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Unemployment, Parental Help, and Self-Efficacy During the Transition to Adulthood*

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Abstract

Youth unemployment reduces the capacity to achieve diverse markers of adulthood, potentially undermining the young adult's sense of confidence and independence. While parents often come to the aid of their unemployed young adult children, such support may also have negative psychological repercussions. Applying a hierarchical modeling strategy to longitudinal data from the Youth Development Study, we find that both unemployment and parental financial support have negative consequences for youth's self-efficacy. These common experiences may thus diminish youth's personal psychological resources as they make the increasingly lengthy and precarious transition to adulthood.

Keywords

unemployment; transition to adulthood; efficacy; parent-young adult relationships

The belief in one's capacity to accomplish important goals is a valuable psychological asset in all phases of life, but this resource may be especially important during the transition to adulthood when youth make critical decisions concerning education, work, and family formation with pervasive consequences for their future socioeconomic trajectories and well-being. More efficacious individuals set higher goals and are more persistent in their striving in the face of obstacles (Bandura, 1977a, 1997). Youth self-efficacy and related psychological attributes, such as planfulness and agency, foster the acquisition of adult roles and both success and fulfillment in their enactment (Jordaan & Super, 1974; Clausen, 1991,

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1993; Reynolds et al., 2007; Lee & Mortimer, 2009; Vuolo, Staff, and Mortimer 2012; Mortimer, Vuolo, & Staff, 2014).

Social, as well as personal, resources help young people to navigate the increasingly precarious and prolonged transition to adulthood (Shanahan 2000). In comparison to prior generations, contemporary parents assume responsibility for their children over a longer period of time (Swartz, 2008, 2009). If they are able, parents often provide crucial “safety nets,” including financial support, co-residence, emotional support, and a variety of instrumental aids for their young adult children (Swartz et al., 2011; Qian, 2012).

A long tradition of research on unemployment has examined its negative psychological consequences for adult anxiety, depression, and well-being (Jahoda, 1982; Warr, 1987; Kessler, et al., 1988; Newman, 1999; Andersen, 2009; Pavlova and Silbereisen, 2012; Young, 2012). Even the threat of unemployment, or job insecurity, threatens the adult’s sense of efficacy and other dimensions of psychological well-being (Glavin, 2013; Mortimer, Lam, and Lee, 2015). Although employment instability is a prominent feature of the early occupational career, the consequences of unemployment for the efficacy of young people, who are in the process of establishing themselves in work, are not well understood. Building on recent studies that have examined how unemployment affects adult wellbeing (Andersen, 2009; Pavlova and Silbereisen, 2012; Young, 2012), as well as how job insecurity reduces workers’ self-efficacy (Glavin, 2013), the central contribution of the present study is its analysis of the effects of unemployment on self-efficacy during the transition to adulthood. Unemployment has the potential to disrupt a successful transition to adulthood, undermine the emergent adult identity, and threaten a sense of efficacy.

Because of its adverse consequences, youth unemployment may also instigate multiple forms of help from parents. But paradoxically, while parental support may soften the blow of job loss and provide needed material assistance, its very provision contradicts a central hallmark of adulthood, independence. Assistance from parents could thereby also undermine the young adult’s self-efficacy.

We use hierarchical linear modeling applied to prospective panel data from the Youth Development Study (Mortimer 2012) to investigate whether spells of unemployment diminish the sense of efficacy during the transition to adulthood. Our modeling strategy is particularly useful in controlling individual characteristics that may increase the likelihood of employment disruptions (selection to unemployment on the basis of unobserved heterogeneity). We also investigate whether assistance from parents, often forthcoming when youth face unemployment, similarly undermines this important psychological resource.

Rising Unemployment and its Consequences for Youth

Occupational careers have become more uncertain and precarious for workers of all ages in recent decades, given increased competition attendant on globalization, overseas outsourcing, rapid technological innovation, organizational mergers and downsizing, and occupational shifts. Standard employment in stable, full-time, “good” jobs, offering advancement opportunities as well as health and retirement benefits, is being replaced by

nonstandard “precarious” employment in “bad” jobs, especially for youth (Kalleberg, Reskin, & Hudson, 2000; Heinz 2003; Blossfeld et al., 2008; MacDonald, 2009; Kalleberg, 2009, 2011, 2012). The transition between “survival jobs,” little different from those young people had as adolescents, to stable full-time “career jobs” becomes ever more challenging in this rapidly changing economic context. The absence of an institutionalized school-to-work transition in the United States contributes to long periods of job search and sometimes “floundering,” as youth seek a good fit between their interests, educational credentials, and values, and the opportunities and rewards that work has to offer (Vuolo, Staff, & Mortimer, 2014). Because most educational degrees are not vocationally specific, often neither the employer nor the young person knows what the novice job seeker is capable of doing. Uncertainty surrounding the transition from school to work is prevalent even in good times (Kerckhoff, 2002, 2003); it is exacerbated during periods of economic downturn. While rising unemployment during the “Great Recession” in Europe and America has diminished the economic welfare of both younger and older workers, younger workers, whose establishment in the labor market is more tenuous, were especially hard hit (Norris, 2010).

Lacking financial resources, as well as the daily life structure and recurrent social relationships that employment provides, unemployed youth risk social marginalization (Julkunen, 2009). In addition to these immediate effects, unemployment at this time of life is likely to have long-term negative consequences for future socioeconomic attainment. Unemployment diminishes human capital development through work, reduces future employment opportunity given employers’ preference for young job seekers with work experience, and diminishes life-long earnings potential, what economists call labor market “scarring” (Gregg, 2001; Neumark, 2002; Blossfeld et al., 2008; Kahn, 2010).

Unemployment and Self-Efficacy

Several related social psychological constructs signify the perceived capacity to affect salient outcomes, for example, internal vs. external locus of control (Rotter, 1966), personal control (Mirowsky & Ross, 1989), and powerlessness (Seeman, 1959). Arguably most influential is Bandura’s concept of self-efficacy, consisting of “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (1997: 3). Individuals with stronger self-efficacy engage in more active coping behavior in stressful situations, exert more effort and persistence in the face of obstacles, set higher goals for themselves, develop more concrete plans, and are more likely to achieve their goals (Bandura, 1977a, 1977b; Gecas, 1989; Skinner, Zimmer-Gembeck, & Connell, 1998). Self-efficacy is also a central component of the life course construct of agency, the capacity to achieve one’s goals in both short and long-term pursuits (Hitlin & Elder, 2007a, 2007b; Hitlin & Johnson, 2015). Self-efficacy is thought to be especially important in fostering effective work-related behaviors (Bandura, 1988).

While self-efficacy is conceptualized as a core feature of personality, it is also thought to be malleable, responsive to successes and failures through life. According to Bandura (1995), people develop efficacy largely by observing their own actions or “performances”. Importantly, from our perspective, such “performances” may include success or failure in meeting normative, age-graded expectations, such as those surrounding employment.

Efficacy may also be influenced by reflected appraisals, vicarious observation, and emotional arousal in challenging situations.

Studies of adult workers indicate that occupational successes and high quality work experiences, especially self-directed occupational conditions, foster self-efficacy, and that economic strain reduces it (Pearlin et al., 1981; Kohn & Schooler, 1983; Goldsmith, Veum, & Darity, 1996). Even the threat of job loss is found to reduce adult workers' sense of control (Glavin, 2013). Research has also established a link between work experience and efficacy among teenagers (O'Brien & Feather, 1990; Mortimer & Zimmer-Gembeck, 2007). The self-efficacy of high school students, participants in the Youth Development Study, was linked to high quality work, defined by opportunities for advancement, the perception that one is being paid well, low levels of stressors, and an absence of conflict between school and work (Finch et al., 1991; Grabowski, et al., 2001; Mortimer, 2003). Steady work of relatively long duration during high school also fostered a sense of efficacy in the economic domain, and sporadic work (bouts of high intensity work of relatively short duration) reduced it (Cunnein, Martin, Rogers, & Mortimer, 2009).

On the one hand, it is plausible to assume that unemployment may be especially detrimental to young people in transition to adulthood because this is a critical period of attitude and identity formation. Gecas (2003) notes that each major stage of life is linked to new social contexts that present distinct challenges and competency demands, which both enable efficacy to be expressed and have marked influence on the ensuing course of efficacy development (see also Masten et al., 2010). There is no consensus on the exact ages at which the transition to adulthood begins or ends. Like other age graded social constructions, these boundaries are subject to social definition, subgroup variation, and historical change (Eliason, Mortimer, & Vuolo, 2015; Mortimer & Moen, 2016). Analysts following Arnett's (2000) lead consider the transition as starting at age 18 and ending at age 25, though Arnett himself (2001) has operationalized the "emerging adult" period from age 20–29. The Population Reference Bureau (Jekielek & Brown, 2005) considers age 18–24 as defining the transition. The present study examines the impacts of unemployment on youth in their early 20's to their early 30's, a period of life during which adult roles are being established.

Stable "adult-like" work provides the economic sustenance that facilitates acquisition of other "markers" of adulthood, including independent living, marriage, cohabitation, and parenthood. Unemployment threatens acquisition of these markers. Unemployment may also threaten the development of a positive work identity, as a valuable and productive worker, and may reduce confidence in the ability to obtain a job, function adequately in the work role, and maintain employment over time.

Being able to maintain a "career-like" job is a salient subjective marker of adulthood to youth themselves. When asked about what criteria are used to decide whether a person is an adult, young people give career establishment and financial independence high priority (Scheer & Palkowitz, 1994; Arnett, 1997, 2001, 2003). In fact, youth consider settling into a career, that is, acquiring an occupation with long-term prospects, as more important than other criteria for acquiring adult status, such as marriage, parenthood, and full-time employment. As a result of its manifold implications for success in establishing oneself as

an adult, the consequences of unemployment may extend far beyond the absence of a paycheck. Given its extensive repercussions and salience during the transition to adulthood, unemployment could threaten the youth's confidence more generally about being able to influence important goals in life.

Individuals tend to "lower their sights" in the face of work-related losses and difficulties (Johnson, Sage, & Mortimer, 2012), perhaps as a result of declining confidence. The ability to identify and persist in goal-directed activities would appear to be of crucial importance for young people in transition to adulthood, a time when socioeconomic trajectories in education and work are in process of formation. If unemployment erodes efficacy at this critical time of career establishment, it may likewise disrupt work-related goal setting and decision-making. A lack of confidence could diminish the very coping behavior needed for successful transition to work, such as active job search or the acquisition of credentials through job training or higher education, thereby having lasting effects on the occupational career.

While there are many reasons to anticipate that unemployment would erode the young person's efficacy, a contrary expectation is also plausible. Unstable work is to be expected during the transition to adulthood, as the lack of institutionalized bridges from school-to-work in the United States makes it incumbent on young people to draw on their own experiences and networks in finding jobs. Even in relatively good economic times, many youth are unemployed repeatedly, as they engage in job search and experience spells of unemployment between jobs that may be temporary, non-standard, and unsatisfactory. The ordinariness and expected character of these experiences, with most of their peers "in the same boat," could protect young people's sense of efficacy. Consistent with this expectation, Pavlova and Silbereisen (2012) find that unemployment has weaker effects on subjective well-being among younger workers than among older workers, a pattern linked to the greater prevalence of long-term unemployment among older workers (see also Young, 2012). Furthermore, Glavin (2013) finds that the threat of job loss diminished personal control more strongly among middle-aged and older workers than among younger workers in their mid-twenties.

Relatedly, another very widespread and presumably problematic circumstance of young adults—having unrealistically high, and unfulfilled educational aspirations—appears to have no significant effect on their mental health (Reynolds & Baird, 2010). Commonly experienced stressors, like youth unemployment spells, may also provide occasion for stock-taking, problem-solving, and the development of "adaptive resilience" (Reynolds & Baird, 2010). If unemployment acts as a "eustressor" (Shanahan & Mortimer, 1996), producing more effective coping, enhancing confidence, and promoting other personal resources, the sense of efficacy may not be threatened. Despite many work-related and other obstacles and delays encountered by youth during the transition to adulthood, rather than expressing fatalism or resignation, their narrative themes stress their capacity to overcome setbacks and resolve problematic circumstances (Mortimer et al., 2002; Silva, 2012). The optimism of young adults in looking toward their futures may be protective when faced with seemingly momentary problems and hardships that are widely experienced among their peers.

In studying the relationship between unemployment and efficacy, it is necessary to consider two plausible sources of this association (Schaufeli, 1997). Although acknowledging the possibility of beneficial or null effects, the discussion thus far has emphasized the potential for unemployment to undermine self-efficacy, causing young persons to see themselves as less efficacious. However, deficiency in efficacy (as well as other psychological resources) could also foster unemployment—if it interferes with persistent job search, or leads to unsatisfactory job performance and job termination. We show elsewhere that a sense of self-efficacy in the economic realm at the age of 18 promotes attainments at age 24, including educational attainment, employment, and income, and reduces the likelihood of early parenting (Mortimer, Staff, & Lee, 2005; see also Lee & Mortimer, 2009). Adolescents' evaluations of their competence predict success in adulthood generally (Mainquist & Eichorn, 1989). However, research to date has not adequately addressed the likelihood of “unobserved heterogeneity” that could render the effects of unemployment on self-efficacy spurious.

In view of the increasingly extended and precarious transition to adulthood, and the potential vulnerability of youth to experiences that threaten their growing independence, we hypothesize that the negative effect of unemployment spells on self-efficacy will be independent of over-time changes in many other life circumstances (including successes and problems) and differences between young adults in social background characteristics.

Parents as “Safety Nets”

The parental role has become extended in recent years, as families, especially in countries with weak welfare provision, compensate for the absence of governmental resources and interventions by providing financial support and co-residential arrangements for their young adult children well into their twenties and even early thirties (Swartz, 2008, 2009). In the United States, considerable cultural ambivalence surrounds such support. The U.S. media are fascinated with the phenomenon dubbed “helicopter parenting;” each Fall a spate of stories feature parents' anguish as they drop off their college freshmen. Parents are said to intervene even with their children's professors and with prospective employers after graduation. Usually, the implied subtext is that this attention is harmful, indicating a failure of parents to “let go” and enable their children to become independently functioning adults.

In contrast to this negative popular image, some social scientists contend that continued parental support of young adult children is necessary, even essential, in this new world of increasing educational requirements for good jobs, the delay in acquiring marriage partners, who could provide stable financial and emotional support, and other circumstances that prevent more “timely” independence during this transitional period (Settersten & Ray, 2010).

Swartz et al. (2011) have begun to address these issues by investigating the circumstances under which financial and residential (co-residence) supports are provided to young adult children. Do parents give these supports irrespective of what is going on in the younger generation's lives, a kind of “unconditional” giving that could foster prolonged and unnecessary dependence? Or is support targeted in a manner that would likely facilitate

successful transition to adulthood? A fixed effects hierarchical modeling strategy to assess change in parental financial contributions and co-residence during the transition to adulthood, specifically from age 23 through age 30, showed strong contingency between parental supports and circumstances in the child's life.

Financial support was extended when the children experienced both unemployment and part-time employment, helping youth to get through periods of economic difficulty and uncertainty. Co-residence occurred when the youth experienced other negative life events. Parents stepped in with both financial and residential support during years when their children were attending school. But as the children achieved markers of adulthood, including cohabitation, marriage, and parenthood, and attained higher levels of income, parents stepped back. Parents thus provided a critical "safety net" during times of negative life events (like unemployment, a break-up of a serious romantic relationship, a serious illness, or being a victim of a crime). They also "scaffolded" the youth as they attempted to acquire human capital through postsecondary education. These findings suggest that the "helicopter" metaphor is much overdrawn.

Parental monetary contributions and co-residence can be critical during times of work-related difficulties and other problems, stabilizing youth financially while helping them to avoid even more serious calamities, like homelessness, bankruptcy, poverty, and welfare dependence. However, such assistance may not come without psychological cost during the transition to adulthood, given the precarious character of the independent adult identity. Johnson (2013) finds that parental assistance with living expenses is associated with more depressive symptoms among youth, but that this effect is conditional on occupying adult roles (i.e., as a nonstudent and independent resident). As Settersten (2010: 9) points out, "A growing challenge of prolonged entry into adult statuses and reliance on others... is that these may make it difficult to achieve a sense of both autonomy and responsibility..." In view of this concern, we investigate whether support from parents undermines the youth's developing sense of efficacy. We hypothesize that self-efficacy decreases with greater financial and residential support from parents.

Data Source

The Youth Development Study drew an initial sample of randomly chosen ninth-grade students enrolled in the St. Paul, Minnesota public schools in the Fall of 1987 (N=1010). During the first four years, the youth completed questionnaires in their high school classrooms; subsequently, surveys were obtained near annually through the mail. Importantly for this analysis, all surveys following high school (starting in 1992), included a Life History Calendar (Freedman, et al., 1988), which obtained a complete monthly record of employment experiences, including full-time (35 hours a week or more) work, part-time (less than 35 hours) work, and unemployment (not employed and looking for work), as well as schooling and residential histories during the preceding year. In addition, information was obtained near-annually registering progress in transition to adulthood, including educational and income attainment and family formation (marriage, cohabitation, and parenthood). Retention in the study has been good (71% by 2005, with about 75% responding in recent adjacent waves), though minorities and men have had higher attrition than whites and

women, and those who were highly disadvantaged at the beginning of the study, indicated by the absence of an employed parent, have had lower levels of retention over time (Staff and Mortimer, 2007). The present analysis covers the youth's experiences of unemployment and self-efficacy during the decade from their early twenties (21–22) to early thirties (31–32). It should be noted that the YDS cohort of youth made their transition to adulthood in relatively good economic times, 1995 to 2005, prior to the recent Great Recession that began in 2008.

Our key dependent variable is self-efficacy, measured by the Pearlin Mastery Scale (Pearlin et al., 1981), an additive index including 7 items (e.g., “I can do just about anything I really set my mind to do”), with which the respondent can “strongly agree” to “strongly disagree” with 4 response options. For the full list of items, see Appendix 1. This analysis includes self-efficacy measured from age 21–22 (wave 8 in 1995) through age 31–32 (wave 16 in 2005), marking what may be considered the beginning and the end of the transition to adulthood for most young people in our society. Self-efficacy was measured in seven survey waves over the 11-year period. Unemployment and other time-varying variables are measured at the same time as self-efficacy.

Unemployment, the central independent variable of interest, was measured by the number of months unemployed during the 12 months preceding each survey; it ranges from 0 to 12 in each wave. To correctly estimate the effects of unemployment on self-efficacy, we must take into account other experiences, both negative and positive, during this period of life that may also affect the young person's developing sense of confidence. We include other negative life events (e.g., a serious injury or illness, a romantic break-up), that might undermine self-efficacy; as well as more positive experiences, such as school attendance, promoting human capital development, and family formation, including marriage, cohabitation, and parenthood, all of which connote progress in the transition to adulthood. We also include the highest level of education achieved to date and household income.

Finally, we include in our models dummy variables representing parental housing and economic support, each coded 1 if the respondent was living with the parent for one month or more in the preceding 12 months, or if the parent covered any living expenses during the preceding year. We dichotomize the two parental support variables because in any single year most respondents received no support (the average during each of the 7 waves is 17% receiving economic support and 22% receiving housing support). However, throughout the 7 waves, 44% of the respondents received economic support from parents at some point; 57% received housing support at some point.

The time-varying variables allow us to address the questions: Do youth suffer declines in efficacy during periods of unemployment, and is efficacy stronger when youth are not unemployed? Does efficacy decline when youth receive financial and residential support from parents? Is their self-efficacy responsive to other life events and achievements? Measures of each time-varying variable are described in Table 1.

A set of background variables was obtained from parents and children during high school (ages 14–17). These are included to account for between-person variation that may be due to social background. For example, adolescents whose parents have higher socioeconomic

status may develop a sense of efficacy vicariously (Bandura, 1977a). To obtain accurate information about socioeconomic status, this information was obtained by surveying parents directly at the beginning of the study. Moreover, males and whites are found to have higher efficacy than females and non-whites, respectively (Gecas, 2003). The background variables include parents' education (the higher level if data from both parents are available), family-of-origin household income, race (white vs. non-white), gender, family structure at the beginning of the study (continuously married parents, stepparents, single parents, and other) and the number of siblings. Since the quality of relationships with parents may foster self-efficacy during adolescence, we include measures of closeness to mother and to father during high school. Measures for these time-invariant variables, with summary statistics, are described in Table 2.

Estimation Procedure

To examine the effects of unemployment, parental assistance, and other variables on self-efficacy, we estimate a two-level hierarchical linear model (HLM), which takes into account the nested structure of the data (a person-year dataset), handles unbalanced and incomplete data appropriately in estimating the parameters, and accommodates covariates that vary with time and those that do not (Halaby, 2003; Osgood, 2010). This mixed-effects modeling approach properly assesses the effects of time-varying work situations and other life circumstances on self-efficacy, while taking into account the clustering of repeated measures from the same individuals and controlling for unobserved time-invariant individual background characteristics.

The multilevel framework incorporates covariates that vary with time in the level 1 model. Covariates considered invariant with respect to time (including background variables) are incorporated in level 2 of the model, as predictors of person-specific intercepts. The first step in estimating this model is to create a person-year data set for each survey year from 1995 through 2005; there are 3,636 person-year observations. The person-year is the unit of analysis at level 1; and each person-year was nested within an individual at level 2 ($N = 680$ respondents). Sample loss is due to attrition (those who dropped out of the study by 1995 would have no level 1 variables during the period of observation), as well as the absence of particular background variables (with the largest nonresponse for number of siblings). The Level 1 equation of the final full model for self-efficacy for person i at time t is written:

$$Y_{it} = \beta_{0i} + \beta_{1i}(W10) + \beta_{2i}(W12) + \beta_{3i}(W13) + \beta_{4i}(W14) + \beta_{5i}(W15) + \beta_{6i}(W16) + \beta_{17i}(\text{unemployment months}_{it}) + \beta_{8i}(\text{parental economic support}_{it}) + \beta_{9i}(\text{parental economic support}_{it}) + \beta_{10i}(\text{negative event}_{it}) + \beta_{11i}(\text{school attendance}_{it}) + \beta_{12i}(\text{R's highest level of education}_{it}) + \beta_{14i}(\text{parenthood}_{it}) + \beta_{15i}(\text{married}_{it}) + \beta_{16i}(\text{cohabiting}) + r_{it}$$

Both Y , referring to the level of self-efficacy, and the β parameters are uniquely estimated for each person i , with r_{it} as the residual from the person-specific average over time. $\beta_{1j} \sim \beta_{6j}$ are specified as a series of dummy variables representing waves in which self-efficacy and other time-varying variables are measured, representing the difference in the average level of self-efficacy in a given year compared to W8, the reference year, when respondents were 21. Since all respondents are of the same cohort, the wave variables also register change as respondents age.

At Level 2:

$$\beta_{0i} = \gamma_{00} + \gamma_{01}(\text{parental education}_i) + \gamma_{02}(\text{family income}_i) + \gamma_{03}(\text{white}_i) + \gamma_{04}(\text{male}_i) + \gamma_{05}(\text{stepparent}_i) + \gamma_{06}(\text{single parent}_i) + \gamma_{010}(\text{closeness to mother}_i) + \gamma_{012}(\text{mean unemployment months}) + \gamma_{013}(\text{mean parental housing support}_i) + \gamma_{014}(\text{mean parental economic support}_i) + \gamma_{016}(\text{mean school attendance}_i) + \gamma_{017}(\text{mean highest level of education}_i) + \gamma_{018}(\text{mean R's income}_i) + \gamma_{019}(\text{mean parentho})$$

$$\beta_{xi} = \gamma_{x0}$$

β_{0i} , the individual intercept at W8 (i.e. at age 21–22), is modeled as a function of specified individual characteristics (γ). The random error component, μ_{0i} , indicates individual variation around the intercept. Thus, while the model allows for person-specific intercepts reflecting differences in averages between-individuals on self-efficacy, the effects of the time-varying covariates, β_{xi} , are fixed across individuals and do not have an error term specified at Level 2.

We estimate the model in three phases. The first (model 1) is a between-effects model, which includes time, represented by yearly dummy variables with W8, age 21–22, as the reference in the level 1 equation, as well as the person-means of unemployment months, parental housing support, parental economic support, negative events, education, school attendance, R's income, parenthood, marriage and cohabiting as level 2 predictors.

Model 2 adds to the variables in Model 1 the person centered time-varying level-1 predictors, including our key variables of interest, unemployment and parental supports. By decomposing the time-varying predictors into between-person and within-person effects, this mixed effects model controls for all observed and unobserved time-stable variables. That is, a model that includes, for all time-varying measures, both person-means at Level 2 and a person-centered measure at Level 1 controls all time stable differences in propensities for these experiences and is equivalent to a fixed effects specification (see Halaby, 2003; Rabe-Hesketh & Skrondal, 2012). In terms of interpretation, the person-means represent the effect for two individuals separated by one unit on a given predictor (i.e. between-person), while the person-centered measures represent the effect of change on that given predictor for an individual (i.e. within-person).

A primary advantage of the mixed effects specification is the ability to include additional time-invariant predictors. Thus, in model 3, we include time-invariant background measures in our mixed effects models. In short, the coefficients from the final model inform us as to whether, net of an individual's propensity to be unemployed and to receive parental assistance over the full period of observation, background variables foster declines in average efficacy across years. Since these measures do not vary within-person, they should have little to no effect on the within-person Level 1 measures, including our key focal variables, namely the effect of within-person changes in unemployment and parental support on self-efficacy.

Findings

Table 3 presents results from the two-level hierarchical models, which indicate how both between- and within-individual changes in each predictor affects self-efficacy from age 21–22 in 1995 through age 31–32 in 2005. Using the variance components from the unconditional model with no covariates (not shown), we find that 55.5 percent of the variation is between-individuals (or at Level 2), while 44.5 percent of the variation is within-individual (or at Level 1). This nearly even split demonstrates that self-efficacy varies both between- and within-individuals, leading both levels to be of considerable interest. Model 1 shows that efficacy increases in the early 20's, from age 21 to 25, and then declines, with some resurgence by the age of 30–31. Interestingly, however, the significant trends after age 26–27 are fully explained by the time-varying variables included in Model 2. The between-person estimates in model 1 reveal that self-efficacy is lower among respondents who experience more negative life events and self-efficacy is higher among respondents with higher levels of income and education. The negative effect of mean years married on efficacy, whereby those married one year longer on average are 0.813 lower on self-efficacy ($p < .05$), could possibly be attributable to the stresses associated with precocious family formation. Model 2 shows that time-varying marital status has no significant effect, such that within-person changes in marital status do not affect efficacy. The variance component for Level 2, which accounts for differences in average self-efficacy across individuals, demonstrates that an individual one standard deviation above the mean is 2.23 units higher on self-efficacy ($\sqrt{4.990} = 2.23$)

Our first hypothesis interrogated the link between unemployment and efficacy. The within-person estimates shown in Model 2 reveal that each 1 month increase in unemployment from an individual's average reduces self-efficacy by .06 ($p < .05$), even with age and the other time-varying experiences, as well as stable propensities to have these experiences, are controlled.¹ We see also that school attendance enhances self-efficacy ($\beta = .308$, $p < .05$). Youth's confidence thus appears to grow as they acquire more knowledge, skills, and credentials. Interestingly, net of these effects, the youth's own income and educational attainment, and indicators of family formation, have no significant effects on self-efficacy.

Our second hypothesis addressed the impacts of parental housing and financial support on efficacy. We find that parents' yearly financial contributions exert a strong and statistically significant negative effect on self-efficacy ($\beta = -.446$, $p < .01$), while yearly parental housing support, or co-residence, exerts no significant influence.²

As is expected given our modeling strategy, adding time-invariant predictors in Model 3 does not affect the pattern of significant findings of our within-person predictors (i.e. age,

¹In an alternative model specification (not shown), we estimated the effects of cumulative unemployment months to date for each wave. The results were substantially the same. We conclude that the total duration of unemployment, or its cumulative history, do not have more severe effects, in diminishing the individual's sense of efficacy, than more proximal, yearly unemployment spells.

²In a supplementary analysis (not shown), a time-varying cumulative measure of years residing with parents had a significant positive effect on self-efficacy. However, the interaction between cumulative and current co-residence had no significant effect, indicating that the duration of residence in the parental household did not alter the impact of current co-residence (still not significant). Additionally, a supplemental analysis showed no significant interaction between year and financial support, indicating that the effect of parental support did not differ by respondent age.

unemployment, parental financial support, and school attendance). Turning to those person-level time-invariant predictors, family income is positively related to self-efficacy. Each increase in family income level increased self-efficacy by .14 ($p < .05$). Closeness to father, as well as mother, also has a positive effect on respondents' self-efficacy in young adulthood. Thus, a respondent who had a closer relationship with mothers or fathers during the high school years tends to have higher self-efficacy during the transition to adulthood. Respondents from a single-parent family tend to have higher self-efficacy compared to those with continuously married parents. Other background factors, such as parental education, race, gender, and the number of siblings do not have significant effects on the self-efficacy of these young adults.

In unlisted analyses, we considered whether gender might moderate the pattern of findings. For instance, assuming traditional gender role attitudes among the young adults in this sample, young men might well experience a greater setback in their perceived self-efficacy than young women when they experience unemployment or when they receive support from their parents. However, we did not find that the negative effect of unemployment was stronger among men compared to women. Furthermore, the within-person effects of financial and residential support did not differ by the young adult's gender. We also did not find that the effects of family income, family structure, or parental closeness (either with mother or father) varied significantly by gender.

In supplemental analyses, we also tested interactions between unemployment and parental support (financial and residential) to see if parental support has a different effect for young adults who are employed versus those who are not, but the interaction terms were statistically non-significant. This finding implies that becoming unemployed had a similar effect on self-efficacy regardless of whether or not it was accompanied by an increase in parental support. Thus, maintaining young adults' self-confidence would require avoiding parental dependence during times of both employment and unemployment. Finally, we examined whether the impacts of financial or residential support on self-efficacy depend on the closeness of the parent-child relationship, specified in an initial set of models as a time-varying variable and, in another set of models, as time-invariant (closeness during high school). Interactions between closeness to each parent and financial support, as well as housing support, were added separately to the final models. Just one of eight interactions (4 parental closeness variables $\times$ 2 modes of support) was statistically significant ($p < .01$). In this one instance, contemporaneous (time-varying) closeness to father exacerbated the negative effect of financial support.

Discussion

Our two-level hierarchical modeling strategy indicates that the decade of the twenties may be a precarious time for youth in terms of self-efficacy development. In the aggregate, this dimension of the self-concept increases in the early 20's (from age 21 to 25) but then declines. The age effects, however, are substantially explained by the time-varying constructs in the model.

This study yields substantial evidence that youth suffer declines in self-efficacy during periods of unemployment as they navigate the critical period of establishment in work and adult identity development during the decade of the twenties. Clearly, among the experiences considered in this analysis, it is school attendance and unemployment that are the most likely to have important repercussions for career development. Youth's awareness of these consequences may make them quite reactive, in positive or negative directions, with respect to their feelings of efficacy.

Importantly, the time-varying experiences that are the most consequential for future socioeconomic attainment, that is, school attendance and unemployment, foster shifts in self-efficacy, not the acquisition of the adult demographic markers related to family formation (i.e., cohabitation, marriage, or parenthood), or even income. Perhaps the indicators of family formation have no significant effects because of their countervailing influences. For example, parenthood might heighten the sense of efficacy, given its importance as a marker of adulthood, while also increasing responsibilities so rapidly, especially in the earliest part of the child's life, that self-efficacy is undermined. Marriage and cohabitation likewise signify successful transition to adulthood, while increasing responsibilities. The effects of income may vary depending on the size of the household and consequent economic need, which are not addressed in this analysis. While those who experience more negative life events on average have lower efficacy, it is also somewhat surprising to find that the negative life events, other than unemployment, do not diminish self-efficacy contemporaneously. It could be that because many of these events may be viewed as out of the respondent's control (e.g., a serious injury or illness), they have little impact on the sense of self-efficacy.

The analysis shows that important social background characteristics, such as the income of the family of origin and closeness to mother and father during adolescence, are positively associated with later self-efficacy. The positive effect of family income during adolescence is robust even when important time-varying experiences are controlled. This indicates that the benefits of having more affluent parents last through the 20s.

We also show that parental economic support, but interestingly, not housing support, diminishes self-efficacy. It is possible that financial aid and housing support have quite different meaning and correlates during this transitional period. Our earlier analysis (Swartz et al., 2011) showed that parents come to the aid of their young adult children who become unemployed by giving financial contributions for living expenses, but not by providing co-residence. Co-residence, in contrast, was given when youth experienced other serious negative life events, some traumatic, and perhaps requiring a wider range of helping activities, or when the youth were attending school.

Although co-residence with parents after age 21–22 can be seen as a sign of dependence and unsuccessful transition to adulthood, it is at the same time a source of strong social support during stressful life transitions, which is critical in maintaining self-efficacy (Jerusalem & Mittag, 1997). It could also be that financial and residential aids have distinct psychological consequences given the different levels of reciprocity accompanying each form of assistance. The close daily interactions and round of life in the parental household provide

many opportunities for co-residing youth to assist in household work, and even to provide emotional support to the parents. Furthermore, many young adults who live with their parents give them regular monetary contributions, a kind of “rent” that could allay feelings of inadequacy or dependence. In contrast, financial assistance from parents, particularly in the context of unemployment, is unlikely to be reciprocated in kind, at least in the short-term. The parents’ one-sided financial help may for that reason undermine the youth’s sense of developing “adult” independence and self-confidence in a way that co-residence does not.

In summary, while financial support from parents may provide an important “safety net,” helping the youth to weather obstacles to successful transition from school to work, it may have unintended consequences in undermining the very psychological resource that may be of essential importance in overcoming work-related as well as other difficulties encountered on the road to adulthood. Unemployment has the potential to erode the young adult’s sense of efficacy in two ways: first, by directly impinging on successful adult transitions and the acquisition of an adult identity (Eliason, et al. 2015), and second, by providing the occasion for parental assistance that undercuts the youth’s developing autonomy and independence.

Parental financial “help” may thus be a double-edged sword—it provides essential material resources that act as a “safety net” in contemporary economic conditions that make it difficult for young people to establish themselves in work. At the same time, however, parental financial support undermines what many youth consider a central prerequisite of adulthood: economic self-sufficiency. Because of this, monetary contributions from parents may jeopardize the development of a sense of self-efficacy that provides critical psychological advantages in navigating the transition to adulthood.

Conclusion

Work is key to a successful transition to adulthood—providing the economic wherewithal for independent residence, marriage, and parenthood. If youth cannot achieve these objective markers of adulthood, cannot attain a sense of adult identity, and lose out on experiences that would help them develop a sense of self-efficacy and other psychological strengths that are needed for a successful transition, their future adult trajectories will likely be jeopardized.

These findings have important policy implications. In undermining efficacy, unemployment and ensuing parental financial assistance may have long-term detrimental consequences. We need to find ways to help the many youth who are having difficulty establishing themselves in work, especially given the huge toll the Great Recession is now having on younger workers. While labor market “scarring” can cause permanent deficits in wages (Blossfeld et al., 2008; Kahn, 2010), the risks of unemployment for youth who are attempting to establish themselves in stable adult-like work may be much more pervasive. At a recent international conference, a Finnish sociologist (Salmela-Aro, 2010) spoke of the worrisome phenomenon of “retirement” among youth in their thirties—she was referring to a failure to ever become established in work, not retirement from a long-term job.

Employment interventions targeted to youth are especially important. Youth do not need additional training programs that are holding actions, leading nowhere, but they require

training in areas of labor shortage. Innovative social structures are sorely needed to forge institutional bridges from school to work, especially for youth who do not have the benefit of college degrees and post-graduate educations. Better contacts between schools and employers are needed at all levels (Person, Rosenbaum, & Deil-Amen, 2005; Person & Rosenbaum, 2006, 2007). Societal investment in entry-level jobs with long-range advancement potential could have large payoffs. Awareness of threats to efficacy from unemployment could also inform the work of counselors, mentors, and others who guide youth, since efficacy is responsive to verbal persuasion, reflected appraisals, and vicarious experience (Bandura, 1997). These latter sources of efficacy might help to bolster youth's self-confidence during periods of economic insecurity and upheaval, but are likely to be less effective than true performance attributions in raising self-efficacy.

The findings presented here also suggest useful directions for future research. First, the YDS sample was drawn from public schools in a single city in Minnesota, and youth in this sample experienced the transition to adulthood during a period of relative prosperity in the United States (1995–2005), though a brief recession occurred in 2001. A recent study of adult workers indicates that job insecurity had more deleterious effects on happiness in 2010, in the aftermath of the Great Recession, than previously, in 2006 (Lam, Fan, & Moen, 2014). Understanding the effects of unemployment during the recent Great Recession and its lengthy aftermath on contemporary youth who are now making the transition from school to work would require study of a younger cohort, ideally one based upon a nationally-representative sample. Comparing the psychological consequences of unemployment for young people making this transition in relatively good and recessionary economic times would thus be a fruitful topic for further study.

Second, we need better understanding of the circumstances and meaning of support from parents—we know something now about what triggers it, and about what its effects may be, but might the circumstances of support modify its consequences? We find evidence here that parental financial support through the twenties undermines efficacy. However, aid given for purposes of “scaffolding” at younger ages, while youth are gaining higher educational credentials, may yield increasing confidence.

Third, studies of job-related difficulties other than unemployment, which could also reduce youth's sense of efficacy, would likewise be informative: for example, hours and pay reductions, frequent job changes or “floundering” in the labor market, and reductions in job security. Comparing the effects of such difficulties for younger and older workers would be useful to determine whether the transition to adulthood is in fact an especially vulnerable period in the life course for efficacy development.

Finally, we need further research that examines work-related problems and coping activities, parental interventions, and psychological reactions simultaneously across time. To understand the mediating dynamics through which unemployment affects efficacy, we should study how self-efficacy influences work-related behaviors, such as job search and the acquisition of human capital through education. Attention to domain specific economic and educational efficacy may be especially important in this regard (Grabowski, et al., 2001). It is probable that self-efficacy and employment have reciprocal effects throughout the

transition to adulthood (Mortimer & Lorence, 1979; Mortimer, 1994), which are not elucidated in our analysis. Unemployment and other work-related difficulties, in reducing self-efficacy and subsequent work-related investments, and inducing parental assistance that further undermines youth confidence, could lead to spiraling failure through the ensuing early career trajectory. In contrast, early work-related successes could engender the opposite, more positive feedback cycles, fostering much more salutary consequences. By increasing the young worker's self-confidence, success in the world of work could heighten goal setting, foster human capital investment, and enable the youth to capitalize on further opportunities to demonstrate competence. We consider the analysis presented in this article an initial step toward understanding these complex and dynamic interrelations of person and job.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Biographies

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Appendix 1

Self-efficacy is an index including the following 7 items, each with four response items. (1=strongly disagree, 4=strongly agree for the first two; the remaining items were reverse coded):

1. I can do just about anything I really set my mind to do.
2. What happens to me is the future mostly depends on me.
3. There is really no way I can solve some of the problems I have.
4. Sometimes I feel that I am being pushed around in my life.

5. I have little control over the things that happen to me.
6. I often feel helpless in dealing with the problems of life.
7. There is little I can do to change many of the important things in my life.

References

- Andersen S. Unemployment and subjective well-being: A question of class? *Work and Occupations*. 2009; 36:3–25.
- Arnett JJ. Young people's conceptions of the transition to adulthood. *Youth and Society*. 1997; 29:1–23.
- Arnett JJ. Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*. 2000; 55:469–480. [PubMed: 10842426]
- Arnett JJ. Conceptions of the transition to adulthood: Perspectives from adolescence to midlife. *Journal of Adult Development*. 2001; 8:133–143.
- Arnett JJ. Conceptions of the transition to adulthood among emerging adults in American ethnic groups. *New Directions for Child and Adolescent Development*. 2003; 100:63–75.
- Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*. 1977a; 84:191–215. [PubMed: 847061]
- Bandura, A. *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall; 1977b.
- Bandura A. Organizational applications of social cognitive theory. *Australian Journal of Management*. 1988; 13:275–302.
- Bandura, A. *Self-efficacy in changing societies*. Cambridge, U.K.: Cambridge University Press; 1995.
- Bandura, A. *Self-efficacy: The exercise of control*. New York: Freeman; 1997.
- Blossfeld, HP.; Buchholz, S.; Bukodi, E.; Kurz, K., editors. *Young workers, globalization and the labor market: Comparing early working life in eleven countries*. Cheltenham: Edward Elgar Publishing; 2008.
- Clausen JA. Adolescent competence and the shaping of the life course. *American Journal of Sociology*. 1991; 96(4):805–842. DOI: 10.2307/2780732
- Clausen, JA. *American lives: Looking back at the children of the great depression*. Berkeley, CA: University of California Press; 1993.
- Cunnein KA, MartinRogers N, Mortimer JT. Adolescent work experience and self-efficacy. *International Journal of Sociology and Social Policy*. 2009; 29:164–175. [PubMed: 19750144]
- Eliason SR, Mortimer JT, Vuolo M. The transition to adulthood: Life course structures and subjective perceptions. *Social Psychology Quarterly*. 2015; 78:205–227. [PubMed: 26441473]
- Finch MD, Shanahan MJ, Mortimer JT, Ryu S. Work experiences and control orientation in adolescence. *American Sociological Review*. 1991; 56:597–611.
- Freedman D, Thornton A, Camburn D, Alwin D, Young-Demarco L. The life history calendar: A technique for collecting retrospective data. *Sociological Methodology*. 1988; 18:37–68. [PubMed: 12282712]
- Gecas V. The social psychology of self-efficacy. *Annual Review of Sociology*. 1989; 15:291–316.
- Gecas, V. Self-agency and the life course. In: Mortimer, JT.; Shanahan, MJ., editors. *Handbook of the life course*. New York: Kluwer/Plenum; 2003. p. 369-388.
- Glavin P. The impact of job insecurity and job degradation on the sense of personal control. *Work and Occupations*. 2013; 40:115–142.
- Goldsmith AH, Veum JR, Darity W Jr. The psychological impact of unemployment and joblessness. *Journal of Socioeconomics*. 1996; 25:333–358.
- Grabowski LS, Call KT, Mortimer JT. Global and economic self-efficacy in the educational attainment process. *Social Psychology Quarterly*. 2001; 64:164–179.
- Gregg P. The impact of youth unemployment on adult unemployment in the NCDS. *The Economic Journal*. 2001; 111:626–653.

- Halaby, CN. Panel models for the analysis of change and growth in life course studies. In: Mortimer, JT.; Shanahan, MJ., editors. *Handbook of the Life Course*. New York: Kluwer/Plenum; 2003. p. 503-527.
- Heinz, W. From work trajectories to negotiated careers: The contingent work life course. In: Mortimer, JT.; Shanahan, MJ., editors. *Handbook of the Life Course*. New York: Kluwer/Plenum; 2003. p. 185-204.
- Hitlin S, Elder GH Jr. Agency: An empirical model of an abstract concept. *Advances in Life Course Research*. 2007a; 11:33–67.
- Hitlin S, Elder GH Jr. Time, self, and the curiously abstract concept of agency. *Sociological Theory*. 2007b; 25:170–191.
- Hitlin S, Johnson MK. Reconceptualizing agency within the life course: The power of looking ahead. *American Journal of Sociology*. 2015; 120:1429–1472.
- Jahoda, M. *Employment and Unemployment: A Social-Psychological Analysis*. Cambridge, U.K.: Cambridge University Press; 1982.
- Jekielek, S.; Brown, B. The transition to adulthood: Characteristics of young adults age 18 to 24 in America. Annie E Casey Foundation, the Population Reference Bureau and Child Trends. 2005. Retrieved at: www.prb.org/pdf05/TransitionToAdulthood.pdf, July 25, 2015
- Jerusalem, M.; Mittag, W. Self-efficacy in stressful life transitions. In: Bandura, A., editor. *Self-efficacy in changing societies*. Cambridge: Cambridge University Press; 1997. p. 177-201.
- Johnson MK. Parental financial assistance and young adults' relationships with parents and well-being. *Journal of Marriage and Family*. 2013; 75:713–733. [PubMed: 23935214]
- Johnson MK, Sage RA, Mortimer JT. Work values, early career difficulties, and the U.S. economic recession. *Social Psychology Quarterly*. 2012; 75:242–267. [PubMed: 23503050]
- Jordaan, JP.; Super, DE. The prediction of early adult vocational behavior. In: Ricks, M.; Ricks, DF.; Pollack, M., editors. *Life history research in psychopathology*. University of Minnesota Press; 1974. p. 108-130.
- Julkunen, I. Youth unemployment and marginalization. In: Furlong, A., editor. *Handbook of youth and young adulthood: New perspectives and agendas*. London: Routledge; 2009. p. 157-166.
- Kahn LB. The long-term labor market consequences of graduating from college in a bad economy. *Labour Economics*. 2010; 17:303–316.
- Kalleberg AL. Precarious work, insecure workers: Employment relations in transition. *American Sociological Review*. 2009; 74:1–22.
- Kalleberg, AL. *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s–2000s*. New York: Russell Sage Foundation; 2011.
- Kalleberg AL. Job quality and precarious work: Clarifications, controversies, and challenges. *Work and Occupations*. 2012; 39:427–448.
- Kalleberg A, Reskin BF, Hudson K. Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review*. 2000; 65:256–278.
- Kerckhoff, AC. The transition from school to work. In: Mortimer, JT.; Larson, RW., editors. *The changing adolescent experience: Societal trends and the transition to adulthood*. New York: Cambridge University Press; 2002. p. 52-87.
- Kerckhoff, AC. From student to worker. In: Mortimer, JT.; Shanahan, MJ., editors. *Handbook of the life course*. New York: Kluwer/Plenum; 2003. p. 251-267.
- Kessler R, Turner B, House J. Effects of unemployment on health in a community survey: Main, modifying, and mediating effects. *Journal of Social Issues*. 1988; 44:69–85.
- Kohn, ML.; Schooler, C. *Work and personality: An inquiry into the impact of social stratification*. Norwood, NJ: Ablex; 1983.
- Lam J, Fan W, Moen P. Is insecurity worse for well-being in turbulent times? Mental health in context. *Society and Mental Health*. 2014; 4:55–73. [PubMed: 25436177]
- Lee JC, Mortimer JT. Family socialization, economic self-efficacy, and the attainment of financial independence in early adulthood. *Longitudinal and Life Course Studies*. 2009; 1:45–62. [PubMed: 22025928]

- MacDonald, R. Precarious work: Risk, choice, and poverty traps. In: Furlong, A., editor. *Handbook of youth and young adulthood: New perspectives and agendas*. London: Routledge; 2009. p. 167-175.
- Mainquist, S.; Eichorn, D. Competence in work settings. In: Stern, D.; Eichorn, D., editors. *Adolescence and work: Influences of social structure, labor markets, and culture*. Hillsdale, NJ: Lawrence Erlbaum; 1989. p. 327-367.
- Masten AS, Desjardins CD, McCormick CM, Kuo SI, Long JD. The significance of childhood competence and problems for adult success in work: A developmental cascade analysis. *Development and Psychopathology*. 2010; 22:679–694. [PubMed: 20576187]
- Mirowsy, J.; Ross, CE. *Social causes of psychological distress*. New York: Aldine de Gruyter; 1989.
- Mortimer, JT. Individual Differences as Precursors of Youth Unemployment. In: Petersen, AC.; Mortimer, JT., editors. *Youth unemployment and society*. New York: Cambridge University Press; 1994. p. 172-198.
- Mortimer, JT. *Working and growing up in America*. Cambridge: Harvard University Press; 2003.
- Mortimer JT. The evolution, contributions, and prospects of the Youth Development Study: An investigation in life course social psychology. *Social Psychology Quarterly*. 2012; 75:5–27. [PubMed: 22844173]
- Mortimer JT, Lorence J. Occupational experience and the self-concept: A longitudinal study. *Social Psychology Quarterly*. 1979; 42:307–23.
- Mortimer, JT.; Lam, J.; Lee, SR. Transformation, erosion, or disparity in work identity? Challenges during the contemporary transition to adulthood. In: McLean, K.; Syed, M., editors. *Oxford handbook of identity development*. New York: Oxford University Press; 2015. p. 319-336.
- Mortimer, Jeylan T.; Moen, Phyllis. The Changing Social Construction of Age and the Life Course: Precarious Identity and Enactment of ‘Early’ and ‘Encore’ Adulthood. In: Shanahan, Michael; Mortimer, Jeylan T.; Johnson, Monica K., editors. *Handbook of the Life Course*. Vol. 2. New York: Springer; 2016.
- Mortimer JT, Staff J, Lee JC. Agency and structure in educational attainment and the transition to adulthood. *Advances in Life Course Research*. 2005; 10:131–153.
- Mortimer, JT.; Vuolo, M.; Staff, J. Agentic pathways toward fulfillment in work. In: Keller, AC.; Samuel, R.; Bergman, MM.; Semmer, NK., editors. *Psychological, educational, and sociological perspectives on success and well-being in career development*. Dordrecht, The Netherlands: Springer; 2014. p. 99-126.
- Mortimer, JT.; Zimmer-Gembeck, M. Adolescent paid work and career development. In: Skorikov, V.; Patton, W., editors. *Career development in childhood and adolescence*. Rotterdam, The Netherlands: Sense Publishers; 2007. p. 255-275.
- Mortimer JT, Zimmer-Gembeck M, Holmes M, Shanahan M. The process of occupational decision-making: Patterns during the transition to adulthood. *Journal of Vocational Behavior*. 2002; 61:439–465.
- Neumark D. Youth labor markets in the United States: Shopping around vs. staying put. *Review of Economics and Statistics*. 2002; 84:462–482.
- Newman, K. *Falling from grace: Downward mobility in the age of affluence*. Berkeley, CA: University of California Press; 1999.
- Norris F. In global unemployment, a sea of young faces. *New York Times*. 2010 Apr 17.:B3.
- O’Brien GE, Feather NT. The relative effects of unemployment and the quality of employment on the affect, work values, and personal control of adolescents. *Journal of Occupational Psychology*. 1990; 63:151–165.
- Osgood, DW. Statistical models of life events and criminal behavior. In: Piquero, AR.; Weisburd, D., editors. *The Handbook of Quantitative Criminology*. New York: Springer; 2010. p. 375-96.
- Pavlova MK, Silbereisen RK. Age, cumulative (dis)advantage, and subjective well-being in employed and unemployed Germans: A moderated mediation model. *Journal of Occupational Health Psychology*. 2012; 17:93–104. [PubMed: 22149203]
- Pearlin LI, Lieberman MA, Menaghan EG, Mullan JT. The stress process. *Journal of Health and Social Behavior*. 1981; 22:337–56. [PubMed: 7320473]
- Person AE, Rosenbaum JE. Educational outcomes of labor-market linking and job placement for students at public and private 2-year colleges. *Economics of Education Review*. 2006; 25:412–429.

- Person, AE.; Rosenbaum, JE. Labor market linkages among two-year college faculty and their impact on students' perceptions, effort, and college persistence. In: Neumark, D., editor. Improving school-to-work transitions. New York: Russell Sage; 2007. p. 211-246.
- Person AE, Rosenbaum JE, Deil-Amen R. Colleges, careers, and the institutional structuring of the transition to adulthood. *Advances in Life Course Research*. 2005; 9:125-149.
- Qian, Z. During the great recession, more young adults lived with parents. Census brief prepared for Project US2010. 2012. Retrieved from <http://www.s4.brown.edu/us2010/Data/Report/report08012012.pdf>
- Rabe-Hesketh, Sophia; Skrondal, Anders. Multilevel and Longitudinal Modeling Using Stata, Volume I: Continuous Responses. Third. College Station, TX: Stata Press; 2012.
- Reynolds JR, Baird CL. Is there a downside to shooting for the stars? Unrealized educational expectations and symptoms of depression. *American Sociological Review*. 2010; 75:151-172.
- Reynolds JR, Burge S, Robbins CL, Boyd EM, Harris B. Mastery and the fulfillment of occupational expectations. *Social Psychology Quarterly*. 2007; 70:366-383.
- Rotter JB. Generalized expectancies for internal vs. external control of reinforcement. *Psychological Monographs*. 1966; 80:1-28.
- Salmela-Aro, K. A study demands-resources model of study burnout and engagement. Paper presented at the Society for Longitudinal and Life Course Studies Inaugural Conference; Clare College, Cambridge, UK. 2010.
- Schaufeli WB. Youth unemployment and mental health: Some Dutch findings. *Journal of Adolescence*. 1997; 20:281-292. [PubMed: 9208347]
- Scheer SD, Palkovitz R. Adolescent-to-adult transitions: Social status and cognitive factors. *Sociological Studies of Children*. 1994; 6:125-140.
- Seeman M. On the meaning of alienation. *American Sociological Review*. 1959; 24:783-791.
- Settersten, R. What is the Contemporary Context of Young Adulthood?. Paper presented at the 18th Annual Symposium on Family Issues ("Early Adulthood in a Family Context"), Pennsylvania State University; University Park, PA. 2010.
- Settersten, R.; Ray, B. Not quite adults: Why 20 somethings are choosing a slower path to adulthood and why it's good for everyone. New York: Bantam Books; 2010.
- Shanahan MJ. Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective. *Annual Review of Sociology*. 2000; 26:667-692.
- Shanahan, MJ.; Mortimer, JT. Understanding the positive consequences of psychosocial stress. In: Markovsky, B.; Lovaglia, M.; Simon, R., editors. *Advances in Group Processes*. Vol. 13. Greenwich: JAI Press; 1996. p. 189-2009.
- Silva J. Constructing Adulthood in an Age of Uncertainty. *American Sociological Review*. 2012; 77:505-522.
- Skinner EA, Zimmer-Gembeck MJ, Connell JP. Individual differences and the development of perceived control. *Monographs of the Society for Research in Child Development*. 1998; 63:1-220.
- Staff J, Mortimer JT. Educational and work strategies from adolescence to early adulthood: Consequences for educational attainment. *Social Forces*. 2007; 85:1169-1194.
- Swartz TT. Family capital and the invisible transfer of privilege: Intergenerational support and social class in early adulthood. *New Directions for Child and Adolescent Development*. 2008; 119:11-24.
- Swartz TT. Intergenerational family relations in adulthood: Patterns, variations, and implications in the contemporary United States. *Annual Review of Sociology*. 2009; 35:191-212.
- Swartz TT, Kim M, Uno M, Mortimer JT, O'Brien K. Safety nets and scaffolds: Parental support in the transition to adulthood. *Journal of Marriage and the Family*. 2011; 73:414-429. [PubMed: 21660216]
- Vuolo M, Staff J, Mortimer JT. Weathering the Great Recession: Psychological and behavioral trajectories in the transition from school to work. *Developmental Psychology*. 2012; 48:1759-1773. [PubMed: 22059449]

- Vuolo M, Staff J, Mortimer JT. Adolescent precursors of pathways from school to work. *Journal of Research on Adolescence*. 2014; 24:145–162. [PubMed: 24791132]
- Warr, P. *Work, unemployment, and mental health*. Oxford, UK: Clarendon; 1987.
- Young C. Losing a job: The nonpecuniary cost of unemployment in the United States. *Social Forces*. 2012; 91:609–634.

Table 1

Operationalization of Time-varying Variables.

Variables	Definition and categories	Mean or %	(SD)
<i>Coded annually from wave 8 in 1995 through wave 16 in 2005; N = 3636</i>			
Self-efficacy	Additive index including 7 items (7–28)	22.33	(3.18)
Unemployment months	Unemployment during the 12 months preceding each survey (0–12)	0.51	(1.84)
Parental housing support	Coded 1 if living with parents for one month or more in the preceding 12 months; coded 0 if not	0.19	
Parental economic support	Coded 1 if parents covered any living expenses in the preceding year; coded 0 if none	0.17	
Negative life events	Coded 1 if during previous year any event occurred: breakup, serious injury/illness, jail time, assaulted, beaten up, robbed, or raped, death of spouse/partner; coded 0 if none	0.20	
School attendance	Coded 1 if attended school in any month in the preceding 12 months; coded 0 if not	0.26	
R's highest level of education	1 = high school or less; 2 = technical/vocational school & associate degree; 3 = some college; 4 = Bachelor or above	2.64	(1.15)
R's income	1 = under \$5k; 13 = \$100k or more	6.38	(3.30)
Parenthood	Coded 1 if respondent has a child; coded 0 if not	0.47	
Marital status	Coded 1 if living w/spouse in any month in the preceding 12 months; coded 0 if not	0.43	
Cohabiting	Coded 1 if living w/partner in any month in the 12 months preceding the survey; coded 0 if not	0.20	
<i>N = 3636 person-waves</i>			

Table 2

Operationalization of Time-invariant Variables.

Variables	Definition and categories	Mean or %	(SD)
Parental education (W1)	Parent's highest education: 1 = less than high school; 2 = high school; 3 = some college/junior college; 4 = 4 year college degree; 5 = some graduate school; 6 = master degree; 7 = PhD or professional degree	3.28	(1.51)
Family income (W1)	1 = under \$5k; 13 = \$100k or more	6.16	(2.27)
Race (W1)	1 = white, 0 = other	0.83	
Gender (W1)	1 = male, 0 = female	0.44	
Family of origin structure (W1)	Continuously married parents (reference category)	0.63	
	Stepparent family	0.15	
	Single-parent family	0.17	
	Other family structure	0.05	
Number of siblings (W1)		1.45	(1.16)
Closeness to father during high school	Average of closeness to father index in waves 1 through 4 (each index ranges from 4–16, based on following items:) 1) "How close do you feel to him/her?" (1 = <i>Not close at all</i> to 4 = <i>Extremely close</i>), 2) "When you are faced with personal concerns and decisions, do you talk them over with him/her?" (1 = <i>Never</i> to 4 = <i>Often</i>), 3) "How often does he/she talk over important decisions that he/she has to make with you?" (1= <i>Never</i> to 4 = <i>Often</i>), and 4) "How often does he/she listen to your side of an argument?" (1 = <i>Never</i> to 4 = <i>Often</i>) Indices from the four years were averaged to form two closeness indices, one for father ($\alpha = .86$) and one for mother ($\alpha = .86$).	9.50	(2.71)
Closeness to mother during high school	Average closeness to mother (same as above)	11.55	(2.50)
<i>N</i> = 680			