ASPE RESEARCH BRIEF
OFFICE OF THE ASSISTANT SECRETARY FOR PLANNING AND EVALUATION
OFFICE OF HUMAN SERVICES POLICY - U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

This study examined the nature and extent of instability across key domains for children and their families, as well as the characteristics of children most likely to experience instability. It used nationally representative data on over 14,000 children between 2008 and 2013 and is the second ASPE brief to address cross-domain family instability. Examining trends by household education, this brief explores the finding from an earlier brief 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 in the Some College group—those with associate's degrees (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 experienced the least instability.*
2. *Children in VTTB and Some College/No Degree households typically experienced the most instability among children in the Some College group.*
3. *Children in VTTB and Some College/No Degree households also experienced more instability than those in households with less education. In addition, children in Some College/No Degree households faced the most cumulative instability across multiple domains—more than those in any other education group.*

CROSS-DOMAIN INSTABILITY IN FAMILIES WITH SOME COLLEGE EDUCATION

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 shortcoming by looking at children's instability both within individual domains of family life and cumulatively across them.[2]

Federal and state policy can play an important role in stabilizing families. However, for it to do so, policymakers must clearly understand the nature and scale of the instability that children experience and the characteristics of children and households most at risk. This brief 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.

This brief follows an earlier brief, "Exploring Cross-Domain Instability in Families with Children," which presented findings by broad categories of household education, analyzing the types and extent of "shocks," or incidents of negative and substantial change, across domains of family life. An unexpected finding was that children in "some college" households—

ABOUT THIS RESEARCH BRIEF

This is the second ASPE brief that addresses cross-domain instability among children in the U.S. It was written by Lincoln H. Groves (ASPE, Institute for Research on Poverty, University of Wisconsin–Madison), Pamela Winston (ASPE, Office of Human Services Policy), and Linda Mellgren (consultant).

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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. This finding challenged the expectation that families would see increased well-being as parental education level increased.[3]

The analysis presented in this brief seeks to understand 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.[4] Further, it explores whether specific subgroups within the Some College group—which made up 37 percent of the children in the study—contributed in particular to the heightened instability many children in these households experienced.[5] Three main findings stand out.

First, among children in Some College households, those in households in which the highest education level was an associate's degree (AA) experienced the least instability. This finding is consistent with the expectation that investments in education result in improved life circumstances. Conversely, children in households in which the highest level of education was a diploma or certificate from a vocational, technical, trade, or business school (VTTB) and households in which the most educated adult entered college but did not finish with a diploma or certificate (Some College/No Degree) experienced the most instability among children in Some College households.

Second, children in VTTB and Some College/No Degree households in fact experienced greater instability than children in households with only a high school degree. These results held even after accounting for other demographic and socioeconomic characteristics of families.

Finally, children in Some College/No Degree households experienced a higher level of instability in multiple areas during the same time period (what we call cumulative cross-domain instability) than children in any other education group.

While our results show that in general, children in households with more education live more stable lives, the relatively high instability among Some College families points to the complexity of how education relates to stability. Our analysis was not designed to identify a causal relationship, and our findings have different potential explanations. Regardless of the precise causes, however, these children and households appear to have distinctive vulnerabilities that may require distinctive policy responses to address their needs.

APPROACH

The study used data from the 2008 Survey of Income and Program Participation (SIPP), following more than 14,000 children and analyzing trends from 2008 to 2013 across households by education level.[6] We documented the extent to which children experienced instability in individual domains—and cumulatively across domains—that could be detrimental to their development.

This work is descriptive and cannot untangle the complex causal relationships among types of instability.[7] Further, it is based on a nationally representative sample drawn at the time of the Great Recession, which affected families in different demographic groups in different ways.[8] It does not address the ultimate impact of instability shocks on children and families. Despite these limitations, it can inform policymakers and others concerned with family self-sufficiency and well-being, and identify future avenues for useful research.

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 Appendices A and B.

Research Questions

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

1. What proportion of children experienced instability shocks in each of the key study domains?
2. What was the extent of cumulative cross-domain instability among the study children?
3. What was the prevalence among these children of instability in each of the key study domains, relative to children in households with less education (high school only), controlling for key demographic factors (e.g., race-ethnicity, child age, region, and household type)?

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. Further, 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).

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.[9] Table 1 lists the domains and specific measures drawn from the SIPP.[10]

Table 1. Domains of Family Instability and Associated Study Measures

Domain	Outcome Measure
Household employment, full-time	Loss of a full-time worker (defined as moving from 35+ hours/week of work to less)
Household employment, any worker	Loss of any employment of a worker (defined as changes from 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).[11] 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 (the educational attainment of the most educated

household member at survey baseline). Table B-1 in Appendix B provides frequencies and percentages for the sample children by education category.

We divided children into five overarching 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)

At the start of our study, approximately 10 percent of the children lived in Less Than High School households; 17 percent in High School households; 37 percent in Some College households (including 13 percent in Some College/No Degree households, 13 percent in VTTB households, and 11 percent in AA households); 21 percent in College households; and 15 percent in College Plus households.

Methods

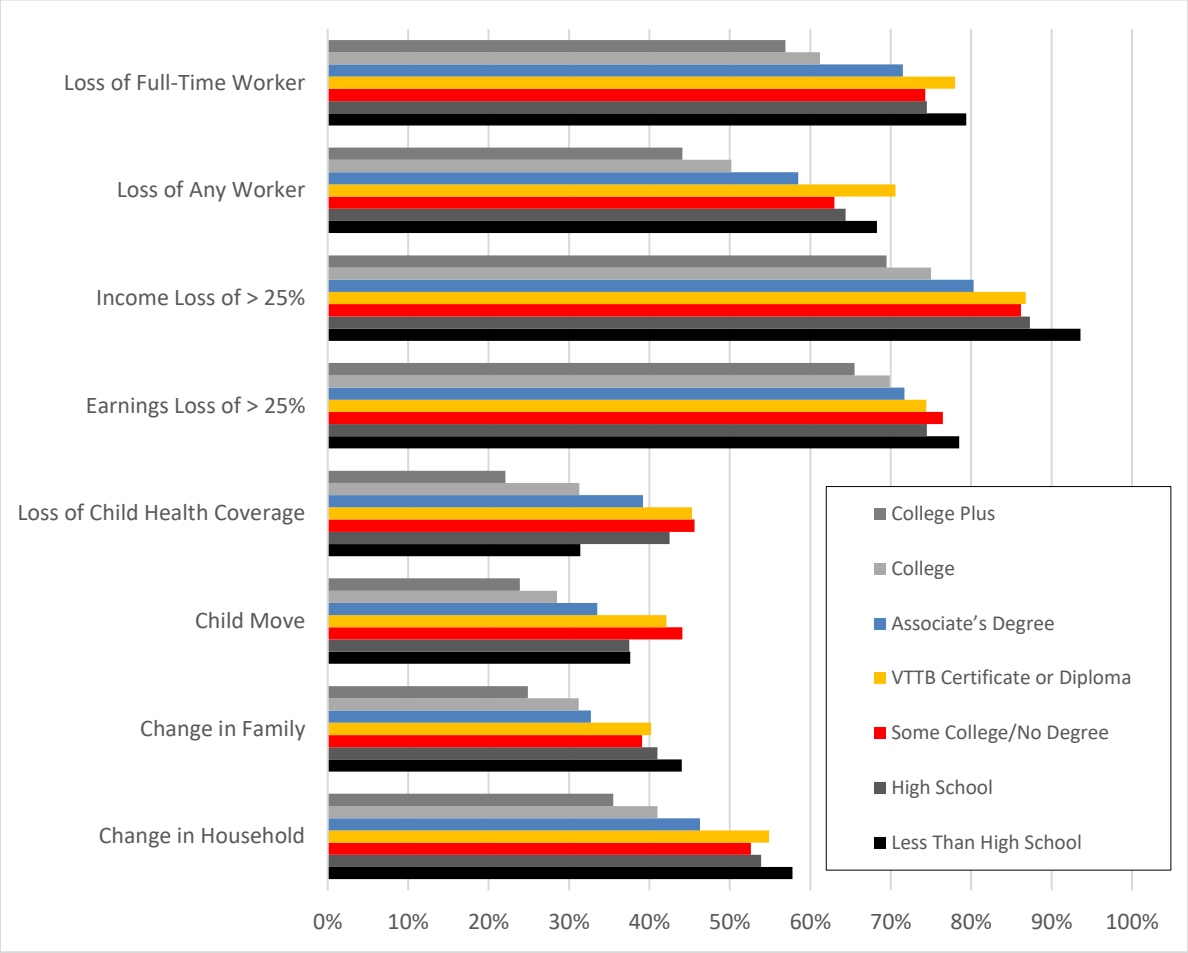
The study analyzed children's experience with instability using different approaches. First, we tabulated different types of instability shocks based on household education level, looking at the proportion of study children in each education group who experienced at least one shock in the different study domains over the study period. Second, we created an index of cumulative instability across multiple domains and calculated that index for children by household education level. These two approaches provide a descriptive understanding of how children in households of different education levels experienced instability to different degrees. However, household education is confounded by various demographic and socioeconomic factors, such as age, race/ethnicity, and income. Therefore, to assess the robustness of our findings, we also used regression analysis to examine levels of children's instability in each domain by household education level, accounting for a range of key demographic and socioeconomic characteristics of families. Appendix B provides more information on the study methods.

FINDINGS

Experience of Instability Shocks

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 a Shock, by Domain and Household Education (2008-2013)



Source: Survey of Income and Program Participation (SIPP).
Note: Table B-2 in Appendix B provides exact percentages. *N* = 14,144.

Overall, children in households with higher educational attainment experienced fewer instability shocks, with some important exceptions.

As expected, overall we saw relatively high levels of instability among children in less educated households (Less Than High School) and lower levels of instability among children in the most educated households (College and College Plus). However, as Figure 1 illustrates, there were exceptions. Child health care coverage stood out in particular, with the highest instability among children in High School households and the three subgroups of Some College households. This may be because these families are less likely to be eligible for public health insurance programs for low-income families or to have jobs providing insurance.

Across the three Some College subgroups, children in households with associate's degrees experienced the lowest rates of instability in all study domains.

Across the Some College subgroups, children in households where the highest educational attainment was an associate's degree experienced the least instability, and 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 show that the monetary gains associated with having an associate's

degree are higher 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 an incident 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.

Children in VTTB households had the *highest* rates of instability among the Some College group in the Loss of Worker domains and the Change in Household Composition domain.

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 a shock—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.

Children in Some College/No Degree households had the highest rates of instability among the Some College group in the Earnings Loss and Child Move domains.

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, VTTB, 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.

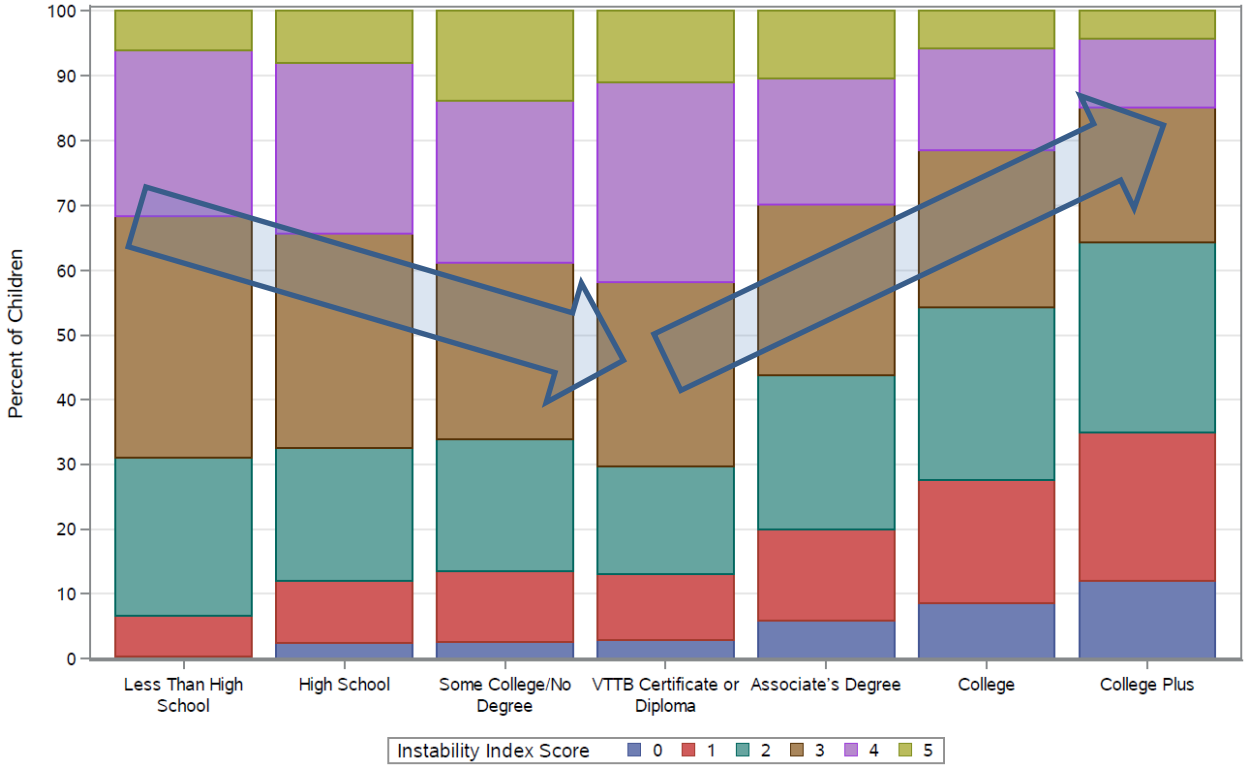
Instability levels were similar for children in Some College/No Degree and VTTB households for the final three domains: Income Loss, Loss of Child Health Care Coverage (though the level here was higher than for High School and Less Than High School households), and Change in Family Composition.

Cumulative Instability

A central study goal was to explore the prevalence of cross-domain cumulative instability in children's lives—instability in multiple domains experienced during the same time period. By moving beyond instability in individual areas to instability in multiple areas or domains together, we can better understand the overall magnitude of the volatility children encounter. The index of cumulative instability summarizes the presence of at least some change in five core study domains over the five-year analysis period. These 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.[12]

The index summarizes the *number of study domains* in which a child experienced shocks over the five years of the analysis, rather than the number of individual shocks a child experienced. If a child ever experienced at least one instability incident or shock during the study period, the child scored 1 for that domain (0 if not). These scores were summed to calculate the index for a single child. We then summarized the overall cumulative index scores by averaging all children's scores by household education level (thus the maximum score possible across all five domains is 5). The 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 summarized 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.

Figure 2. Cumulative Instability Index Distribution, by Education Level (2008-2013)



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

Figure 2 presents the distribution of cumulative instability index scores across the education groups. These scores show how different levels of cumulative instability (instability in one, two, three, four, or five study domains over the five-year study period) were distributed among children at different education levels.

As expected, the greatest proportions of children experiencing no incidents of instability in any domain over the study period (the 0 index score) were in the College and College Plus households. Otherwise, the findings were more nuanced, with instability in all groups, but relatively high levels of cumulative instability (higher index numbers) found especially among children in the Some College/No Degree and VTTB households.

In fact, as we went up education level in the lower grouping of categories (Less Than High School through VTTB), a greater proportion of children experienced *higher* levels of cumulative instability(the light green and purple sections of the bars). In contrast, as we went up education level in the higher grouping of categories (AA through College Plus), a greater proportion of children experienced *lower* levels of cumulative instability (the blue, red, and darker green sections of the bar). The blue arrows in Figure 2 show this trend toward greater—and then less—instability at higher education levels. The arrow from the Less Than High School group to the VTTB group shows that an *increasing* proportion of children experienced higher levels of instability (index scores of 4 or 5) as education levels went up. The trend shifts at VTTB, as shown by the upward arrow, indicating that a *decreasing* proportion of children experienced higher levels of instability as education levels went up (and, conversely, an increasing proportion experienced lower levels of instability, indicated by index scores of 0 to 3).

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. In contrast, about 10 percent (8.9 percent of children in College households and 12.1 percent of children in College Plus households) experienced no instability.

As expected, at higher household education levels (AA and higher), children experienced less instability as the education level increased.

The distribution of instability index scores shifted toward less instability at higher household education levels (as the blue arrow on the right side of Figure 2 illustrates). Among households with at least AA-level education, fewer children experienced high degrees of instability at each successively higher education level. This finding is consistent with the expectation of less instability as household education rises.

In contrast, in less educated households, children experienced *more* instability as the education level increased.

Unexpectedly, the distribution of instability index scores shifted in the opposite direction—toward *more* instability—at lower household education levels (as the blue arrow on the left side of Figure 2 illustrates). Among households at the VTTB and lower education levels, children experienced greater instability at each successively higher level of education. This finding countered the expectation of less instability as household education rises.

Children in Some College/No Degree households had the highest proportion of children with the greatest cumulative instability—greater even than among less educated households.

Finally, the proportion of children who experienced instability in all five domains of the instability index during the study period was greatest among the Some College/No Degree group, as Figure 2 also illustrates. About 14 percent of children in this group experienced the highest levels of cumulative instability during the study. In contrast, about 6 percent and 8 percent of children in less educated households—those at the Less Than High School and High School levels, respectively—experienced this level of cumulative instability. A better understanding of the circumstances of these children and households is important, given their apparent disproportionate vulnerability to instability.

Prevalence of Instability by Domain, Accounting for Other Factors

Household education is not the only factor potentially influencing the prevalence of family instability. Other factors, such as race-ethnicity and family structure, may also affect the relationship between education and instability to the extent that they are correlated with household education.

This section presents results from statistical estimates (using linear probability models) of the relationship between instability and household education, after accounting for children's race-ethnicity and age, the number of people in the household, parents' relationship status, and the region where the household was located. Further, this analysis compared instability among each of the Some College subgroups to that among children in High School households. This method allowed us to hold constant the comparisons and look at each Some College subgroup against a single reference group, the High School group. Specific estimates from this analysis and more details on the methodology can be found in Appendix B. Overall, this analysis confirmed the findings presented above regarding instability shocks.

Children in College and College Plus households experienced consistently lower levels of instability than other children, in keeping with the earlier findings.

This finding held across all domains. The only exception was in the domain of children's health care coverage, where children in Less Than High School households also experienced relatively low instability. As noted above, this finding is likely attributable to the role of public health insurance programs.

Children in households with an associate's degree experienced lower levels of instability in several domains relative to children in High School households, consistent with expected benefits of higher education.

Children in AA households had lower instability in several domains, relative to children living in households with only a high school degree. The most notable of these domains were Loss of Household Income, Change in Family Composition, and Change in Household Composition.

In contrast, children in VTTB and Some College/No Degree households saw *higher* levels of instability relative to children in High School households.

Children in VTTB households experienced higher instability relative to children in High School households—and more than children in other groups—in several domains, even when key demographic and household characteristics were held constant. These domains included Loss of a Full-Time Worker, Loss of Any Worker, and Change in Household Composition.

Children in Some College/No Degree households experienced higher instability relative to children in High School households in three other domains. These domains were Earnings Loss, Loss of Child's Health Care Coverage, and Child Move.

CONCLUSION

This study finds that children in households in which the most educated adult has pursued higher education but not completed a four- or two-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 has 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.

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 unpack causal relationships, and a range of reasons may lead to higher instability among households at this education level. It is plausible that adults who are in less stable households to begin with are less likely to finish a degree, in part because of that instability. For example, economic insecurity may lead a household member to stop pursuing a degree to find employment. The complex relationship among types of instability may also be a factor. A family member may lose a job, for instance, leading to a shift in housing arrangements that makes the completion of a degree more difficult.

It may also be the case that the pursuit of a degree contributes to higher levels of family instability. For example, the costs of postsecondary education may increase household debt, which could lead to difficulty in paying for housing and therefore to either a move or the addition of new members to a household. A VTTB certificate or completion of a few years toward a four-year diploma may not provide sufficient labor market benefits to offset the associated costs, compounding the situation.

Other explanations may also play a role. Other circumstances could affect both college completion and the instability measures identified in this study. Health issues or disability, for instance, may contribute to unstable conditions. Research into causal relationships would make a valuable contribution to better understanding the specific circumstances of these families and the children living in them, and may provide direction for policy action.

The findings from this study add to the growing attention to college noncompletion. They should not be read as discouraging parents' pursuit of higher education. Rather, the study findings suggest the need for federal and state self-sufficiency policies to focus on certain Some College households and the children living in them in a more refined fashion. Self-sufficiency programs and policies could, for example, explore ways to better support parents who are attempting to complete a college degree while raising a family, and to more effectively screen for and scaffold families against the particular risks of instability that they may face. A systematic exploration of possible policy and practice responses to these findings is beyond the scope of this analysis but could be a valuable next step in understanding how to help vulnerable families pave the way to greater self-sufficiency.

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ENDNOTES

[1] As an earlier ASPE brief on family instability notes, 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] Generally, these domains are household employment, income, and earnings; children's residential moves; children's health insurance; and family and household composition. Table 1 provides more detail.

[3] See Psacharopoulos and Patrinos (2004), as well as work by human capital theorists, such as Schultz (1961), Becker and Tomes (1986), and Becker (2002).

[4] Cooper (2017), Shapiro et al. (2017), and Pfeffer (2018) provide a discussion of recent college noncompletion patterns and their implications, noting the heterogeneity of noncompleters.
[5] See Ewart and Kominski (2014) for an analysis of holders of alternative educational credentials.
[6] For more information on the SIPP, including technical documentation, see https://www.census.gov/sipp/.
[7] This analysis cannot unravel the causal 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. Relationships among domains are likely to be complex and interconnected, with causal relationships working in multiple directions. 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 such as age and temperament, and the presence and capacity of caring adults to buffer potential negative effects (Adams et al. 2016).
[8] 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.
[9] This brief added "loss of any worker" (defined as change from work of any hourly increment to none) to the economic instability measures. It therefore reports on eight measures, rather than the seven used in the first brief.
[10] 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.
[11] 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 the analysis. Further, the number of children included in this brief's analysis (14,144) is lower than the number in the prior brief's analysis (14,767) because data on household education subgroups (the three components of the broader Some College group) were not collected until the second wave of the SIPP. Therefore, children in households that did not participate in wave 2 were excluded from this analysis.
[12] The index excluded domains that were subsets of others we explored in the single-domain analysis. The earlier ASPE brief on family instability describes the index in greater detail.