Early Trouble, Long-Term Consequences: Does Family Instability Keep People from Doctors?*

Ethan J. Evans, *University of California*
Bill McCarthy, *University of California*
Cecilia Benoit, *University of Victoria*
Mikael Jansson, *University of Victoria*

Objectives. This study assesses the impact of family instability during childhood on adult intentions to seek healthcare when depressed or in pain, adding to research on the long-term consequences of family instability and on care seeking. *Methods.* Logistic regression is used with survey data collected from nearly 600 service workers in Sacramento, CA and Victoria, British Columbia. *Results.* Adults who experienced high levels of familial disruption, defined as five or more changes, during childhood are less likely to say that they would seek healthcare when experiencing mental and physical distress. This pattern is independent of a number of demographic attributes, mediating mechanisms, mental and physical health status, and health-care access. *Conclusions.* Family instability in childhood has long-term consequences for health-care seeking intentions. This instability within a primary social institution, the family, may shake the very foundation upon which trust in other institutions is formed.

Family structures today are in flux—delayed marriage and childbearing, divorce, adoption, cohabitation, lone parenthood, remarriage are increasingly common—and many children experience a number of household changes before they leave home to pursue adult roles (Brown et al., 2015; Teachman et al., 2013). These changes in family structures affect childhood and adolescent development and well-being (Bzostek and Beck, 2011; Craigie et al., 2012; Fomby and Cherlin, 2007; Magnuson and Berger, 2009) and may be detrimental to adolescent and adult physical and mental health outcomes (Amato and Sobolewksi, 2001; Gähler and Garriga, 2013).

Research on life course consequences of changes in family structure has, however, mostly ignored its implications for health-care seeking. According to the life course approach (Elder et al., 2003; George, 1993) early conditions and events have long-term effects on people's later lives, including their health. As Link and Phelan (1995) note, theorizing about health requires highlighting how distal factors put people "at risk of being at risk" (also see Avison, 2010; Mayer, 2009). Extending this insight, we argue that the trajectories that start in childhood have important implications for the utilization of health-care services in adulthood (Braveman and Barclay, 2009). We focus on family instability and examine its link with seeking healthcare for two health problems: prolonged symptoms of depression and bodily pain. We examine these relationships with data from a sample of

*Direct correspondence to Ethan J. Evans, Center for Healthcare Policy & Research, University of California, Davis, 2103 Stockton Blvd., Sacramento, CA 95817 ⟨ejevans@ucdavis.edu⟩. All data and coding for replication purposes shall be shared by: Bill McCarthy, Department of Sociology, University of California, Davis, One Shields Avenue, Davis, CA 95616 ⟨bdmccarthy@ucdavis.edu⟩.

SOCIAL SCIENCE QUARTERLY

DOI: 10.1111/ssqu.12448

service workers and with logit models that incorporate variables from Andersen's behavioral model (Andersen, 1995) of health access and utilization (predisposing, enabling, and need factors), along with measures of distress, economic difficulties, and later life consequences associated with health and behavioral outcomes (Sun and Li, 2008). We find that high levels of instability are linked to a disinclination to seek formal healthcare, suggesting that multiple changes in family structure may shake the bedrock necessary for establishing trust in health institutions and providers in adulthood (Blendon, Benson, and Hero, 2014; Hall et al., 2001).

Background

Family Instability and Health

A substantial body of research finds that changes in family structure during childhood have relatively proximate negative consequences for health, development, and behavioral outcomes. Changes in family structure are, for example, associated with poorer health, cognitive, and behavioral outcomes for five-year-olds (Bzostek and Beck, 2011; Craigie et al., 2012); problem behavior in elementary school (Cavanagh and Houston, 2006); and negative cognitive and behavioral outcomes in adolescence (Fomby and Cherlin, 2007; Lee and McLanahan, 2015; Magnuson and Berger, 2009). Longer-term consequences of parental separation or divorce in childhood or adolescence have also been documented. Adults from these families score higher on measures of depression (Amato, 1991; Gilman et al., 2003) and lower on general psychological well-being scales (Amato and Sobolewski, 2001; Gähler and Garriga, 2013) compared with people from stable two-parent families. Although not all studies find enduring consequences of family instability, Amato (1991:551) concludes that "[o]verall, in spite of some inconsistency, the available survey data suggest that experiencing family disruption as a child is associated with lowered psychological well-being in adulthood."

Three approaches are generally invoked to account for this relationship (Sun and Li, 2008). One approach emphasizes the family's role as the primary socializing institution and its provision of stability and security. According to this perspective, the loss or addition of a parental figure may create ambiguity in household rules, family relationships, and parental expectations that negatively affect children's emotional sense of security and increase their anxieties about continuous adjustments; this distress may result in psychological or emotional deficits that persist into adulthood (Beck et al., 2010). A second perspective highlights parental resources. It notes that instability is often accompanied by changes in economic resources, parenting time, and attention that negatively impact children (Fairbrother et al., 2005). A third, less commonly invoked, perspective is the possibility that parental divorce has a delayed pathway effect, triggering events or experiences later in a child's life, such as curtailed education or early parenthood in adolescence that, in turn, have negative consequences in adulthood (Cherlin et al., 1998).

Family Instability and Health-Care Use

Most research studying the impact of early experiences on health-care utilization or intended use assesses static family structure differences rather than instability across time. Heck and Parker (2002) find, for example, that children of single mothers are less likely to have a regular source of healthcare and have more unmet needs than children who live in

two-parent households. Gorman and Braverman (2008) move beyond a two-parent/single-parent comparison and report that children in other family structures (e.g., cohabiting parents, stepparents) are also less likely to have a usual source of routine care and more likely to have delays in seeking healthcare. Although only a few studies have examined multiple family changes, there is evidence of an inverse association between family turbulence (moving in with other adults) and parents' confidence in their ability to obtain healthcare or meet their children's health-care needs (Fairbrother et al., 2005).

Notwithstanding the contributions of studies such as these, the research suffers from several limitations. Expanded assessment, both in terms of quantity and type of family transitions applied to the impact of family change on specific health and developmental outcomes, has not yet been applied to investigation of health-care utilization. Yet, changes in contemporary marriage and family patterns mean that many children live in families in which one or more parents or guardians will exit and that a significant minority of these children will experience multiple transitions and considerable instability (Parke, 2013). It is therefore imperative to examine the consequences of the level of family stability. A further limitation is that researchers rarely test the influence of family structure on healthcare beyond childhood or adolescence, a time when the patient's care seeking is typically not self-determined. As noted above, a life course perspective suggests that adult experiences, such as the inclination to seek formal healthcare, are influenced by an array of childhood experiences, including the level of family instability.

Our approach to the determinants of health-care use goes beyond the two dominant perspectives on health-care seeking. Both approaches assume patient agency in seeking care. Human agency theory distinguishes between goals, intentions, and plans to fulfill these goals (for a review of human agency theory, see Bandura, 1989). In terms of health-care seeking, scholars find that intention and actual behavior are influenced by personal and social attitudes, severity of needs, perceptions, external barriers, and/or extraneous costs. One orientation coming out of the theory of planned behavior (for a review of TPB, see Armitage and Connor, 2001) focuses on proximate factors, such as perceptions about the severity of the health problem and the benefits of and barriers to obtaining care (Ajzen, 1991). A second approach focuses on a broader set of predisposing, enabling, and need conditions (Andersen, 1995). These include social structural attributes (e.g., socioeconomic status and education), beliefs (e.g., about health, illness, and health services), resources (e.g., health insurance coverage, social networks, access to clinics/hospitals), and the extent of an illness and the prior use of services (Berkanovic et al., 1981). Both approaches acknowledge the importance of intention in the exercise of human agency and the contributions of proximate structural factors and experiences. We hypothesize that more distal factors also impact intentions and health-seeking behavior—that family instability and changes in childhood establish the conditions under which long-term trajectories of care seeking are formed. Trajectories influenced by instability may predispose delay or neglect in care seeking, factors shown to lead to poor health outcomes (Dickinson and O'Flynn, 2016).

Seeking Healthcare for Depression and Chronic Body Pain

We assess our hypothesis with data on service/care workers' intention to seek heathcare if faced with two health problems: depression and chronic back/body pain. The choice of these two problems reflects three main concerns. First, depression and chronic pain represent two common mental and physical health ailments. The World Health Organization (2004) estimates that depression affects the lives of millions of adults, yet less than half receive treatment. Vasiliadis and colleagues (2007) report no difference in the prevalence

of depression (8.2 percent and 8.7 percent) and mental health service use between Canada and the United States. According to the Agency for Healthcare Policy and Research (1994), 50 percent of working-age adults experience back problems, but only 15–20 percent seek healthcare. Second, each of these ailments is especially relevant to service/care work occupations, a growing sector of the North American economy. Service/care work is often physically demanding and may require intense and stressful emotional labor (Hochschild, 1983). Third, using more than one ailment increases the potential of finding patterns that apply to the treatment of a range of health concerns and may provide more insights into the mechanisms through which family instability operates.

Many fields of inquiry that study intentions document an "intention-behavior gap." In the health field, researchers have documented a gap in the intention to practice safe sex (Fontdevila, 2006), change one's diet (Allan et al., 2011), use sunscreen (Allom et al., 2013), and exercise (Rhodes and de Bruijn, 2013). A meta-analysis of exercise finds, for example, that although a majority of respondents behaved in ways consistent with their intentions (i.e., intenders exercised more, nonintenders did not), a sizable proportion of respondents acted in ways that did not match their stated intentions (Rhodes and de Bruijn, 2013). Meanwhile, research on following through on diet plans suggests that the size of the gap between intentions and behaviors is not homogenous but can vary considerably across people (Allan et al., 2011). We did not find any prior research on intentions about healthcare use and subsequent use, but we address this issue with an analysis of respondents' subsequent use of formal healthcare.

Data, Variables, and Methods

Our analysis uses data collected between 2003 and 2007 as part of a study that focused on low-prestige service/care work, health, and well-being. The study used a comparative, panel design, and a combination of random and nonrandom sampling, to locate 597 participants who were interviewed four times over two years in one of two locations: the greater metropolitan region of Sacramento, California, and the census metropolitan area of Victoria, British Columbia (Benoit et al., 2015a, 2015b; McCarthy et al., 2014). Paid service/care work contributes to the well-being or development of other people, is often face to face, and requires skills in interaction and communication (England, 1992). It represents a sizable sector of the U.S. and Canadian economies that employs between 15 and 25 percent of the workforce (Budig and Misra, 2010; Dwyer, 2013).

All of the people we interviewed worked in one of three personal service/care jobs: hairstyling, food and beverage serving, and sex work. The sample is limited to jobs that involve face-to-face contact with clients and the exchange of services for money (e.g., for sex work this includes street-based sexual commerce, escorting, and erotic massage, but excludes Internet or phone sex). Although it may seem unusual to include sex work in a study of styling and serving, sex work shares many features with these low-tier care jobs (e.g., emotional attention/intimacy toward clients, physical labor, importance of tips to supplement low wages) and the workers in these occupations share a number of attributes (e.g., disproportionately female, low levels of educational attainment) (see McCarthy et al. 2014; Benoit et al., 2017). Moreover, while the sex work we studied during data collection was a criminal offense in California (and most of the United States), it was not illegal in Canada (McCarthy et al., 2012).

Briefly, the study collected data on the following: demographic and background information; family history; current physical and mental health status; work conditions; occurrence and time of onset of stigmatizing health conditions; occupational health and

safety issues; and frequency and type of health service use, as well as hypothetical health scenarios. Our analysis focuses on the first of the four waves because this is the only wave that included measures of our key dependent variables; however, we also use data from the second wave in a supplementary analysis of association between instability and respondents' actual utilization of health services.

Dependent Variables

We measure our key variable, intention to seek health-care services, with responses to two hypothetical scenarios. Using scenarios allows researchers to collect information beyond respondents' current personal situation (Finch, 1987). In our case, hypothetical scenarios bypass idiosyncrasies or specific circumstances related to respondents' past or current health situation (Schoenberg and Ravdal, 2000); therefore, scenarios equalize need, an influential factor in the decision to seek care (Berkanovic et al., 1981). The first scenario asked respondents the following: "If you were suffering from feelings of prolonged depression and those feelings did not seem to go away, what would you do, or who would you turn to?" The interviewer read a list of 17 options (including one for "other") and asked respondents to indicate up to three choices, in their order of preference. We focus on respondents' first choice and coded the following as indicators of the inclination to seek formal medical care/health services: family, drop-in, or hospital emergency room physician; psychiatrist; or clinical counselor or psychologist (see Table 1 for descriptive statistics). In each scenario, respondents could also indicate "other"; we coded these responses as formal care only if the respondents specified additional information that indicated formal medical attention, such as "emergency room" or "specialist."

Our second scenario focused on chronic body aches and pains, asking: "If you were suffering from prolonged muscle aches/strains, such as back, neck or shoulders, what would you do, or who would you turn to?" We coded the following as demonstrating an inclination to seek formal healthcare: family, drop-in clinic, or hospital emergency room physician, and registered or drop-in physical therapist, chiropractor, or therapeutic massage specialist.

We also examine the relationships between intention and behavior with an analysis of the use of formal healthcare. This measure is a binary variable that indicates if the respondents visited a family or regular physician after their first-wave interview and in the four months preceding their second-wave interview.

Explanatory Variables

Respondents used a life-history calendar (Freedman et al., 1988) to report monthly changes in household composition (e.g., movement of parents, partners, aunts, grandparents, family friends, or other adults in/out of the home) from birth through the age of 25. We focus on the period from the respondents' birth to their 13th birthday because it includes the cumulative influence of changes through both early (birth to about five years old) and middle childhood (approximately ages six through twelve) and because of findings that family changes throughout childhood significantly impact various development and well-being outcomes in adulthood (Magnuson and Berger, 2009; McLanahan, 1985; cf. Cavanagh and Huston, 2008). We initially create a continuous measure with each year-to-year change as one. However, only a small proportion of the sample (2 percent) reported more than five changes and so we truncated our measure at five. We treat family instability

TABLE 1

Descriptive Statistics ($n = 566$)

Variable Names	Mean	Std. Dev.	Min	Max
Depression: Would formal healthcare be your first choice when seeking care? (1 = yes)	0.364	0.482	0	1
Pain: Would formal healthcare be your first choice when seeking care? (1 = yes)	0.371	0.483	0	1
Use of formal health-care services in the four months prior to second wave (1 = yes)	0.463	0.499	0	1
Changes in family structure before age 13 (1 = yes)				
0 changes	0.503	0.500	0	1
1 change	0.108	0.310	0	1
2 changes	0.182	0.386	0	1
3 changes	0.083	0.276	0	1
4 changes	0.071	0.257	0	1
5 or more changes	0.053	0.224	0	1
Age	37.245	12.163	19	83
Gender (1 = female)	0.784	0.412	0	1
Racial minority (1 = yes)	0.279	0.449	0	1
Childhood unhappiness	2.482	1.059	1	5
Childhood poverty	1.592	0.859	1	5
Education	11.438	1.156	6	14
Parent before 21 (1 = yes)	0.074	0.262	0	1
Occupation				
Sex work (1 = yes)	0.345	0.476	0	1
Serving (1 = yes)	0.348	0.478	0	1
Hairstyling (1 = yes)	0.307	0.460	0	1
Monthly income	2,069.141	2,049.717	0	10,000
Mental health	2.635	0.990	1	5
Physical health	2.705	0.911	1	5
Recent health visit (1 = yes)	0.793	0.405	0	1
Health insurance (1 = yes)	0.794	0.405	0	1

as a categorical variable and estimate an effect for each level. This allows comparisons between family backgrounds characterized by high, low, and no volatility or instability.

Mechanisms

We include a number of measures to assess potential mediators of any association between family instability in childhood and intention to seek healthcare. One item focuses on childhood and asked respondents about their general happiness while growing up (1 = very happy; 2 = mostly happy; 3 = somewhat happy/somewhat unhappy; 4 = mostly unhappy; 5 = very unhappy). We include four measures that reflect later life experiences that may be influenced by family instability and could impact a respondent's access to or perceptions of health-care services, and thus the decision to seek care: education (last grade completed); becoming a parent before the age of 21 (1 = yes); current monthly income (constructed from two items that asked about income from service/care work and from any other employment); and occupation (a dummy variable for whether the respondent was employed in sex work or one of the other two service/care occupations).

Our final set of mechanisms measures factors highlighted in Andersen's behavioral model of health-care use that may impact the decision to seek care: self-reported mental and

physical health (need); having recently sought formal healthcare (predisposing condition); and having health insurance (enabling condition). Our general mental health scale ($r = 0.587$) is based on two questions commonly used in self-report measures (DeSalvo et al., 2006): how often respondents felt unwell mentally or emotionally (1 = never; 2 = not often; 3 = sometimes; 4 = very often; 5 = always, chronically) and their mental health in the four months prior to their interview (1 = excellent; 2 = very good; 3 = good; 4 = fair; 5 = poor). Our physical health scale ($\alpha = 0.644$) uses three items about physical health in the four months prior to their interview: overall physical health (1 = excellent; 2 = very good; 3 = good; 4 = fair; 5 = poor) and the frequency of feeling unwell physically and of experiencing bodily pain (1 = never; 2 = not often; 3 = sometimes; 4 = very often; 5 = always, chronically). We use dichotomous measures to indicate recent use of formal healthcare (visits to formal health providers in the past four months) and health insurance (Canadian residents have free access to primary health and hospital care, whereas U.S. respondents vary in their access).

Control Variables

Following Lieberson's (1985) admonition, we only use a small set of controls to reduce the possibility of including "pseudo" controls. We use a three-item scale of childhood poverty ($\alpha = 0.783$) to assess the thesis that family instability's negative consequences for healthcare operate through the economic difficulties it creates. The items asked respondents to use a five-item scale (1 = always, almost always; 2 = most of the time; 3 = half of the time; 4 = some of the time; 5 = rarely, never) to assess how frequently their parents were able pay for basic necessities, school supplies, and recreational activities.

Our analysis also includes three demographic characteristics: age, gender, and racial minority status (we do not include a measure for country because in our data it is highly correlated with having health-care coverage). The behavioral model described above recognizes the role of demographic characteristics in the intention to seek formal health services. In general, people have more health problems and more interactions with the health-care system as they age (Anderson, 1973). Likewise, compared to men, women have higher rates of reported illness symptoms and are more likely to seek healthcare (Green and Pope, 1999), including to treat depression (Vasiliadis et al., 2007), although it is less clear if they are substantially more likely to seek care for prolonged back pains and headaches (Hunt et al., 2011).

The association between race and ethnicity and health-care utilization is less clear-cut. Some research finds that African Americans endorse less positive attitudes toward seeking mental health treatment than whites (Conner et al., 2010), whereas other investigations find that African Americans with depression are more likely to "definitely go" and seek care (Diala et al., 2001). In terms of pain, Carey et al. (1996) report that nonwhites were less likely to experience severe low back pain, but more likely to seek care when they do.

We lose approximately 5 percent of the sample ($n = 31$) because of missing information. *t*-tests indicate that the means for our variables for the analytic and original sample are not statistically different (results available on request). Our dependent variables are dichotomies and we estimate a series of logistic regression models that begins with demographic controls and number of family structure changes before age 13, and then adds mediating variables. The variance inflation factor (VIF) mean for the independent variables is 1.3 and the largest VIF is 1.7, suggesting that multicollinearity did not adversely influence the analysis.

Results

Descriptive Statistics

Table 1 shows the means and standard deviations for each variable considered in the analysis. The average age of survey respondents is 37 years old. A majority of respondents are nonminorities (72 percent) and female (78 percent). The average number of years of primary education completed is just over 11 years. Seven percent of respondents became a parent before their 21st birthday. The average monthly income of respondents is $2,069 per month. A majority of U.S. respondents, 58 percent, had some type of health insurance (all Canadian respondents have government-provided healthcare) and most respondents had used formal health services at least once in the past four months. Most respondents, 75 percent on our averaged scale, reported that their mental health was good or better or that they were unwell mentally or emotionally only sometimes or less in the four months prior to their interview. Eighteen percent described their mental health as fair or that they felt unwell very often, and 7 percent said their mental health was poor and that they always felt unwell. Seventy-one percent of respondents reported that their physical health was good or better or that they felt unwell or experienced pain sometimes or less, whereas 22 percent indicated they were in fair physical health or very often ill. Seven percent said their physical health was poor or they were chronically unwell and in pain.

Few respondents reported that they had to go without necessities, school supplies, and recreational activities during childhood due to their parents' inability to pay. The parents of 79 percent of respondents were able to pay for such items most of the time or always, while just under 4 percent could pay only some of the time or rarely or never. Just over half of respondents, 53 percent, reported being generally very happy or mostly happy during childhood, whereas 32 percent indicated being somewhat happy/somewhat unhappy. Eleven percent said they were mostly unhappy and 4 percent described their childhood as very unhappy.

Most respondents (98 percent) said they would seek formal care for depression if they experienced prolonged symptoms, but only 36 percent said they would do so as their first choice. Approximately 27 percent reported they would talk with their family physician or a physician at a drop-in clinic, whereas 11 percent said they would consult a psychiatrist or counselor. The most popular alternatives to formal healthcare involved personal relationships. Approximately 19 percent reported that they would seek help from a family member, 16 percent said they would talk with friends, and 1 percent said they would turn to a co-worker.

In the case of prolonged muscle aches and strains, 37 percent of respondents indicated that they would seek formal care as their first choice. Twenty-one percent said they would seek care from their family physician or a physician at a drop-in clinic, whereas 18 percent would see a registered physical therapist, chiropractor, or massager. In lieu of seeking formal care, the most common alternatives when faced with pain were individual efforts; 18 percent of respondents said they would take nonprescription medication and 15 percent would use home remedies.

The data on family structure change reveal considerable variation in respondents' backgrounds. Approximately half of them reported that there were no changes in their family before their 13th birthday, whereas the other half experienced change during one or more years. At one end of the change continuum, 11 percent of the sample experienced change in only one year; at the other end, 7 percent of respondents said they experienced change in four years, while 5 percent reported changes in five or more years.

TABLE 2

Logit Regression, Intending to Seek Care for Depression ($n = 566$).[a]

Variables	Model 1	Model 2	Model 3	Model 4
Family structure				
1 change in family structure before age 13	0.391	0.382	0.340	0.246
	(0.294)	(0.295)	(0.307)	(0.314)
2 changes in family structure before age 13	−0.201	−0.228	−0.233	−0.231
	(0.253)	(0.257)	(0.266)	(0.270)
3 changes in family structure before age 13	0.135	0.095	−0.165	−0.232
	(0.332)	(0.338)	(0.358)	(0.362)
4 changes in family structure before age 13	−0.349	−0.362	−0.362	−0.266
	(0.378)	(0.378)	(0.389)	(0.402)
5 or more changes in family structure before age 13	−1.648**	−1.701**	−2.005**	−1.953**
	(0.628)	(0.634)	(0.663)	(0.671)
Childhood poverty	−0.017	−0.034	−0.070	−0.079
	(0.110)	(0.113)	(0.117)	(0.121)
Age	0.012	0.012	0.005	0.005
	(0.007)	(0.007)	(0.009)	(0.009)
Gender (female = 1)	0.624*	0.604*	0.501*	0.347
	(0.232)	(0.234)	(0.242)	(0.253)
Racial minority (minority = 1)	−0.648**	−0.645**	−0.891**	−0.806**
	(0.214)	(0.214)	(0.227)	(0.232)
Childhood unhappiness		0.060	0.000	−0.024
		(0.093)	(0.097)	(0.102)
Sex work			0.561*	0.527*
			(0.249)	(0.264)
Serving			−0.719**	−0.691*
			(0.262)	(0.269)
Education			−0.016	−0.015
			(0.090)	(0.092)
Parent before age 21			−0.141	−0.112
			(0.364)	(0.373)
Monthly income			−0.139	−0.160
			(0.086)	(0.091)
Mental health				0.011
				(0.121)
Physical health				0.039
				(0.123)
Recent health visit				0.874**
				(0.290)
Health insurance				0.484
				(0.275)
Constant	−1.255	−1.347	0.647	−0.277

[a]Standard errors in parentheses.
**$p \leq 0.01$, *$p \leq 0.05$.

Logistic Regression Models

The results presented in Tables 2 and 3 reveal several patterns for reported health-seeking intentions. Among those who have experienced changes in their family structure before age 13, the odds of seeking formal medical care for depression and for chronic pain generally decrease with each increase in family instability. The odds ratio differences are most notable for respondents who had an unusually high level of instability; in the case of depression and pain, the odds ratio for those with five or more changes are negative and

TABLE 3

Logit Regression, Intending to Seek Care for Chronic Pain ($n = 566$).[a]

Variables	Model 5	Model 6	Model 7	Model 8
Family structure				
1 change in family structure before age 13	0.728*	0.755*	0.740*	0.703*
	(0.292)	(0.293)	(0.297)	(0.300)
2 changes in family structure before age 13	0.259	0.325	0.347	0.345
	(0.244)	(0.249)	(0.253)	(0.255)
3 changes in family structure before age 13	0.025	0.122	−0.007	−0.036
	(0.337)	(0.343)	(0.355)	(0.355)
4 changes in family structure before age 13	−0.148	−0.117	−0.090	−0.031
	(0.369)	(0.370)	(0.375)	(0.380)
5 or more changes in family structure before age 13	−1.245*	−1.137*	−1.230*	−1.169*
	(0.557)	(0.562)	(0.573)	(0.576)
Childhood poverty	0.067	0.107	0.080	0.086
	(0.108)	(0.111)	(0.113)	(0.115)
Age	0.010	0.010	0.004	0.004
	(0.007)	(0.007)	(0.008)	(0.009)
Gender (female = 1)	0.547*	0.595*	0.518*	0.459
	(0.229)	(0.231)	(0.236)	(0.242)
Racial minority (minority = 1)	−0.350	−0.362	−0.450*	−0.394
	(0.206)	(0.206)	(0.213)	(0.217)
Childhood unhappiness		−0.142	−0.168	−0.168
		(0.093)	(0.095)	(0.099)
Sex work			0.028	0.032
			(0.243)	(0.253)
Serving			−0.581*	−0.557*
			(0.250)	(0.254)
Education			−0.046	−0.046
			(0.088)	(0.089)
Parent before age 21			0.164	0.174
			(0.348)	(0.351)
Monthly income			−0.001	−0.010
			(0.084)	(0.086)
Mental health				−0.022
				(0.117)
Physical health				−0.004
				(0.120)
Recent health visit				0.339
				(0.259)
Health insurance				0.259
				(0.255)
Constant	−1.411	−1.199	−0.074	−0.388

[a]Coefficients, standard errors in parentheses.
**$p \leq 0.01$, *$p \leq 0.05$.

significant (Model 1, depression: $b = -1.648$, SE = 0.628; Model 5, pain: $b = -1.245$, SE = 0.557; compared to no change); these effects indicate that, compared to respondents from intact families, those who experienced an extremely high number of family changes were less likely to say that they would seek formal medical care for either problem (for pain, people who experienced one change were more likely to seek medical care). Sensitivity analyses indicate that collapsing the level of family change in other ways (e.g., a dichotomy or trichotomy) does not provide evidence of a family instability effect; instead, it is the isolation of high levels of instability that reveals its consequences. Chi-square tests for

TABLE 4

Predicted Probabilities: Intention to Seek Care

Depression	Predicted Probability	95% Confidence Interval	
0 changes in family structure before age 13	0.373	0.315	0.432
1 change in family structure before age 13	0.468	0.340	0.597
2 changes in family structure before age 13	0.328	0.234	0.421
3 changes in family structure before age 13	0.405	0.262	0.549
4 changes in family structure before age 13	0.296	0.152	0.440
5 or more changes in family structure before age 13	0.103	−0.008	0.214
Chronic pain			
0 changes in family structure before age 13	0.351	0.294	0.408
1 change in family structure before age 13	0.529	0.401	0.656
2 changes in family structure before age 13	0.412	0.315	0.510
3 changes in family structure before age 13	0.357	0.218	0.496
4 changes in family structure before age 13	0.318	0.172	0.464
5 or more changes in family structure before age 13	0.135	0.011	0.259

Note: Base models (1, 5) with covariates at their means.

the equivalency of coefficients indicate that for both depression and chronic pain the coefficients for respondents who experienced five or more changes also differ significantly from the coefficients for each of the other levels of family instability included in our analysis.

We use predicted probabilities to describe the magnitude of these effects (see Table 4) and compare respondents with five or more changes to all others (control variables are set to their means). In both equations, the predicted probability of seeking care for respondents whose families experienced the most disruptions is lower than those for respondents who lived in families with varying, but lower levels of instability, or for respondents who experienced no change in composition. For example, the predicted probability of the intention to seek formal health-care treatment for depression is 0.103 for people whose families had five or more changes prior to their 13th birthday, compared to 0.373 for respondents whose family members did not change. The same pattern is evident in the chronic pain model: the predicted probability of seeking formal health-care treatment is 0.135 for respondents who experienced five or more family transitions before they turned 13, whereas it is 0.351 for people whose family did not change.

Test of mean differences between respondents who experienced five or more family transitions and the rest of our sample indicate that as a group, people with the most instability were significantly younger, and had higher scores on childhood poverty and unhappiness than other respondents (results available on requests). They had less education on average, worse physical and mental health, and a greater proportion of them worked in the sex industry. These two groups did not differ significantly in their current income, race, or gender.

Our results also shed light on the relationship between the likelihood of seeking formal healthcare and demographic variables, measures of potential mechanisms (i.e., distress, economic resources, and later consequences), and health-care variables. We find that racial minority respondents compared to nonminority respondents say that they are less likely to seek care if they were to experience depression (see Models 1 through 4), whereas compared to men, women are more likely to seek care for depression and chronic pain.

We do not find compelling evidence of the mechanisms proposed by the three approaches to understanding the negative consequences of family structure and instability. Childhood

TABLE 5

Logit Regression, Use of Formal Healthcare ($n = 477$)

Variables	*b*	SE
Would seek healthcare if depressed	0.586*	(0.232)
Would seek healthcare if in pain	0.647**	(0.236)
Family structure		
1 change in family structure before age 13	0.566	(0.388)
2 changes in family structure before age 13	0.375	(0.294)
3 changes in family structure before age 13	−0.387	(0.426)
4 changes in family structure before age 13	−0.563	(0.493)
5 or more changes in family structure before age 13	−0.262	(0.526)
Childhood poverty	0.002	(0.142)
Age	0.010	(0.010)
Gender (female = 1)	−0.050	(0.281)
Racial minority (minority = 1)	−0.013	(0.261)
Childhood unhappiness	0.065	(0.121)
Sex work	0.461	(0.304)
Serving	0.195	(0.284)
Education	−0.141	(0.114)
Parent before age 21	−0.025	(0.423)
Monthly income	0.076	(0.100)
Mental health	−0.204	(0.140)
Physical health	0.691**	(0.153)
Recent health visit	0.357	(0.304)
Health insurance	1.710**	(0.334)
Constant	−3.401	

**$p < 0.01$, *$p < 0.05$.

unhappiness (Models 2 and 6), as well as limited educational attainment, early parenting, and monthly income (Models 3 and 7) do not have statistically significant effects on the likelihood of seeking care. They also do not mediate, to any significant extent, the relationship between profound family instability and care seeking. People in sex work are more likely than hairstylists (comparison group) to seek care for depression, but not for pain, whereas people who work as servers are less likely than stylists to seek formal healthcare for either malady. In terms of need, predisposing and enabling factors (Models 4 and 8), the relationships between respondents' self-reported mental and physical health and intention to seek formal healthcare for depression or body pain are all nonsignificant. The likelihood of seeking care if depression occurred is significantly higher for people who had used formal health-care services within the previous four months and for those who have health insurance (Model 4), but neither variable is significantly associated with the intent to seek care for body pain (Model 8).

We estimated several additional models to see if the patterns described above were country specific or unique to one of the occupational groups we studied (results available on request); however, only one interaction effect was significant. Although moderation effects are often difficult to demonstrate in individual-level data with small samples, their absence suggests that the association between extreme levels of family instability in childhood and intention to seek healthcare is not specific to one occupation or country of residence.

Our final analysis (see Table 5) examines the intention-behavior relationship with an analysis of the association between our wave-one measure of intention to use formal healthcare and its actual use in the four months prior to the second-wave survey. We have

second-wave data on formal health-care use from 416 respondents (73 percent of first-wave respondents). We estimate a logit model of the use of formal healthcare that includes all of the independent variables described above, as well as our indicators of respondents' intention to use formal healthcare should they experience depression or chronic pain. In these models, both measures of intentions at wave one are significantly related to subsequent use of formal healthcare (depression: $b = 0.586$, SE $= 0.234$; pain: $b = 0.647$, SE $=$ 0.236). These effects are net of controls for physical and mental health, prior health-care use, insurance coverage, and several demographic variables.

Discussion

People's relationships with health-care institutions and health providers are outcomes of the long arm of childhood. Indeed, our results show that these relationships are influenced by events and experiences that begin in early life (Hayward and Gorman, 2004; Maggi et al., 2010). We find that high levels of change in family structure, rather than simply experiences of change, affect adult intention to seek healthcare, and that intention to use formal healthcare is associated with its subsequent use. As suggested by a social psychological perspective, frequent changes in caregivers in childhood may contribute to expectations that others will provide little support in times of need and to a discomfort about disclosing problems to others (Sarason et al., 1990). Vogel and Wei (2005) find that insecure attachment discourages seeking assistance. From a sociological perspective, instability within a primary social institution, the family, may shake the very foundation upon which trust in other institutions is formed (Hall et al., 2001). As incorporated in Bourdieu's (1977) notion of habitus, a person comes to a certain way of understanding and navigating his or her social world through the person's placement and experiences within and in relation to primary social institutions. We propose that disruption experienced by children's familial networks informs their habitus, specifically the way in which they operate toward formal healthcare. Further, one's relationship to authority begins within the family and may transfer to interactions in other authority settings, such as providers in the formal health-care system. Childhood context may compromise people's confidence and interest in interacting and establishing relationships with people in positions of formal authority, such as health practitioners in the health-care system.

Subsequent research can build on our findings in several ways. Our study uses data from a sample drawn from three low-status, service/care work occupations. It is important to ascertain if the consequences we find for high levels of family instability occur in the general population or in the same manner for other vulnerable populations. Our measure of family instability relies on adults' recall of the timing of family changes in childhood; although people are better at remembering major events relative to minor ones, long-term panel studies that begin in childhood may provide better measures (Dohrenwend, 2006). We find no effects for several mediators or mechanisms specified by other explanations of health-care outcomes. However, we use single items to measure a number of these variables. Future research should employ more robust measures of distress, resources, and negative consequences, as well as measures of other potential mechanisms, such as trust in health-care institutions. As well, it should extend our analysis of health-care use in the short term and assess whether family instability has difference consequences for health and health service use over the long term. We did not find any effects for having health insurance; however, differences in national policy means that Canadian residents have free access to primary health and hospital care, whereas U.S. respondents vary in their access. Future research should measure the specifics of health-care coverage to further assess the

role of national health-care programs and private insurance on life course trajectories and health-care utilization.

We know that people exposed to instability during childhood are at greater risk of poor health and well-being across the life course. Further, we know that family structure in North America is in flux—delayed marriage and delayed childbearing, divorce, adoption, cohabitation, lone parenthood—and that many children are experiencing an increasing number of household changes (Teachman et al., 2013). Our findings suggest that those exposed to high levels of family instability are less likely to seek formal healthcare, and are thus less likely to realize advantages of expanded health coverage and/or improvements in diagnostics and treatment. Exploring the patterns of formal service use of adults impacted by intense childhood instability is part of an effort to improve equitable access to health services and enhance the health of those most vulnerable in North American society.

REFERENCES

Agency for Healthcare Policy and Research. 1994. "Acute Low Back Pain Problems in Adults: Assessment and Treatment." *Quick Reference Guide for Clinicians: Clinical Practice Guideline #14*. Available at ⟨http://www.chirobase.org/07Strategy/AHCPR/ahcprclinician.html⟩.

Ajzen, Icek. 1991. "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes* 50:179–211.

Allan, Julia L., Marie Johnston, and Neil Campbell. 2011. "Missed by an Inch or a Mile? Predicting the Size of Intention–Behaviour Gap from Measures of Executive Control." *Psychology & Health* 26(6):635–50.

Allom, Vanessa, Barbara Mullan, and Jamie Sebastian. 2013. "Closing the Intention–Behaviour Gap for Sunscreen Use and Sun Protection Behaviours." *Psychology & Health* 28(5):477–94.

Amato, Paul R. 1991. "Parental Absence During Childhood and Depression in Later Life." *Sociological Quarterly* 32(4):543–56.

Amato, Paul R., and Juliana M. Sobolewski. 2001. "The Effects of Divorce and Marital Discord on Adult Children's Psychological Well-Being." *American Sociological Review* 66(6):900–21.

Andersen, Ronald M. 1995. "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" *Journal of Health and Social Behavior* 36(1):1–10.

Anderson, James G. 1973. "Demographic Factors Affecting Health Services Utilization: A Causal Model." *Medical Care* 11(2):104–20.

Armitage, Christopher J., and Mark Conner. 2001. "Efficacy of the Theory of Planned Behavior: A Meta-Analytic Review." *Social Psychology* 40(4):471–99.

Avison, William R. 2010. "Incorporating Children's Lives into a Life Course Perspective on Stress and Mental Health." *Journal of Health and Social Behavior* 51(4):361–75.

Bandura, Albert. 1989. "Human Agency in Social Cognitive Theory." *American Psychologist* 44(9):1175–84.

Beck, Audrey N., Carey Cooper, Sara McLanahan, and Jeanne Brooks-Gunn. 2010. "Partnership Transitions and Maternal Parenting." *Journal of Marriage and Family* 72(2):219–33.

Benoit, Cecilia, Bill McCarthy, and Mikael Jansson. 2015a. "Occupational Stigma and Mental Health: Discrimination and Depression Among Front-Line Service Workers." *Canadian Public Policy* 41(Suppl. 2):S61–S69.

———. 2015b. "Stigma, Sex Work, and Substance Use." *Sociology of Health and Illness* 37(3):437–51.

Benoit Cecilia, Nadia Ouellet, Mikael Jansson, Samantha Magnus, and Michaela Smith. 2017. "Would You Think About Doing Sex for Money? Structure and Agency in Deciding to Sell Sex in Canada." *Work, Employment & Society* 0950017016679331. https://doi.org/10.1177/0950017016679331.

Berkanovic, Emil, Carol Telesky, and Sharon Reeder. 1981. "Structural and Social Psychological Factors in the Decision to Seek Medical Care for Symptom." *Medical Care* 19(7):693–709.

Blendon, Robert J., John M. Benson, and Joachim O. Hero. 2014. "Public Trust in Physicians—US Medicine in International Perspective". *New England Journal of Medicine* 371(17):1570–72.

Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. New York: Cambridge University Press.

Braveman, Paula, and Colleen Barclay. 2009. "Health Disparities Beginning in Childhood: A Life-Course Perspective." *Pediatrics* 124(Suppl. 3):163–74.

Brown, Susan L., Wendy D. Manning, and J. Bart Stykes. 2015. "Family Structure and Child Well-Being: Integrating Family Complexity." *Journal of Marriage and Family* 77:177–90.

Budig, Michelle J., and Joya Misra. 2010. "How Care-Work Employment Shapes Earnings in Cross-National Perspective." *International Labour Review* 149(4):441–60.

Bzostek, Sharon H., and Audrey N. Beck. 2011. "Familial Instability and Young Children's Physical Health." *Social Science & Medicine* 73(2):282–92.

Carey, Timothy S., Arthur T. Evans, Nortin M. Hadler, Grazyna Lieberman, William D. Kalsbeek, Anne M. Jackman, John G. Fryer, and Robert A. McNutt. 1996. "Acute Severe Low Back Pain: A Population-Based Study of Prevalence and Care-Seeking." *Spine* 21(3):339–44.

Cavanagh, Shannon E., and Aletha C. Huston. 2006. "Family Instability and Children's Early Problem Behavior." *Social Forces* 85(1):551–81.

———. 2008. "The Timing of Family Instability and Children's Social Development." *Journal of Marriage and Family* 70(5):1258–70.

Cherlin, Andrew J., P. Lindsay Chase-Lansdale, and Christine McRae. 1998. "Effects of Parental Divorce on Mental Health Throughout the Life Course." *American Sociological Review* 63(2):239–49.

Conner, Kyaien O., Valire Carr Copeland, Nancy K. Grote, Gary Koeske, Daniel Rosen, Charles F. Reynolds, and Charlotte Brown. 2010. "Mental Health Treatment Seeking Among Older Adults with Depression: The Impact of Stigma and Race." *American Journal of Geriatric Psychiatry* 18(6):531–43.

Craigie, Terry-Ann L., Jeanne Brooks-Gunn, and Jane Waldfogel, J. 2012. "Family Structure, Family Stability and Outcomes of Five-Year-Old Children." *Families, Relationships and Societies* 1(1):43–61.

DeSalvo, Karen B., Nicole Bloser, Krisi Reynolds, Jiang He, and Paul Muntner. 2006. "Mortality Prediction with a Single General Self-Rated Health Question: A Meta-Analysis." *Journal of General Internal Medicine* 21(3):267–75.

Diala, Chamberlain C., Carles Muntaner, Christine Walrath, Kim Nickerson, Thomas LaVeist, and Phil Leaf. 2001. "Racial/Ethnic Differences in Attitudes Toward Seeking Professional Mental Health Services." *American Journal of Public Health* 91(5):805–07.

Dickinson, Helen, and Janine O'Flynn. 2016. *Evaluating Outcomes in Health and Social Care*. Chicago: Policy Press.

Dohrenwend, Bruce P. 2006. "Inventorying Stressful Life Events as Risk Factors for Psychopathology: Toward Resolution of the Problem of Intracategory Variability." *Psychological Bulletin* 132(3): 477–95.

Dwyer, Rachel. E. 2013. "The Care Economy? Gender, Economic Restructuring, and Job Polarization in the US Labor Market." *American Sociological Review* 78(3):390–416.

Elder, Glen, Monica Kirkpatrick Johnson, and Robert Crosnoe. 2003. "The Emergence and Development of Life Course Theory." Pp. 3–19 in Jeylan T. Mortimer and Michael J. Shanahan, eds., *Handbook of the Life Course*. New York: Springer.

England, Paula. 1992. *Comparable Worth: Theories and Evidence*. New York: Aldine.

Fairbrother, Gerry, Genevieve Kenney, Karla Hanson, and Lisa Dubay. 2005. "How Do Stressful Family Environments Relate to Reported Access and Use of Health Care by Low-Income Children?" *Medical Care Research Review* 62(2):205–30.

Finch, Janet. 1987. "The Vignette Technique in Survey Research." *Sociology* 21(1):105–14.

Fomby, Paula, and Andrew J. Cherlin. 2007. "Family Instability and Child Well-Being." *American Sociological Review* 72(2):181–204.

Fontdevila, Jorge. 2006. "Phenomenologies of the Akratic Self: Masculinity, Regrets, and HIV Risk Among Men on Methadone." *Journal of Urban Health* 83(4):586–601.

Freedman, Deborah, Ariand Thornton, Donald Camburn, Duane Alwin, and Linda Young-DeMarco. 1988. "The Life History Calendar: A Technique for Collecting Retrospective Data." *Sociological Methodology* 18: 37–68.

Gähler, Michel, and Anna Garriga. 2013. "Has the Association Between Parental Divorce and Young Adults' Psychological Problems Changed Over Time? Evidence from Sweden, 1968–2000." *Journal of Family Issues* 34(6):784–808.

George, Linda K. 1993. "Sociological Perspectives on Life Transitions." *Annual Review of Sociology* 19:353–73.

Gilman, Stephen E., Ichiro Kawachi, Garett M. Fitzmaurice, and Stephen L. Buka. 2003. "Family Disruption in Childhood and Risk of Adult Depression." *American Journal of Psychiatry* 160(5):939–46.

Gorman, Bridget, and Jennifer Braverman. 2008. "Family Structure Differences in Health Care Utilization Among U.S. Children." *Social Science & Medicine* 67(11):1766–75.

Green, Carla, and Clyde Pope. 1999. "Gender, Psychosocial Factors and the Use of Medical Services: A Longitudinal Analysis." *Social Science & Medicine* 48(10):1363–72.

Hall, Mark, Elizabeth Dugan, Beiyao Zheng, and Aneil K. Misra. 2001. "Trust in Physicians and Medical Institutions: What Is it, Can it Be Measured, and Does it Matter?" *Milbank Quarterly* 79(4):613–39.

Hayward, Mark D., and Bridget K. Gorman. 2004. "The Long Arm of Childhood: The Influence of Early-Life Social Conditions on Men's Mortality." *Demography* 41(1):87–107.

Heck, Katherine, and Jennifer Parker. 2002. "Family Structure, Socioeconomic Status, and Access to Health Care for Children." *Health Services Research* 37(1):171–84.

Hochschild, Arlie. 1983. *The Managed Heart*. Los Angeles: University of California Press.

Hunt, Kate, Joy Adamson, Catherine Hewitt, and Irwin Nazareth. 2011. "Do Women Consult More Than Men? A Review of Gender and Consultation for Back Pain and Headache." *Journal of Health Services Research & Policy* 16(2):108–17.

Lee, Dohoon, and Sara McLanahan. 2015. "Family Structure Transitions and Child Development Instability, Selection, and Population Heterogeneity." *American Sociological Review* 80(4):738–63.

Lieberson, Stanley. 1985. *Making it Count: The Improvement of Social Research and Theory*. Berkeley: University of California Press.

Link, Bruce G., and Jo Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior* 35(extra issue):80–94.

Maggi, Stefania, Lori J. Irwin, Arjmand Siddiqi, and Clyde Hertzman. 2010. "The Social Determinants of Early Child Development: An Overview." *Journal of Pediatrics and Child Health* 46(11):627–35.

Magnuson, Katherine, and Lawrence M. Berger. 2009. "Family Structure States and Transitions: Associations with Children's Well-Being During Middle Childhood." *Journal of Marriage and Family* 71(3):575–91.

Mayer, Karl Ulrich. 2009. "New Directions in Life Course Research." *Annual Review of Sociology* 35:413–33.

McCarthy, Bill, Cecilia Benoit, and Mikael Jansson. 2014. "Sex Work: A Comparative Study." *Archives of Sexual Behavior* 43(7):1379–90.

McCarthy, Bill, Cecilia Benoit, Mikael Jansson, and Kat Kolar. 2012. "Regulating Sex Work: Heterogeneity in Legal Strategies." *Annual Review of Law and Social Science* 8:255–71.

McLanahan, Sara. 1985. "Family Structure and the Reproduction of Poverty." *American Journal of Sociology* 90(4):873–901.

Parke, Ross D. 2013. *Future Families: Diverse Forms, Rich Possibilities*. Chichester, UK: John Wiley & Sons.

Rhodes, Ryan E., and Gert-Jan de Bruijn. 2013. "How Big is the Physical Activity Intention-Behaviour Gap? A Meta-Analysis Using the Action Control Framework." *British Journal of Health Psychology* 18(2): 296–309.

Sarason, Irwin G., Gregory R. Pierce, and Barbara R. Sarason. 1990. "Social Support and Interactional Processes: A Triadic Hypothesis." *Journal of Social and Personal Relationships* 7(4):495–506.

Schoenberg, Nancy E., and Hege Ravdal. 2000. "Using Vignettes in Awareness and Attitudinal Research." *International Journal of Social Research Methodology* 3(1):63–74.

Sun, Yongmin, and Yuanzhang Li. 2008. "Stable Post-Divorce Family Structures During Late Adolescence and Socioeconomic Consequences in Adulthood." *Journal of Marriage and Family* 70(1):129–43.

Teachman, Jay, Lucky Tedrow, and Gina Kim. 2013. "The Demography of Families." Pp. 39–63 in Gary Peterson and Kevin Bush, eds., *Handbook of Marriage & Family*. New York: Springer.

Vasiliadis, Helen-Maria, Alain Lesage, Carol Adair, Philip S. Wang, and Ronald C. Kessler. 2007. "Do Canada and the United States Differ in Prevalence of Depression and Utilization of Services?" *Psychiatric Services* 58(1):63–71.

Vogel, David L., and Meifen Wei. 2005. "Adult Attachment and Help-Seeking Intent: The Mediating Roles of Psychological Distress and Perceived Social Support." *Journal of Counseling Psychology* 2(3):347–57.

World Health Organization. 2004. *The Global Burden of Disease: 2004 Update*. Table A2: Burden of Disease in DALYS by Cause, Sex and Income Group in WHO Regions. Available at ⟨http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_AnnexA.pdf⟩.