number of risky behaviors the youth engages in, known as cumulative risk (Sameroff et al. 1993). Initially we had conducted a factor analysis to generate a "propensity toward risk taking" but we found the cumulative risk measure to correlate with the factor at a level of .98. Given the greater interpretability of the cumulative risk measure, we have chosen to use it as our dependent variable. The cumulative risk measure takes a value between 0 and 13. We estimate equation (2) using a negative binomial, a count data model that accounts for over-dispersion in the distribution.

We also estimate an equation where the dependent variable represents not obtaining a high school diploma. This is essentially a second equation (2) and can be estimated independently using a linear probability model.

For the outcome in equation (3), we focus on the degree to which youth develop a connectedness to school or work as they age from age 18 to 24. To obtain our dependent variable, we first use trajectory analysis (Nagin 1999) to identify patterns of connectedness in school or the labor market after age 18. Trajectory analysis employs maximum likelihood estimation to categorize data over a time period. In this case, we have identified a group that is essentially in school or working throughout the time period (consistently connected), a group that is neither in school nor working for the entire period, and two to four intermediate patterns. Membership in a specific trajectory group becomes the outcome of interest in the second equation of the model. This equation is then estimated using multinomial logits to account for the selection into one of the groups.

Preliminary analyses indicate several interesting findings. Focusing initially on youth in low income families, we see that there is a direct effect of this vulnerability on the likelihood of never being connected to school or work between age 18 and 24. Risk taking behaviors and not completing high school do predict not being connected; however, we do not find that youth from low-income families are more likely to engage in risky behaviors nor more likely to not complete high school. Thus there is no indirect effect of being in a low-income family operating through these behaviors.

While we have focused to date on the role of family income, we observe that other vulnerable factors appear likely to have indirect effects. For example, youth from

single-parent families are more likely to engage in risky behaviors. We will be exploring further the other exogenous factors that may impact adult outcomes both directly and indirectly.

The model we have developed accounts for the impact of risky behaviors and dropping out on young adult outcomes and on the possibility that youth in vulnerable circumstances may be more likely to engage in risky behaviors or drop out of school. However, youth who do not face these vulnerabilities may still choose to engage in risky behaviors or drop out of school. We intend to extend the analysis to explore whether, given the youth has chosen to engage in a behavior that has potential negative adult consequences, do family characteristics influence the impact of the chosen behavior, e.g., whether higher income families can act as protective factors in mitigating the potential negative impacts of risk-taking behaviors and dropping out.