Cross-Domain Instability in Families with Some College Education: Implications for Supporting Opportunity and Security

By Pamela Winston, Lincoln Groves, and Linda Mellgren U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation

Abstract

This study examined the nature and extent of instability across key domains for children and their families. It used nationally representative data on over 14,000 children between 2008 and 2013. Examining trends by household education, this paper explores the finding from an earlier analysis that instability was pronounced among children in households where the highest level of education was "some college." It looks more closely at the three types of households that made up the Some College group in the dataset we used. These were those in which the highest level of education was an associate's degree (AA); those with credentials from vocational, technical, trade, or business schools (VTTB); and those in which an adult entered college but did not finish with a credential (Some College/No Degree). Key findings are:

- 1. Among children in Some College households, those in AA households were least likely to experience instability.
- 2. Children in VTTB and Some College/No Degree households typically experienced the most instability among children in the Some College group. Children in VTTB and Some College/No Degree households also experienced more instability than those in households with less education (Less Than High School or High School) in several domains.
- 3. In addition, children in VTTB and Some College/No Degree households faced the most *cumulative* instability across multiple domains—more than those in any other education group.
- 4. A range of factors appeared to contribute to these findings, though our methods were not able to establish cause. Further research could provide deeper insights into potential causal factors and help identify the most useful evidence-based approaches to reducing instability.

The views expressed in this paper are those of the authors alone, not positions of the U.S. Department of Health and Human Services.

INTRODUCTION

Many American children experience instability in their family lives. Across a range of academic disciplines, researchers have documented ways that high levels of instability can negatively affect child development, adult well-being, and family self-sufficiency.¹ However, much of this research examines specific areas of instability—such as income volatility or family composition—in isolation. This approach may mask the prevalence and breadth of instability that children face. Our research seeks to remedy this limitation by looking at the instability of children and their households, both within individual domains of family life and cumulatively across them.²

Federal and state policy has the potential to play an important role in stabilizing families and helping them move toward self-sufficiency. However, for it to do so, policymakers must understand the nature and scale of the instability that they experience and the characteristics of children and households most at risk. This analysis contributes to a deeper knowledge of instability by delving into the experiences and characteristics of children in households with some higher education attainment but not a college degree, a group that appears to have unexpected vulnerability to instability.

This paper follows an earlier analysis (Winston, Groves, and Mellgren 2017), which examined children and their households by broad categories of household education. It examined the types and extent of incidents of negative and substantial change that they experienced across domains of family life. An unanticipated finding was that children in "some college" households—those in which the most educated adult pursued higher education beyond a high school diploma but did not attain a four-year degree—experienced disproportionately high levels of instability in multiple areas.

Returns to education appeared not to be linear for these families. Our findings challenged the common expectation that families with higher levels of parental education would have higher levels of wellbeing.³ In recent years, however, research has begun to consider characteristics of families in the Some College education group that might contribute to heightened economic vulnerability and instability. These include program non-completion coupled with student debt burden (Chang Wei and Horn 2013), circumstances of parents participating in postsecondary education that may make completion of college more difficult (Cruse et al. 2018a), and characteristics of certificates or degrees attained, which in some cases may produce few or even negative returns to investment (Bahr 2016, Zhang and Oymak 2018).⁴ This analysis adds to this growing literature.

The analysis presented in this paper examines further the composition of the Some College group, in which the most educated adult in each household had more than a high school diploma but less than a bachelor's degree. In particular, it explores whether specific subgroups within the Some College group—which made up 37 percent of the children in the study—contributed especially to the heightened instability many children in these households experienced. Finally, it considers factors that may contribute to these patterns, potential areas for further research, and considerations for policy and practice, keeping in mind the limits of the descriptive analysis.

STUDY APPROACH

The study used data from the 2008 Survey of Income and Program Participation (SIPP), following 14,144 children and analyzing trends from 2008 to 2013 across households by education level. We documented the extent to which children experienced instability in individual domains—and cumulatively across domains—that could be detrimental to their development. We also gathered perspectives from federal staff in the departments of Health and Human Services, Labor, and Education

and other policy analysts whose work addresses issues related to these issues, and synthesized their observations with findings from other research and our own analysis of study results. These discussions, and a scan of selected literature, were intended to explore potential reasons for the findings and implications for research and policy next steps.

We should stress that this work is descriptive and cannot untangle the complex causal relationships among types of instability. This analysis cannot unravel the relationships among multiple instability shocks, such as how they may "cascade" or interconnect in other ways (for a synthesis of other research addressing these issues, see Hill et al. 2017). Further, changes such as a move or the addition of a household member may ultimately be positive or negative for a child and family, depending on their circumstances, the frequency with which similar changes occur in the child's life, family or community resources, child characteristics, and the presence and capacity of caring adults to buffer potential negative effects (Adams et al. 2016). This study was not able to determine the nature of the changes for individual cases nor address the ultimate impact of instability shocks on outcomes for children and families.

In addition, the analysis used a nationally representative sample drawn at the time of the Great Recession, which affected families in different demographic groups in different ways.⁶ It was also likely to contribute to greater volatility in some measures such as income and employment.

Despite these limitations, our hope is that this work can inform researchers, policymakers, and others concerned with family well-being about a potentially underappreciated issue, highlight potential implications of the findings, and identify future avenues for useful further research to inform policy and practice.

This section briefly describes the research questions, key definitions, characteristics of the study sample, and methods. Additional detail on the study approach is available in the Appendix.

Research Questions

This study addressed three main research questions, analyzed by household education level:

- 1. What proportion of children experienced incidents of instability in each of the key study domains?
- 2. On average how frequently did they experience incidents of instability in each domain?
- 3. What was the extent of cumulative cross-domain instability among the study children?
- 4. What are potential implications of these findings for research, policy, and practice?

Definitions

Family instability involves a complex set of interrelated factors, and a full exploration of them is beyond the scope of this project. Certainly not all change in a child's life is negative, nor does the same change affect all children and families similarly. Some changes, such as an income decrease while a parent completes college or a move to a safer neighborhood, may lead to beneficial outcomes for children. It is beyond the capacity of this study to differentiate when effects of specific changes may in fact be positive.

In addition, instability is only one measure of well-being, and it may interact with other facets of family life in ways we do not fully understand. However, research indicates that high levels of change, even

when some incidents may be positive, can be disruptive and stressful for children and their families and detrimental to child development and family well-being (see, for example, Moore et al. 2000; Sandstrom and Huerta 2013). Further, families themselves indicate that they may prefer stability to mobility—one 2014 survey found that 92 percent of respondents chose financial stability over "moving up the income ladder" (Pew Charitable Trusts 2015a).

We examined instability for children and the households in which they live across eight interconnected domains: full-time household employment, any employment of a worker, earnings, income, children's residence, children's health care coverage status, family composition, and household composition. Table 1 lists the domains and specific measures drawn from the SIPP.⁷

Table 1. Domains of Family Instability and Associated Study Measures

Domain	Outcome Measure
Household employment,	Loss of a full-time worker (defined as moving from 35+
full-time	hours/week of work to less)
Household employment,	Loss of any employment of a worker (defined as changes from
any worker	work of any hourly increment to none)
Household income	Total income for a child's household (including government
	transfers) falls more than 25 percent below the average
	household income during the entire period analyzed for that
	child
Household earnings	Total labor force earnings for a child's household falls more than
	25 percent below the average household earnings during the
	entire period analyzed for that child
Child residential moves	Child moves from one residence to another
Child health care coverage	Loss of child's private or public health care coverage
Family composition	Any change (gain or loss) in the child's biological nuclear family
	within the household
Household composition	Any change in the number of people living in the household

Study Sample

The study followed 14,144 children and their households, a sample representing nearly 75 percent of those who participated in the SIPP panel at its start (the baseline survey). Because the SIPP records data on a monthly basis, these sample children provided roughly 800,000 monthly observations for analysis. Children were categorized by household education level, defined as the educational attainment of the most educated household member at survey baseline. Once children were assigned to household-education categories at baseline, these categories were not changed over the course of the study in order to track children in consistent groups over time.

We divided children into five broad household education groups for comparison:

- Less Than High School
- High School (diploma or GED)
- Some College
- College (bachelor's degree)
- College Plus (master's degree, PhD degree, or other post-bachelor's degree)

The Some College households were then divided into three subgroups:

- Households with associate's degrees (AA)
- Households with certificates or diplomas from vocational, technical, trade, or business schools (VTTB)
- Households with some college education but no certificate or diploma (Some College/No Degree)

Table 2 provides the distribution of children among education groups in the study at the baseline survey.

Table 2. Children in the Study Sample by Household Education

Education Level	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
Less Than High School	1345	9.5	1345	9.5
High School	2388	16.9	3733	26.4
Some College/No Degree	1873	13.2	5606	39.6
VTTB Certificate or Diploma	1932	13.7	7538	53.3
(VTTB)				
Associate's Degree (AA)	1517	10.7	9055	64.0
College	2998	21.2	12053	85.2
College Plus	2091	14.8	14144	100

Source: Survey of Income and Program Participation (SIPP) 2008 Panel.

Note: The sample total for this analysis (14,144) is lower than that for the prior analysis (Winston, Groves, and Mellgren 2017) where all Some College subgroups were examined together (14,767) because the detailed education information was collected during the second wave of SIPP data collection, and not all families that were in the study at baseline participated in this wave.

Methods

The study analyzed children's experience with instability using several approaches. First, we tabulated different types of instability shocks based on household education level, looking at the proportion of study children in each education group who experienced at least one shock in the different study domains over the study period. Because household education may be confounded by various demographic and socioeconomic factors, we also used regression analysis to examine levels of children's instability in order to assess the robustness of our findings. Second, we assessed the average number of incidents of instability that children experienced in each domain. Third, we created an index of cumulative instability across multiple domains and calculated that index for children by household education level. These approaches offer a descriptive understanding of how children in households of different education levels experienced instability. The Appendix provides more information on the study methods.

FINDINGS

Proportion of Children Experiencing Instability, by Domain

In all household education groups, a substantial proportion of children experienced instability at some point during the study period in each of the domains, as Figure 1 shows. But the proportion varied substantially by both domain and household education level.

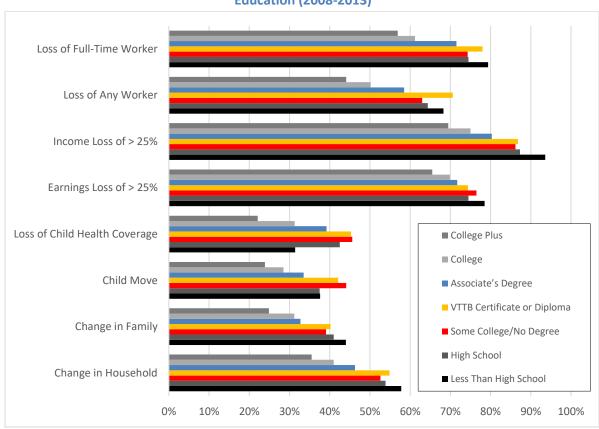


Figure 1. Proportion of Children Experiencing an Incident of Instability, by Domain and Household Education (2008-2013)

Source: Survey of Income and Program Participation (SIPP).

Note: Table A-2 in the Appendix provides exact percentages. N = 14,144.

Overall, children in households with higher educational attainment experienced fewer instability shocks than those with less attainment, with some important exceptions. As expected, we saw relatively low levels of instability among children in the most educated households (College and College Plus), and higher levels of instability overall among children in the least educated households (Less Than High School). For example, 70 percent of children and their households in the College Plus group experienced an income loss of more than 25 percent over the study period, while 94 percent of children and their households in the Less than High School group did so.

However, these patterns were not necessarily the rule—in several domains, children in more educated households experienced as much or more instability than those in less educated households. Child health care coverage stood out in particular, with the highest instability among children in the three subgroups of Some College households and in High School households. This may be because families in the Some College group are less likely to be eligible for public health insurance programs than the least educated (and presumably lowest-income) families, at the same time they may not have employment that provides private health insurance.

Among the Some College subgroups, children in households where the highest educational attainment was an AA experienced the least instability. Their levels of instability were more similar to those of children in College households (bachelor's degree) in several domains (see Figure 1). This is consistent

with other studies that indicate that the monetary gains associated with having an associate's degree are higher and more durable than those associated with certificates or some college credit (Belfield and Bailey 2017). For example, in the Child Move domain, 34 percent of children in AA households experienced a move over the five years, compared with 29 percent of children in College households and 42 percent and 44 percent of children in VTTB and Some College/No Degree households, respectively. Other domains, such as Loss of Income, Earnings Loss, and Change in Family Composition, saw similar patterns.

In contrast, children in households where the highest level of education was a VTTB certificate or diploma experienced the greatest instability among the Some College subgroups in three domains. For Loss of a Full-Time Worker, 78 percent of VTTB children experienced an incident of instability—a higher proportion of children than in AA, Some College/No Degree, and even High School households. For Change in Household Composition, we saw a similar pattern. For Loss of Any Worker, a higher proportion of children in VTTB households experienced instability than any other children, including those in High School and Less Than High School households.

Similarly, children in households where the highest level of education was Some College/No Degree experienced the greatest instability among the overall Some College group in two domains. These were Earnings Loss (higher than that of AA, VTTB, and even High School households), and Child Move (higher than that of AA and VTTB, and High School and Less Than High School households). The degree of residential instability among children in VTTB and Some College/No Degree households is particularly striking and warrants further exploration.

Instability levels were similar for children in Some College/No Degree and VTTB households for the final three domains: Income Loss, Loss of Child Health Care Coverage, and Change in Family Composition.

Finally, because household education is not the only factor potentially influencing the prevalence of family instability (other factors correlated with household education may play a role), we calculated statistical estimates using linear probability models of the relationship between instability and household education, accounting for several key demographic factors. These were children's race-ethnicity and age, the number of people in the household, parents' relationship status, and the region where the household was located. This analysis also compared instability among each of the Some College subgroups to that among children in High School households, allowing us to hold constant the comparisons and look at each Some College subgroup against a single reference group. This analysis confirmed our overall findings. Specific estimates from this analysis and more details on the methodology are in the Appendix.

Average Frequency with Which Children Experienced Instability, By Domain

The previous measures explored the proportion of children that experienced a particular type of instability shock during the five-year period. Here we examine the average number of times children experienced the shock.⁹

Table 3. Average Number of Times Children Experienced Instability, By Education Level (2008-2013)

Education Level	Loss of Full- Time Worker	Loss of Any Worker	Income Loss of > 25%	Earnings Loss of > 25%	Loss of Child Health Care Coverage	Child Move	Change in Family	Change in Household
< High School	1.9	1.3	16.8	11.8	0.4	0.6	0.7	1.3
High School	1.7	1.2	14.0	9.9	0.6	0.6	0.6	1.1
Some College/No Degree	1.6	1.2	13.5	10.0	0.7	0.8	0.7	1.2
VTTB	1.6	1.3	13.6	9.4	0.7	0.8	0.7	1.2
AA	1.5	1.0	11.3	8.8	0.6	0.6	0.5	0.9
College	1.2	0.8	10.3	8.5	0.5	0.4	0.4	0.7
College Plus	1.1	0.7	9.7	8.6	0.3	0.3	0.4	0.6

Source: Survey of Income and Program Participation (SIPP). N = 14,144

As Table 3 shows, in general children in households with the highest educational attainment experienced fewer instability shocks. Consistent with other findings of this study, on average children in the College and College Plus group experienced notably fewer incidents of instability in all domains than did the other children.

Once again, the children in VTTB and Some College/No Degree households experienced somewhat more instability—measured by the average number of incidents—than children in less-educated households in several domains. This was notably the case for health care coverage and child move. VTTB and Some College/No degree children experienced roughly similar amounts of instability to Less Than High School and High School children for several other domains. These included loss of any worker, earnings loss, and change in family and in household.

Children in AA households experienced notably lower amounts of instability in all domains than did children in the four less-educated household subgroups, including the other Some College subgroups. Not surprisingly, they experienced, on average, somewhat more incidents of instability than did children in College and College Plus households.

Cumulative Instability Experienced by Children in Education Subgroups

A central study goal, as noted above, was to explore the prevalence in children's lives of cross-domain cumulative instability—instability in multiple domains experienced during the same period of time. By moving beyond instability in individual areas to multiple areas or domains together, we can better understand the overall magnitude of the volatility children encountered. The index of cumulative instability summarizes the presence of change in five core study domains over the five-year analysis period. These core domains are loss of a full-time worker in the household, loss of household income of at least 25 percent, loss of the child's health care coverage, a move by the child, or a change in

household composition. The index excluded domains that could be considered subsets of the core group. The Appendix describes the index in greater detail.

The index summarizes the *number of study domains* in which a child experienced instability over the five years of the analysis, rather than the number of individual incidents of instability a child experienced. If a child ever experienced at least one instability shock during the study period, he or she scored 1 for that domain (0 if not). We then summed the scores to calculate the index for each child and summarized the overall cumulative index scores by averaging all children's scores by household education level. The maximum score possible across all five domains was 5, representing the highest level of instability, with 0 representing the lowest level of instability, zero domains.

The cumulative instability index approach is similar to that used in the Adverse Childhood Experiences (ACE) study, which links information about the prevalence of adverse childhood experiences to adult health outcomes using a seven-point index that summarizes participants' experiences with different types of adverse events (Felitti et al. 1998; CDC 2016). Obvious limitations of our approach are that the instability domains were treated equally, although they were unlikely to be equal from the child's perspective, and that it cannot capture the intensity of instability within each domain (e.g. one move is treated the same as three). Further, unlike the ACE study, we cannot link children's index scores to their outcomes as adults. But the index gives us a snapshot of the degree to which children in different household groups experienced instability of different types during a single time period.

100 90 80 70 60 Percent of Children 50 40 30 20 10 0 Less Than High High School Some College/No VTTB Certificate or Associate's College College Plus Degree Degree ■ 5 ■ 4 ■ 3 ■ 2 ■ 1 ■ 0 Instability Index Score

Figure 2. Cumulative Instability: Number of Domains Children Experienced, by Education Subgroup (2008-2013)

Source: Survey of Income and Program Participation (SIPP). N = 14,144.

Figure 2 presents the distribution of cumulative instability scores across children in the different household-education levels over the five-year study period. It presents cumulative instability in zero, one, two, three, four, or five domains, going from the blue section at the top of the bars (zero domains—no instability), down to the pale green section at the bottom of the bars (five domains—the greatest level of instability).

As expected, the greatest proportion of children experiencing the *lowest* levels of cumulative instability—zero or one incidents of instability in any domain over the study period (the blue and red sections of each bar)—were in College and College Plus households, furthest to the right in Figure 2. The children in the least-educated households—Less Than High School and High School only, furthest to the left—were least likely to experience zero or one incidents of instability.

Less expected, we found the *highest* levels of cumulative instability (scores of 4 or 5, the purple and light green sections of each bar), among children in the Some College/No Degree and VTTB households. A higher proportion of children in these Some College subgroups experienced the greatest cumulative instability than did children in the least-educated households. In contrast, children in AA, College, and College Plus households were least likely to experience the greatest cumulative instability (scores of 4 or 5).

Figure 2 shows this trend toward greater instability—and then less—as we looked at children in households at increasing education levels. Moving from the Less Than High School group to the VTTB group we see that an *increasing* proportion of children experienced high levels of instability (scores of 4 or 5). While approximately 32 percent of Less Than High School children experienced the highest levels of instability (scores of 4 or 5), about 40 percent of the Some College/No Degree and 43 percent of the VTTB children did. This trend shifts after the VTTB education level; from VTTB to College Plus we see that a *decreasing* proportion of children experienced high levels of instability (index scores of 4 or 5) as education levels increase (from 43 percent for VTTB children to 30 percent for children in AA households to about 16 percent for College Plus).

The cumulative instability patterns we see across the three highest education levels (AA, College, and College Plus) reflect what we would expect from investments in more education—decreasing instability and increasing stability. The patterns across the four lowest education levels (Less Than High School, High School, VTTB, and Some College/No Degree) are counterintuitive, however, reflecting greater investment in education associated with higher rates of cumulative instability.

Finally, the proportion of children who experienced instability in all five domains (scores of 5, the green sections of the bars) during the study period was greatest among the Some College/No Degree group. About 14 percent of children in this group experienced the highest levels of cumulative instability, in contrast to about 6 percent and 8 percent of children in less educated households—those at the Less Than High School and High School levels, respectively.

It is noteworthy that study children in households at all education levels experienced some level of cumulative instability. Even among the groups with the most education (College and College Plus) roughly 90 percent of children experienced at least one shock in at least one instability domain during the analysis period. This is likely to reflect effects of the Recession, though it would be valuable to tease out more carefully the role it played. A better understanding of the circumstances of all the children and households, but particularly those in the VTTB subgroups and below, could offer insights into their apparent disproportionate vulnerability to instability and possibly suggest remedies for it.

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

The relationship between adult education and family well-being is complex, and certainly the characteristics of adults with children who do not complete a four-year college degree are varied, as are the reasons for noncompletion. This study was not designed to establish causal relationships, and a range of factors are likely to have contributed to the relatively high instability it found among Some College households, in particular those in the Some College/No Degree and VTTB subgroups. Further, as the paper's introduction notes, while high levels of instability have—overall—deleterious effects for children, not all incidents of change reflected in our findings necessarily had negative consequences for the children and households in the study.

Nonetheless, given the negative effects that research links to high levels of family instability, and our finding of disproportionate instability among VTTB and Some College families, further examination of the conditions associated with it is warranted. This section includes ideas about potential causes of instability among these families, research options for further exploration, and consideration of policy and practice responses that could better support children and families.

Possible Factors Contributing to Increased Instability for Some College Families

The study findings are likely to reflect complex causal relationships and the interconnectedness of different domains of family instability. As other researchers have suggested (Hill et al. 2017, Morduch and Schneider 2017, among others), many families experience cascading effects of interrelated areas of instability. For some families, incidents of instability may trigger others and even loop back on each other in ways that are difficult to tease out. For example, a parent may lose a job, leading to the loss of private health-care coverage for the family, a shift in housing arrangements, and a change in family or household composition. This instability may, in turn, make it harder for the parent to find new regular employment.

In addition, it is essential to keep in mind that there is likely to be substantial heterogeneity within the three Some College groups the study explores. All VTTB certificates are not created equal nor are all Some College/No degree parents in the same situations for the same reasons. Families may have antecedent characteristics that contribute to instability and make it more likely they will be in the Some College/No Degree or VTTB groups rather than AA or College/College Plus—adults who are in less stable households to begin with may be less likely to complete a degree, in part because of that instability.

This study could not unravel these types of complex situations. But the information we analyzed, including discussions with key observers and related literature, suggests a range of possible factors that could have exacerbated instability among different types of Some College families in our study, particularly those in the VTTB and Some College/No Degree subgroups. These are examples (and certainly not an exhaustive list).

Effects of the Great Recession. The loss of employment and income were among the most visible effects of the Great Recession. In our study, children in VTTB and Some College households had levels of instability similar to those of less educated households for the employment and earnings measures. The Great Recession was likely to have contributed to this as deteriorating economic conditions reached into the middle class (Elsby et al. 2011). Also, other research notes that high levels of income instability also extended beyond the official end of the Great Recession for many families (Morduch and Schneider 2017).

In addition, the downturn in the housing market and the mortgage foreclosure crisis may have contributed to residential instability among the VTTB and Some College/No Degree children, who had the greatest instability in the "child move" measure. Their families may have been more likely than the least-educated households to own homes rather than rent, and to hold subprime mortgages. They may also have been more likely to face foreclosure than more educated households, who would have had greater financial resources and less exposure to the subprime market.

Program Eligibility Requirements. Income eligibility requirements for public programs may contribute to some of our findings. Eligibility phase-outs or "cliffs effects" occur when eligibility for certain meanstested programs ends as family incomes pass specified eligibility thresholds (in the case of cliffs, eligibility may end abruptly) (Macartney and Chien 2019). It is possible that children in the lowest-education (and likely lowest-income) groups may have been able to maintain their eligibility for public health care programs, for example. But those in the more unstable Some College subgroups may have been in households that were neither income eligible for public coverage nor covered by employer-provided health insurance, as would be more likely for households at higher education levels.

Similarly, it is possible that the least-educated households saw incrementally less residential instability than some households in the Some College subgroups in part because they were more likely to receive housing assistance, even if the majority did not.¹⁰

Further, VTTB and Some College/No Degree families may have been more likely to be on the cusp of program eligibility, moving in and out as their employment and earnings fluctuated. This could make them more susceptible to churning, and to leaving programs for reasons such as error or the decision not to reapply due to stigma or complex administrative requirements. This would contribute to income volatility (which included both earnings and transfer payments).

Quality of Post-secondary Credentials. Several studies stress the variability in the quality and economic returns from associates' degrees, certificates, and other credentials. Important dimensions are the credential level, length of study, and subject area. Some certificates in some fields offered positive economic returns (e.g. health and technology), one analysis found, while certificates in fields such as consumer services (e.g. cosmetology) showed negative returns (Bahr 2016). Other studies also found substantial variability by credential subject area, stronger and more durable returns for AA degrees than certificates, and higher returns for men than women, in part because of the subjects they pursue (Belefield and Bailey 2017; Minaya and Scott-Clayton 2017; Carnevale, Rose, and Hanson 2012). Prospective students may be ill-informed about the potential economic benefits to paths they might pursue. This could leave them with debt but also greater susceptibility to job loss and earnings declines, especially if they do not complete their course of study.

Debt. Students in all Some College subgroups could face high levels of debt, but non-completers appear to be particularly vulnerable (Chang Wei and Horn 2013).¹¹ One study found that non-completion rates increased for some students between 2001 and 2009, and that by 2009, the median debt burden for non-completers was 35 percent of annual income. For some families, a VTTB certificate or completion of some credits toward a four-year diploma may not provide sufficient labor market benefits to offset the associated costs, compounding families' unstable circumstances.

Challenges Balancing Family, Education, and Work. Recent research indicates that over half of students at two- and four-year colleges are now "nontraditional"—financially independent, over 24, and parents (Cruse et al. 2018a). Parents who seek post-secondary education face challenges in balancing life and family demands, along with the academic demands of school. Certain groups in particular, such as lower income, minority, and single parents, are likely to pursue post-secondary education with fewer financial

or family resources to buffer them than are traditional students (IWPR 2017). This may contribute to failure to complete degrees, and to household instability in related areas for these families.

Future Research Directions

Further research could help us understand better the families' circumstances and untangle the extent to which these factors, and others, contributed to the relative instability of the families we looked at and the ramifications of this instability.

The Survey of Income and Program Participation. This project was not able to fully exploit the data available in the SIPP. Further analysis of the data in the 2008 panel could shed additional light on contributors to family instability and guide inquiry into more effective policies and practices. Analyzing prior SIPP panels, in particular those begun in 2001 and 2004, could also give a sense of the consistency of the findings over time, and the extent to which the results we found were distinctive to the time around the Great Recession.¹²

The 2008-2013 SIPP panel contains a set of core variables for which monthly data were gathered —this frequency makes it well suited for a study of instability.¹³ It also contains modules with questions about special topics asked one to three times over the course of the five-year panel. While they cannot address month-to-month instability as the core questions can, they can provide useful information about households and, in cases where the module is administered more than once over the panel, some measures of change.¹⁴

Using the rich set of variables found in the SIPP could contribute to further analysis by Some College subgroup to examine program use, churning, and associated instability in income. It could suggest reasons for earnings volatility, and clarify the relative use of housing assistance and home ownership. With information on assets and liabilities, it might be able to suggest whether VTTB and Some College households were disproportionately affected by the foreclosure crisis. This could possibly indicate reasons for children's differential residential instability, as well as related measures such as household composition. By examining educational assistance, debt, and income for these households, we might also be able to clarify the extent of financial burden paired with VTTB credentials or college noncompletion. Further, use of data in a module on professional certifications and educational certificates could be cross-referenced with information on the VTTB households to learn more about their credentials and other circumstances.¹⁵

SIPP data could also provide information on the challenges of balancing family, work, and education, which may contribute to differential rates of family instability among children in VTTB and Some College households. Data on income sources; child care availability, cost and stability; caregiving responsibilities; disability within the household; work schedules; and other job characteristics by educational subgroup (and characteristics such as race and sex) could provide insight into these questions.

Most ambitiously, the multiple years of longitudinal data in the SIPP panels could allow us to understand better the interconnected nature of the areas of instability many families may face, and the possibility that certain changes have disproportionate power to trigger others. For example, a job loss could trigger a cascade of other effects including loss of earnings, a move, and change in household or even family composition. By casting a wider net in exploring potential relationships among variables, it may be possible to map these interconnected effects as they occur over time. If such analysis is possible, it could allow identification of particular triggers of family instability and let policymakers and practitioners target interventions based on these risk triggers.

Finally, further analysis by demographic characteristics such as race-ethnicity, parents' age, and factors such as state, region, and metro versus non-metro location could also be undertaken with the SIPP. This

would sharpen the analysis and could suggest directions for policy and practice. Our work included preliminary analysis of cumulative instability related to race-ethnicity and household education (the Appendix contains a summary of these findings), but the data would support additional analysis.

Other Research Possibilities. Additional research using other sources of information, both quantitative and qualitative, could also be valuable in identifying more clearly the circumstances of the different subgroups of Some College households and pointing toward strategies to support their advancement.

First, the ability to connect levels and types of family instability to child and adult outcomes would be invaluable. Unlike the ACEs study, which linked children's index scores to their adult health outcomes, our cumulative instability index represents only a descriptive measure of instability. By linking cumulative instability levels for families in different household education groups to wellbeing outcomes, we could move beyond simple descriptive research to more predictive approaches.

Further, the cumulative instability index we developed does not differentiate by type of instability or its intensity (how frequently it might occur for an individual child or household). It would be worthwhile to explore the possibility of incorporating intensity into the index, and/or of differentially weighting domains with particular power to trigger instability in other areas. This could lead to a more refined and useful index.

More information about variations in college non-completion, types of certificates and other credentials obtained, and the relationship of credentials to past and current employment—specific to the Some College sub-groups—would improve our understanding of these families' challenges. SIPP data does not allow differentiation between someone who took a few post-high school college credits and someone who dropped out a few credits short of graduation. Without more specific information, we cannot establish how various postsecondary education levels, certificates of different types, or worker skill levels affect instability.

Finally, better qualitative data on reasons for non-completion of college and decisions regarding pursuit of particular kinds of certificates or degrees would be useful. We suspect that the reasons are variable and complex, but without more insight into families' key decision factors, results from purely quantitative analysis will only tell part of the story.

Policy and Practice Considerations

The findings from this study add to the growing attention to the risks associated with college noncompletion and the circumstances of individuals who do not obtain two- or four-year college degrees. The findings should not be read as suggesting that parents not pursue higher education. Post-secondary education can play a critical role in helping families move from economic hardship into self-sufficiency. Rather, the study findings indicate that it may be helpful to focus in a more informed fashion on families pursuing post-secondary education as a path to independence, and in particular certain Some College households and the children living in them. A systematic exploration of promising policy and practice responses is beyond the scope of this analysis. But several possibilities arose from the information we examined.

First, self-sufficiency programs and policies could explore ways to better support low-income parents who are attempting to complete a college degree while raising a family as a way to improve their economic conditions, and to more effectively screen for and scaffold families against the particular risks of instability that they may face (Spaulding et al. 2016, IWPR 2018). By working to help parents complete their college degrees or certificate programs with academic supports and access to child care and other work supports, the pitfalls of noncompletion accompanied by debt could more likely be avoided. Certain types of parents such as single parents may be at particular risk (IWPR 2017). But research also finds

that single mothers with degrees from four-year colleges are much less likely to live in poverty than those with high school only (13 versus 41 percent), suggesting benefits in supporting their persistence (Cruse et al. 2018b). A case management approach that tailors interventions to risk, for example, could help parents stay in programs through completion of a two- or four-year degree or certificate or other credential (see Evans et al. 2018 for one such program).

Second, credentialing by itself may be insufficient. Parents who aspire to invest in their skills and earning potential, and the wellbeing and self-sufficiency of their families, may need more assistance in sorting out what type of credential would be a good investment. In addition, a focus on improved vocational education, and "upskilling" and training outside the expectations of four-year degrees, could benefit some parents (Holzer 2018, Reeves 2018).

Third, families across the lower education levels, but particularly those showing the greatest levels of instability, could benefit from a range of strategies to support their stability and advancement, and mitigate against episodic poverty (Reeves 2018, Morduch and Schneider 2018). Specific approaches are likely to differ for different types of families—what most helps families in the Less Than High School group may vary in some ways from what most helps Some College/No Degree households where the parent has begun a four-year degree but failed to complete it while accruing debt. But development of a range of options, and thoughtful targeting, could support families seeking opportunity and advancement. A careful examination of evidence-based policy and practice options could be a valuable next step in understanding how to most effectively help families facing the greatest instability.

Finally, none of this discussion about Some College families is to suggest that less-educated households are necessarily in preferable circumstances. Less-educated families, particularly those in the Less Than High School group, also appear to experience substantial instability across domains. This group is most likely to be unstable in the loss of a full-time worker, loss of earnings and income, and change in family and household composition domains. Further, it is important to keep in mind that while some families may appear "stable," they nonetheless may live in very difficult, if steady-state, circumstances that are harmful for children and adults and make movement to self-sufficiency more difficult. These "stably poor" also warrant attention from policymakers and practitioners.

CONCLUSION

This study found that children in households in which the most-educated adult has pursued higher education but not completed a two- or four-year degree experienced higher levels of instability than their peers in families with either more or less education. This group included households in which the highest educational attainment was a diploma or certificate from a vocational, technical, trade, or business school (VTTB households) and households in which the most educated adult entered college but did not finish with a diploma (Some College/No Degree). Specifically, the study had three main findings.

First, the analysis showed that children in households in which the most educated adult had an associate's degree (AA households) experienced less instability than children in VTTB or Some College/No Degree households.

Second, children in VTTB and Some College/No Degree households experienced higher levels of instability in certain domains than children in households in which the most educated adult had only a high school degree. For example, children in both groups were more likely to experience instability than children in High School households in the areas of loss of children's health care coverage and children's moves. Children in one or the other of these groups were more likely than children in High School

households to experience instability in the areas of loss of worker and household composition (those in VTTB households) and loss of earnings (those in Some College/No Degree households).

These findings held even after accounting for a range of demographic factors that could complicate the relationship between education and instability. In statistical models controlling for race-ethnicity, household structure, and other factors, children in AA households experienced the least instability within the Some College group, with levels in some cases closer to those of children in College and College Plus households than to those of other Some College children. Children in VTTB and Some College/No Degree households experienced greater instability than children in High School households in the same domains that were found when the analysis did not control for additional demographic factors.

Third, the analysis found that children in Some College/No Degree and VTTB households showed a greater likelihood of experiencing the highest levels of cumulative instability across multiple domains of family life. Children in both groups—Some College/No Degree and VTTB—were found disproportionately at the highest levels of the study's cumulative instability index (experiencing instability in four or five of the five domains that composed the index). These high cumulative instability levels were more common in these groups than among children in any other education group, including Less Than High School and High School.

Finally, the findings, informed by semi-structured conversations and a literature scan, suggest areas for future research and identify policy and practice directions to consider, as the growing evidence supports.

REFERENCES

Adams, Gina, Mary Bogle, Julia B. Isaacs, Heather Sandstrom, Lisa Dubay, Julia Gelatt, and Michael Katz. 2016. "Stabilizing Children's Lives: Insights for Research and Action." Washington, DC: Urban Institute. http://www.urban.org/urban-wire/stabilizing-childrens-lives-insights-research-and-action.

Bahr, Peter R. 2016. "The Earnings of Community College Graduates in California." New York: Teachers College, Columbia University, Center for Analysis of Postsecondary Education and Employment. https://capseecenter.org/the-earnings-of-community-college-graduates-in-california/

Becker, Gary Stanley. 2002. *The Age of Human Capital*. http://media.hoover.org/sites/default/files/documents/0817928928_3.pdf

Belfield, Clive, and Thomas Bailey. 2017. *The Labor Market Returns to Sub-Baccalaureate College: A Review*. Center for Analysis of Postsecondary Education and Employment (CAPSEE) Working Paper. https://ccrc.tc.columbia.edu/publications/labor-market-returns-sub-baccalaureate-college-review.html

Brown, Susan L. 2006. "Family Structure Transitions and Adolescent Well-Being." *Demography*, 43(3): 447-61.

Carnevale, Anthony P., Stephen J. Rose, and Andrew R. Hanson. 2012. "Certificates: Gateway to Gainful Employment and College Degrees." Washington: Georgetown University, Center on Education and the Workforce. https://cew.georgetown.edu/cew-reports/certificates/

Cavanagh, Shannon E., and Aletha C. Huston. 2008. "The Timing of Family Instability and Children's Social Development." *Journal of Marriage and Family*, 70(5): 1258-70.

Centers for Disease Control and Prevention (CDC). 2016. "About the CDC-Kaiser ACE Study." Atlanta: CDC. https://www.cdc.gov/violenceprevention/acestudy/about.html.

Chang Wei, Christina and Laura Horn. 2013. "Federal Student Loan Debt Burden of Noncompleters." *Stats in Brief*. National Center for Education Statistics, Institute of Education Sciences. U.S. Department of Education. https://nces.ed.gov/pubs2013/2013155.pdf

Cherlin, Andrew J. 2014. *Labor's Love Lost: The Rise and Fall of the Working-Class Family in America*. New York: Russell Sage Foundation.

Cherlin, Andrew J. 2010. *The Marriage-Go-Round: The State of Marriage and the Family in America Today*. New York: Vintage Books.

Cooper, Preston. 2017. "College Completion Rates are Still Disappointing." Washington, DC: American Enterprise Institute. http://www.aei.org/publication/college-completion-rates-are-still-disappointing.

Cruse, Lindsey Reichlin, Eleanor Eckerson, and Barbara Gault. 2018a. "Understanding the New College Majority: The Demographic and Financial Characteristics of Independent Students and their Postsecondary Outcomes." Briefing Paper. Washington, DC: Institute for Women's Policy Research. https://iwpr.org/publications/independent-students-new-college-majority/

Cruse, Lindsey Reichlin, Jessica Milli, and Barbara Gault. 2018b. "Single Mothers with College Degrees Much Less Likely to Live in Poverty." *Quick Figures, #Q072*. Washington: Institute for Women's Policy Research. https://iwpr.org/wp-content/uploads/2018/07/Q072 Single-Mothers-College-Degrees-Poverty.pdf

DeRose, Laurie, and W. Bradford Wilcox. 2017. "Ties That Bind: Childrearing in the Age of Cohabitation." Washington, DC: American Enterprise Institute. https://www.aei.org/publication/ties-that-bind/.

Desmond, Matthew, and Kristin L. Perkins. 2016. "Housing and Household Instability." *Urban Affairs Review*, 52(3): 421-36.

http://journals.sagepub.com/doi/abs/10.1177/1078087415589192?journalCode=uarb.

Duncan, Greg J., Kathleen M. Ziol-Guest, and Ariel Kalil. 2010. "Early Childhood Poverty and Adult Attainment, Behavior, and Health." *Child Development*, 81(1): 306-25. http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2009.01396.x/abstract.

Elsby, Michael W.L., Bart Hobijn, Aysegul Sahin, and Robert G. Valletta. 2011. "The Labor Market in the Great Recession—An Update to September 2011." Brookings Papers on Economic Activity. Washington, DC: Brookings Institution. https://www.brookings.edu/wp-content/uploads/2011/09/2011b bpea elsby.pdf.

Evans, Gary W., and Michelle Schamberg. 2009. "Childhood Poverty, Chronic Stress, and Adult Working Memory." *PNAS*, 106(16): 6545-49.

Evans, William, Melissa Kearney, Brendan C. Perry, and James X. Sullivan. 2018. "The Impact of Case Management on Community College Persistence and Graduation in the United States." J-PAL Working Paper. https://www.povertyactionlab.org/evaluation/impact-case-management-community-college-persistence-and-graduation-united-states

Ewart, Stephanie, and Robert Kominski. 2014. "Measuring Alternative Educational Credentials: 2012." United States Census Bureau Report No. P70-138.

https://www.census.gov/library/publications/2014/demo/p70-138.html.

Felitti, Vincent J., Robert F. Anda, Dale Nordenberg, David F. Williamson, Alison M. Spitz, Valerie Edwards, Mary P. Koss, and James S. Marks. 1998. "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults." *American Journal of Preventive Medicine*, 14(4): 245-58. http://www.ajpmonline.org/article/S0749-3797%2898%2900017-8/fulltext.

Gottschalk, Peter, and Robert Moffitt. 2009. "The Rising Instability of U.S. Earnings." *Journal of Economic Perspectives*, 23(4): 3-24. https://www.aeaweb.org/articles?id=10.1257/jep.23.4.3.

Hannagan, Anthony, and Jonathan Morduch. 2016. "Income Gains and Month-to-Month Income Volatility: Household Evidence from the U.S. Financial Diaries." In *Economic Mobility: Research and Ideas on Strengthening Families, Communities and the Economy*. St. Louis: Federal Reserve Bank of St. Louis. https://www.stlouisfed.org/community-development/publications/economic-mobility.

Hill, Heather D., Pamela Morris, Lisa A. Gennetian, Sharon Wolf, and Carly Tubbs. 2013. "The Consequences of Income Instability for Children's Well-Being." *Child Development Perspectives*, 7(2): 85-90.

Hill, Heather D., Jennifer Romich, Marybeth Mattingly, Shomon Shamsuddin, and Hilary Wething. 2017. "An Introduction to Household Economic Instability and Social Policy." *Social Service Review*, 91(3): 371-89

Holzer, Harry J. 2018. "Jobs for the Working Class: Raising Earnings Among Non-College Graduates." Brookings Institution. https://www.brookings.edu/research/jobs-for-the-working-class-raising-earnings-among-non-college-graduates/

Institute for Women's Policy Research (IWPR). 2017. "Single Mothers in College: Growing Enrollment, Financial Challenges, and the Benefits of Attainment." *Briefing Paper #C460*. https://iwpr.org/wp-content/uploads/2017/09/C460 8.21.17 Single-Mothers-Briefing-Paper-FINAL-2.pdf

Institute for Women's Policy Research (IWPR). 2018. "Time Demands of Single Mother College Students and the Role of Child Care in their Postsecondary Success." *Briefing Paper #C468*. https://iwpr.org/publications/single-mothers-college-time-use/

Jelleyman, T., and N. Spencer. 2008. "Residential Mobility in Childhood and Health Outcomes: A Systematic Review." *Journal of Epidemiology and Community Health*, 62(7): 584-92.

Joint Center for Housing Studies of Harvard University. 2017. "America's Rental Housing 2017." Cambridge, MA: Harvard University. http://www.jchs.harvard.edu/americas-rental-housing.

Kalil, Ariel. 2009. "Joblessness, Family Relations, and Children's Development." *Family Matters*, 83: 15-22. https://aifs.gov.au/publications/family-matters/issue-83/joblessness-family-relations-and-childrens-development.

Macartney, Suzanne and Nina Chien. 2019. "Marginal Tax Rates: A Quick Overview." Brief 1. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Retrieved from: https://aspe.hhs.gov/system/files/aspe-files/260661/brief1-intromtrs.pdf

Manning, Wendy D. 2015. "Cohabitation and Child Well-Being." The Future of Children, 25(2): 51-66.

Minaya, Veronica and Judith Scott-Clayton. 2017. "Labor Market Trajectories for Community College Graduates: New Evidence Spanning the Great Recession." New York: Center for Analysis of Postsecondary Education and Employment, Teachers College, Columbia University. https://capseecenter.org/labor-market-trajectories-community-college-graduates/

Moore, Kristin Anderson, Sharon Vandivere, and Jennifer Ehrle. 2000. "Turbulence and Child Well-Being." Washington, DC: Urban Institute. http://urbn.is/2dut7Hp.

Morduch, Jonathan, and Rachel Schneider. 2017. *The Financial Diaries: How American Families Cope in a World of Uncertainty.* Princeton: Princeton University Press.

National Research Council and Institute of Medicine. 2010. "Student Mobility: Exploring the Impact of Frequent Moves on Achievement: Summary of a Workshop." Washington, DC: National Academies Press. https://www.nap.edu/catalog/12853/student-mobility-exploring-the-impacts-of-frequent-moves-on-achievement.

Pew Charitable Trusts. 2015a. "Americans' Financial Security Perception and Reality." Issue Brief. Retrieved from: https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/02/americans-financial-security-perceptions-and-reality

Pew Charitable Trusts. 2015b. "The Precarious State of Family Balance Sheets." Washington, DC: Pew. http://www.pewtrusts.org/en/research-and-analysis/reports/2015/01/the-precarious-state-of-family-balance-sheets.

Pfeffer, Fabian T. 2018. "Growing Wealth Gaps in Education." *Demography*. Published online March 27. https://doi.org/10.1007/s13524-018-0666-7.

Psacharopoulos, George, and Harry Anthony Patrinos. 2004. "Returns to Investment in Education: A Further Update." *Education Economics*, 12(2): 111-34.

Reeves, Richard V. "Where's the Glue? Policies to Close the Family Gap." Brookings Institution. Retrieved from: https://ifstudies.org/blog/wheres-the-glue-policies-to-close-the-family-gap.

Sandstrom, Heather, and Sandra Huerta. 2013. "The Negative Effects of Instability on Child Development: A Research Synthesis." Washington, DC: Urban Institute. http://www.urban.org/research/publication/negative-effects-instability-child-development-research-synthesis.

Shaefer, H. Luke, Adrienne Lapidos, Reid Wilson, and Sandra Danziger, "Association of Income and Adversity in Childhood with Adult Health and Well-Being," *Social Service Review* 92, no. 1 (March 2018): 69-92.

Shapiro, D., A. Dundar, F. Huie, P.K. Wakhungu, X. Yuan, A. Nathan, and A. Bhimdiwali. 2017. *Completing College: A National View of Student Completion Rates – Fall 2011 Cohort* (Signature Report No. 14). Herndon, VA: National Student Clearinghouse Research Center. https://nscresearchcenter.org/signaturereport14/.

Shonkoff, Jack P., Andrew S. Garner, and the Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent Care; and Section on Developmental

and Behavioral Pediatrics. 2012. "The Lifelong Effects of Early Childhood Adversity and Toxic Stress." *Pediatrics*, 129(1): e232-e246.

http://pediatrics.aappublications.org/content/pediatrics/early/2011/12/21/peds.2011-2663.full.pdf.

Spaulding, Shayne, Teresa Derrick-Mills, and Thomas Callan. 2016. "Supporting Parents Who Work and Go to School: A Portrait of Low-Income Students Who Are Employed." Washington: The Urban Institute. https://www.urban.org/sites/default/files/publication/76796/2000575-supporting-parents-who-work-and-go-to-school-a-portrait-of-low-income-students-who-are-employed.pdf

Stevens, Ann Huff, and Jessamyn Schaller. 2011. "Short-Run Effects of Parental Job Loss on Children's Academic Achievement." *Economics of Education Review*, 30(2): 289-99.

U.S. Bureau of Labor Statistics, U.S. Department of Labor. 2015. "The Economics Daily: Unemployment Rates by Educational Attainment in April 2015." https://www.bls.gov/opub/ted/2015/unemployment-rates-by-educational-attainment-in-april-2015.htm

U.S. Bureau of Labor Statistics, U.S. Department of Labor. 2012. "Spotlight on Statistics, The Recession of 2007–2009." https://www.bls.gov/spotlight/2012/recession.

Western, Bruce, Deirdre Bloome, Benjamin Sosnaud, and Laura M. Tach. 2016. "Trends in Income Insecurity among U.S. Children, 1984–2010." *Demography*, 53(2): 419-47.

Winston, Pamela, Lincoln Groves, and Linda Mellgren. 2017. "Exploring Cross-Domain Instability in Families with Children." ASPE Research Brief. Office of the Assistant Secretary for Planning and Evaluation. U.S. Department of Health and Human Services.

https://aspe.hhs.gov/system/files/pdf/258221/FamilyInstabilityResearchBrief.pdf

Wolf, Sharon, Lisa A. Gennetian, Pamela A. Morris, and Heather D. Hill. 2014. "Patterns of Income Instability among Low- and Middle-Income Households with Children." *Family Relations*, 63(3): 397-410.

Zhang, Jizhi, and Ceylan Oymak. 2018. "Participants in Subbaccalaureate Occupational Education: 2012." *Stats in Brief*. National Center for Education Statistics, Institute of Education Sciences. U.S. Department of Education. https://nces.ed.gov/pubs2018/2018149.pdf

ENDNOTES

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¹ As noted in an earlier ASPE publication on family instability (Winston, Groves, and Mellgren, 2017), many studies explore specific though sometimes interconnected dimensions of instability. They include (but are not limited to) Hannagan and Morduch 2016, Gottschalk and Moffitt 2009, Morduch and Schneider 2017, Hill et al. 2013, Hill et al. 2017, Western et al. 2016, Wolf et al. 2014, and Pew Charitable Trusts 2015 (income and earnings); Stevens and Schaller 2011 and Kalil 2009 (employment); Desmond and Perkins 2016, Jelleyman and Spencer 2008, and National Research Council and Institute of Medicine 2010 (housing and residential stability); Manning 2015, Cherlin 2010 and 2014, DeRose and Wilcox 2017, Cavanagh and Huston 2008, and Brown 2006 (family and household composition); and Evans and Schamberg 2009, Shonkoff et al. 2012, and Duncan et al. 2010 (developmental implications of chronic stress, poverty, and instability).

² One exception is work being done by Yoonsook Ha, of Boston University, and colleagues, e.g. "Patterns of Multiple Instability among Low-income Families with Children," a paper presented at the 2017 annual meeting of the Association of Public Policy and Management. Their analysis also uses the SIPP.

³ For example, see Psacharopoulos and Patrinos (2004), as well as work by human capital theorists such as Becker (2002).

- 9 Some of the measures–such as income and earnings—were likely to have been more volatile because of the Great Recession. Further, some events such as a residential move were much less common than income-related changes. Finally, the frequency of some measures may be affected by idiosyncracies of the data. For example, the number of earnings "shocks" a household experiences could be affected by the frequency of paycheck distribution, contributing to the number of drops in earnings a household would see in a given month. (See Winston, Groves, and Mellgren 2017 [Appendix A], and Morduch and Schneider 2017 for a discussion of these issues.)
- ¹⁰ Even though most income-eligible families do not receive rental housing assistance, a nontrivial proportion do, estimated at about a quarter (Joint Center for Housing Studies of Harvard University 2017).
- ¹¹ Of course, adults in the College and College Plus groups could also face high levels of debt, but generally would be expected to have greater earnings with which to pay it off.
- ¹² A redesign of future SIPP panels beginning in 2014 may make them less useful for this type of analysis, in part because monthly data will be collected annually rather than every four months as was the case for prior panels. See http://www.census.gov/programs-survey/sipp/about/sipp-introduction-history.html.
- ¹³ In addition to the measures used for this analysis, this information includes: data about the types of work done by adults in households, characteristics of employers, and sources of income such as Social Security, disability, unemployment insurance, child support payments, and the Supplemental Nutrition Assistance Program (or food stamps) and other nutrition program benefits. It also asks about rent subsidies or public housing assistance, receipt of a range of educational assistance programs such as Pell Grants and National Direct Student Loans, and financial help from family or friends. Further, questions address reasons for receiving government transfer income and other aspects of program participation. For more information about the SIPP variables, see the SIPP Users' Guide: https://www2.census.gov/programs-surveys/sipp/guidance/SIPP 2008 USERS Guide Chapter3.pdf. ¹⁴Potentially useful topical modules include: child wellbeing, adult wellbeing, employment history, education and training history, assets and liabilities, child care, work schedules, household relationships, poverty, disability, medical expenses, taxes, and professional certifications and educational certificates (these questions were administered only once, toward the end of the 2008 panel). For more information about the topical modules, see the SIPP Users' Guide: https://www2.census.gov/programs-

surveys/sipp/guidance/SIPP 2008 USERS Guide Chapter3.pdf

⁴ Cooper (2017), Shapiro et al. (2017), and Pfeffer (2018) also discuss recent college noncompletion patterns and their implications, noting the heterogeneity of noncompleters.

⁵ For more information on the SIPP, including technical documentation, see https://www.census.gov/sipp/.

⁶ The recession from 2007 to 2009 undoubtedly contributed to the rates of economic instability during the analysis period, and research indicates that it affected groups of Americans differently (U.S. Bureau of Labor Statistics 2015; 2012). For example, unemployment increased across all major education groups from 2007 through 2009, although workers with less than a high school degree saw the greatest increases. (Also see Elsby et al. 2013.) ⁷ This is not a comprehensive list of all the important areas of family instability. Domains such as education, health and mental health status, disability, and justice involvement, among others, are also critical and are often closely related to those we studied. However, the SIPP contains longitudinal data on the dimensions we explored, not these others. We recognize that the eight areas of instability in the study could be defined as representing four domains (i.e., economics, health care coverage, residence, and household) with four or more subdomains (employment, income, and earnings as subsets of economics, and family as a subset of household). For the sake of simplicity, however, we refer to each of the areas as a domain.

⁸ Children in households that completed fewer than half the survey waves (eight or fewer) and those who would have aged out of childhood over the course of the study (those older than age 12 at baseline) were excluded from

¹⁵ Ewart and Kominski (2014) examined the data in the professional certifications and educational certificates module of the 2008 SIPP. They looked at certificates, licenses, and educational certificates across "regular education" levels ranging from less than high school to doctorate degree, finding differing earnings premiums from these alternative credentials. This work is not directly comparable to ours, but it appears that further analysis of the data in this module could provide more information about the families in our household-education subgroups. ¹⁶ See Shaefer et al. 2018 for an approach that links ACEs, childhood income, and adult outcomes, though not specifically instability measures.