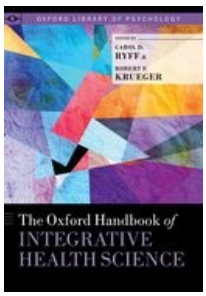

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CHAPTER

35 The Great Recession, Inequality, and Health: An Integrative Approach

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Abstract

Biopsychosocial integration requires attentiveness to changing historical contexts. The Great Recession of 2007–2009 is regarded as the most severe economic downturn since the 1930s and has contributed to the growing American problem of inequality. To advance knowledge of the human consequences of the Great Recession and growing inequalities, integrative approaches are needed. This chapter summarizes conceptual frameworks that address the ways the Great Recession has exacerbated US problems of inequality and for whom. In light of these frameworks and using data from the Midlife in the United States (MIDUS) baseline and Refresher samples, a historically situated inquiry into whether life in America looks worse in the Great Recession aftermath is presented. Findings on inequality in recession hardships, health vulnerabilities, and psychological influences are reviewed. The chapter concludes with a discussion of additional domains of assessment about Great Recession impacts that can be pursued with MIDUS.

Keywords: biopsychosocial integration, Great Recession, inequality, MIDUS, hardships, health vulnerabilities, psychological resources

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Introduction

Longitudinal studies that track changing mental and physical health profiles across the decades of adult life require attentiveness to the historical contexts in which such lives are unfolding. Macrolevel changes, exemplified by major economic downturns, constitute one important type of contextual influence. The Great Recession of 2007–2009 is known to have produced drastic and long-lasting changes to the economy in the United States and globally. Dubbed a "national experiment in stress," many Americans experienced prolonged periods of job insecurity and financial hardship (Shierholz, 2010). The Great Recession further compounded problems of inequality in opportunities to succeed in life. National studies showed, for example, that low-education workers experienced more recession hardships (i.e., unemployment, debt) and had more difficulty recovering compared to college-educated workers (Carnevale, Jayasundera, & Cheah, 2012; Carnevale, Jayasundera, & Gulish, 2015; Hoynes, Miller, & Schaller, 2012; Taylor, Morin, & Wang, 2010). These realities underscore the importance of investigating the extent to which the Great Recession limited life opportunities for some Americans and, in so doing, possibly impacted health and well-being. Whether the Great Recession has exacerbated previously documented problems of social inequalities in health is a further important question.

In this chapter, we utilize novelties of the Midlife in the United States (MIDUS) design, which include assessments from two national samples of US adults situated on either side of the Great Recession, to examine historical changes in individual health and well-being, while offering new insights on the human consequences of inequality. We begin by summarizing the literature on recession hardships, inequality, and
p. 500 health vulnerabilities. Grounded in biopsychosocial approaches, we outline two primary ↳ pathways that confer health vulnerability: the stress process and individual differences in psychological resources.

After laying out these conceptual frameworks, we present two intersecting threads of empirical research on how American lives have been impacted by the Great Recession. Using data from MIDUS, we first present a historically situated inquiry into whether life in America looks worse in the aftermath of the Great Recession. Essentially, this involves examining evidence of *period effects* in health and well-being between the pre- and postrecession eras. Second, we link inequality in exposure to actual recession hardships with health vulnerabilities, while considering possible moderating influences of psychological resources.

Overall, our aim is to illuminate the interplay of historical change in economic hardships with individual-level factors in accounting for differential profiles of health and well-being. We conclude with consideration of multiple future research directions available in MIDUS to advance understanding of how major societal challenges like the Great Recession impact the lives of some US adults.

Recession Hardship, Inequality, and Health Vulnerability

Emerging research conducted in the United States and Europe has linked the Great Recession to changes in mental health, health behaviors, and physical health conditions. Coinciding with declines in the housing market and rises in unemployment from 2007 to 2009, serious psychological distress rose among younger adults (25- to 44-year-olds), an age group that has been most impacted by the recent economic downturn (Burgard, 2012). Younger adults were also more likely to forgo preventive and curative medical care, which can have damaging effects on health over time. Further, abdominal obesity rates for females showed a 3% increase from 2008 to 2010 (Beltrán-Sánchez, Harhay, Harhay, & McElligott, 2013). The recession also corresponded with increased suicide rates (Chang, Stuckler, Yip, & Gunnell, 2013), poorer self-rated health (Simou & Koutsogeorgou, 2014), and increased prevalence of cardiovascular and respiratory problems (Astell-Burt & Feng, 2013). In summary, diverse findings underscore the adverse health and well-being correlates of the recent economic downturn.

A further important point is that the recent recession influenced the lives of many Americans *to differing degrees* based on preexisting vulnerabilities. National studies showed that less educated adults experienced more economic hardships and had more difficulty recovering from the recent recession than their more educated counterparts (Hoynes et al., 2012). Currie, Duque, and Garfinkel (2013) found that more disadvantaged groups—those with low education—had poorer self-rated physical health and were more likely to increase health-compromising behaviors in relation to higher rates of citywide unemployment. In a review of prior recession findings, low educational attainment was more strongly associated with negative health outcomes during economic downturns than during periods of economic stability (Glonti et al., 2015). Additionally, Cutler, Huang, and Lleras-Muney (2015) demonstrated that periods of high unemployment amplified the negative health consequences of low educational attainment. That is, educationally disadvantaged people who entered the labor market during economic downturns were most likely to suffer poorer health. Further, educational attainment has become a stronger predictor of health and longevity in recent decades, raising concerns about widening inequalities across educational levels (Case & Deaton, 2015; Hayward, Hummer, & Sasson, 2015; Maera, Richards, & Cutler, 2008). Extending these findings to the recent Great Recession, it appears that less educated adults represent a preexisting vulnerable subgroup likely to experience more widespread hardship and, relatedly, worse health.

Education is seen as a major social determinant of health because it sets the stage for a life characterized by daily opportunities or challenges related to socioeconomic status (SES). Those with more education have access to better careers, more wealth and earning power, and access to social networks populated by other persons possessing resources and societal influence (Galobardes, Shaw, Lawlor, Lynch, & Smith, 2006). These characteristics, in turn, protect against future adversity. Less educated persons, on the other hand, tend to be embedded in environments with fewer life opportunities, including less access to healthcare, fewer economic resources for health promotion and prevention, and more detrimental social norms favoring unhealthy behaviors (Donnellan, Conger, McAdams, and Neppl, 2009). By further reducing financial security, recession-related hardships may amplify the negative health consequences of low educational attainment and possibly worsen social inequalities in health.

Pathways From Recession Hardship and Inequality to Health

Population-based sciences, including sociology, economics, and public health, have long highlighted the human consequences of social inequality, focusing on access to healthcare and poverty as primary processes. However, these factors do not fully explain the linkages between inequality and health vulnerability. More recently, psychologists have expanded approaches to social inequalities in health via two of the most cited intervening processes: the stress pathway and SES differences in psychological resources.

Stress Pathway

The stress pathway is the most cited mechanism driving inequalities in health (Adler, 2009). It is also the primary pathway proposed in the recession and health literature (Catalano et al., 2011). On a daily basis, socioeconomically disadvantaged individuals tend to experience more severe stressors and appraise such events as posing greater threats to financial stability and self-concept (Almeida, 2005; Gallo, Bogart, Vranceanu, & Matthews, 2005; Hatch & Dohrenwend, 2007). Further, increased debt and unemployment brought on by economic downturns have been linked to indicators of psychological distress, including increased anxiety and depression (Gathergood, 2012; O'Donnell, Corrigan, & Gallagher, 2015). Life histories of SES disadvantage result in cumulative wear and tear on the body across multiple biological systems, such as allostatic load (Gruenewald et al., 2012). Greater disturbances in the stress hormone cortisol have also been observed among those who are socioeconomically disadvantaged (Gustafsson, Janlert, Theorell, & Hammarström, 2010), which in turn contributes to SES inequalities in number and severity of health problems (Zilioli, Imami, & Slatcher, 2017).

The Great Recession is widely regarded as a stress-inducing historical event, although limited empirical research has directly tested the mechanisms involved (Catalano et al., 2011). Economists have posited that the Great Recession was unique relative to prior downturns in that individuals were likely to have been threatened by multiple recession-related stressors (e.g., job insecurity, unemployment, financial hardship). Problematically, many studies on the health correlates of recessions have not incorporated direct assessments of recession experiences, making it difficult to rule out alternative explanations. Increases in obesity and declines in mental health coinciding with the Great Recession, for example, may be due to other societal or environmental factors besides exposure to recession-related stressors. Further, prior research that has examined exposure to recession-related stressors has typically focused on the impacts of a single stressor, and limited health outcomes have been examined (see Burgard & Kulousova, 2015).

To address gaps in the prior literature, MIDUS affords unique opportunities to examine the stress pathway and the impacts of the economic downturn on Americans' health and well-being. Unique to the MIDUS design are two samples of same-aged US adults recruited from two different historical periods, one before and one after the Great Recession. With these two samples, it is possible to compare differences in life opportunities and reports of psychological distress and physical health before and after the Great Recession. Second, also available in the recently recruited postrecession sample are data on exposures to several types of recession-related stressors, thus offering sharpened assessments of individual differences in exposure to recession hardships.

Psychological Resources

Stressful experiences are not inevitably detrimental to health and well-being. What also matters is whether psychological resources are, or are not, available to successfully adapt to and cope with adverse circumstances (Matthews & Gallo, 2011). Psychological resources include constructs such as conscientiousness, perceived control, and purpose in life. These resources are associated with positive health outcomes (e.g., Chapman, Fiscella, Duberstein, & Kawachi, 2009; Zilioli, Slatcher, Ong, & Gruenewald, 2015) and reduced mortality (e.g., Boyle, Barnes, Buchman, & Bennett, 2009). Further, the absence of such resources may account for heightened disease risk associated with low educational attainment (e.g., Avendano et al., 2006; van Oort, van Lenthe, & Mackenbach, 2005). Based on such previous findings, psychological resources are increasingly gaining attention as possible targets of intervention.

On an absolute level, socioeconomically disadvantaged groups tend to have fewer psychological resources (Boehm, Chen, Williams, Ryff, & Kubzansky, 2015). However, there are important variations within SES groups in these patterns. Figure 35.1 illustrates the distribution of self-ratings of purpose in life at different

p. 502 levels of the education gradient in the MIDUS Refresher sample. Although the pattern is graded by educational ↳ attainment, with less educated adults reporting lower levels of purpose in life, there is notable variability within each gradient. Such data suggest that some individuals are able to maintain psychological strengths despite their experience of educational disadvantage.

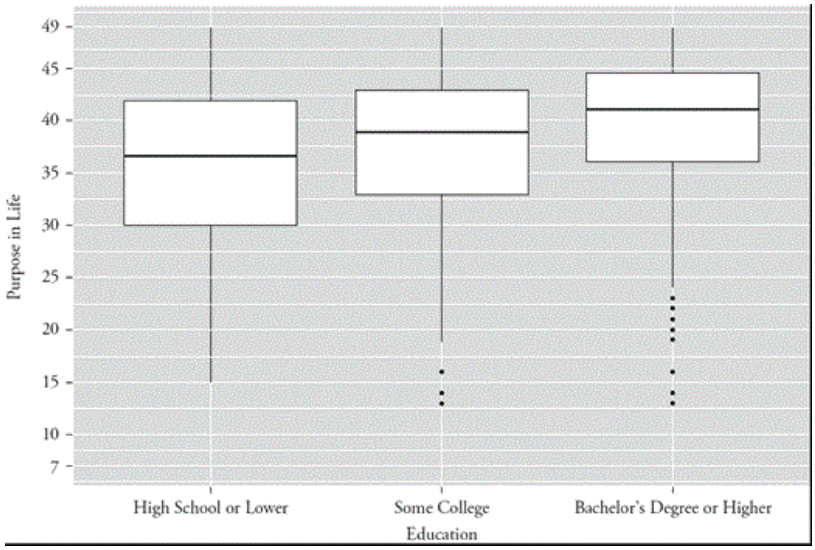

Figure 35.1 Box and whisker plots of distribution of purpose in life (possible range of 7 to 49) by educational attainment in a recently recruited national sample of US adults (ages 25–74) from the MIDUS (Midlife in the United States) study (*N* = 2,598). The solid horizontal lines represent the median value; the boxes represent the lower and upper quartiles (25% and 75%); the vertical lines represent the minimum and maximum nonoutlier values. The dots represent outlier values.

According to the reserve capacity model, individual differences in psychological resources are conceptualized as resilience factors that protect against sources of economic hardship. In this framework, psychological resources are theorized to offset the absence of the health-protective scaffolding that is prominent in higher SES lifestyles and environments (Donnellan et al., 2009). Research on individual differences in inequality and health has found strong and consistent evidence for the protective role of psychological resources relating to sense of control, sense of purpose, self-control, and the desire to plan for the future.

Prior MIDUS findings have already documented that psychological resources can confer resilience against health problems among those who are socioeconomically disadvantaged. For example, Zilioli et al. (2017) found that perceived control buffered the effect of low SES on diurnal cortisol slope as well as the frequency and severity of physical symptoms. Similarly, although lower educational attainment has been linked to higher levels of inflammatory markers such as interleukin 6 (IL-6), MIDUS researchers found that such links were moderated by levels of psychological well-being (Morozink, Friedman, Coe, & Ryff, 2010). Thus, among the less educated adults, protection against elevated IL-6 was evident among those reporting higher levels of multiple aspects of psychological well-being. These and related findings from other studies have led to interventions focused on psychological resources as strategies for promoting health and well-being among in low-SES children and adults (Miller, Yu, Chen, & Brody, 2015; Van der Gucht, Takano, Van Broeck, & Raes, 2015).

Returning to the Great Recession, an important question is whether key psychological resources continue to serve as protective buffers for those experiencing widespread recession hardship. Relatedly, the reserve capacity framework is gaining attention as a possible route to combat social inequalities in health. Thus, qualities such as self-control and the desire to plan for the future may serve important protective functions for low-SES individuals, thereby underscoring increased advocacy for programs and interventions that

p. 503 enhance these characteristics (Haushofer & Fehr, 2014; Heckman, 2008). Nonetheless, the reserve ↳ capacity framework has been tested primarily in contexts of individual-level (or microlevel) socioeconomic adversity (e.g., low education, low individual income; Lachman & Weaver, 1998; Turiano, Chapman, Agrigoroaei, Infurna, & Lachman, 2014). To date, few studies have tested the role of psychological resources in modifying health outcomes in the context of the Great Recession (Glonti et al., 2015).

The "Disabling" of Psychological Resources

Rooted in sociology, the "disabling" framework emphasizes the influence of social context and demanding situations. It proposes that an abundance of positive psychological characteristics will not necessarily be beneficial under contexts of greater socioeconomic adversity (Shanahan, Hill, Roberts, Eccles, & Friedman, 2014). The concept of *disabling* originated from observations of children and adolescents of the Great Depression in the 1930s (Shanahan, Elder, & Miech, 1997). Two cohorts of children were followed over time to test whether psychological strengths might be weakened in contexts of historic economic decline. One cohort entered the workforce during the Depression (high levels of socioeconomic adversity), whereas the other cohort entered the workforce after World War II (low levels of socioeconomic adversity). At adolescence, the cohorts were rated (by teachers and parents) on conscientious-like behaviors such as planfulness and self-regulation. These behaviors were then correlated with social functioning and civic engagement in adulthood. The findings revealed that the benefits of conscientiousness depended on the historical period in which individuals entered the workforce. For the cohort entering the workforce in optimal economic conditions (post-WWII), high conscientiousness at adolescence predicted enhanced social functioning in adulthood. In contrast, conscientiousness was not predictive of future social functioning for the cohort that entered the workforce during a period of economic instability.

Additional support for the disabling hypothesis comes from ethnographic research on hospital characteristics and patient management of diabetes. Successful management of diabetes requires high levels of conscientious-like behaviors, including extensive self-management of daily injections of insulin, regulation of food intake, and consistent monitoring of eating behavior and everyday choices (Lawson, Bundy, Belcher, & Harvey, 2010; Vollrath, Landolt, Gnehm, Laimbacher, & Sennhauser, 2007). Lutfey and Freese (2005) found that several social and environmental factors placed constraints on low-SES patients' ability to manage their diabetes, despite their best intentions to do so. First, lower SES patients experienced less supportive interactions with their primary care provider. Second, they received less assistance and education in managing their disease compared to higher SES individuals who attended better clinics. Third, financial constraints among lower SES patients undermined their ability to regularly test blood glucose levels and eat a healthy diet. Finally, strained social connections with family and friends made the disease more difficult to manage. All of these factors illustrate how conscientious intention and effort to manage Type 2 diabetes can be undermined by social and environmental constraints associated with living in a low-SES context.

In summary, extant support for disabling is based largely on descriptive or ethnographic studies. More rigorous empirical tests of the disabling hypothesis are needed to determine whether the efficacy of psychological strengths in promoting health is undermined by larger social and structural forces, such as those brought about from the Great Recession. In addition to heightening stress exposure among vulnerable subpopulations (i.e., educationally disadvantaged), the Great Recession may exacerbate inequality by reducing the efficacy of psychological resources. In the next section, we summarize recent findings from MIDUS that illustrate the strengths of the study for investigating inequality and health in the context of the Great Recession by integrating perspectives on stress exposure, psychological resources, and disabling. First, beginning in 1995 and expanding over two decades, MIDUS makes it possible to examine pre- and postrecession correlates of stress exposure, including life opportunities, life outlooks, physical health, and

psychosocial well-being. The postrecession sample, embedded in heightened economic adversity, is predicted to show more compromised outcomes compared to the prerecession sample. Second, in the postrecession sample, assessments of individual differences in exposure to recession hardship and health outcomes make it possible to directly examine the role of psychological resources and the potential for disabling.

MIDUS Findings on Recession Hardships, Inequality, and Health

The MIDUS study offers unique opportunities to examine the "national experiment in stress" metaphor
p. 504 concerning the health and well-being impacts of the ↳ Great Recession and growing inequalities. Available in MIDUS are two samples of same-aged probability samples of US adults recruited from two different historical periods, one before (~1995) and one after (~2012) the Great Recession. In the first section that follows, we summarize research on differences in life opportunities, life outlook, psychosocial factors, and physical health before and after the Great Recession. In the second section, we focus on the recently recruited postrecession sample to examine the scope of hardships experienced and implications for health and whether psychological resources played a protective role or are possibly disabled.

Comparisons of Pre- and Postrecession America

Kirsch, Love, Radler, & Ryff (2018) examined period effects in health and well-being in two national samples of adults. The prerecession sample refers to the original MIDUS baseline sample recruited in 1995 (N = 3,487). The postrecession sample refers to the new national sample of US adults, known as the MIDUS Refresher (N = 3,577), recruited primarily in 2012. The Refresher sample paralleled the size of the original baseline study as well as its age (25–74 years) and gender distribution. Indeed, a key purpose of the Refresher data collection was to sharpen the scientific focus on the health and well-being significance of the Great Recession on the lives of American adults. Poststratification weights were used to adjust for slight discrepancies in sociodemographic representation between the samples and the populations from which they were recruited (see Kirsch, Love, Radler & Ryff, 2018). The findings focused on how the changing sociohistorical context matters for US adults. Key questions were how the two samples differed in terms of who is getting ahead in life as well as comparisons in life outlooks, psychosocial factors, and physical health.

Period effects for pre- and postrecession samples were observed in life opportunities related to education, income, and employment. Consistent with nationwide increases in educational attainment, respondents in the postrecession sample were more likely to have completed 16 or more years of education (33.2%) compared to the prerecession sample (23.9%). However, despite having higher educational and occupational attainment, the postrecession respondents, on average, had less total household income than prerecession respondents and were less likely to be employed in paid positions. Relatedly, there were notably more postrecession respondents in the bottom income quintile bracket compared to their prerecession counterparts. In summary, these findings suggested that adults in the postrecession era had more difficulty getting ahead in life in terms of income and employment, despite being more highly educated.

In addition to more limited life opportunities, postrecession respondents had poorer life outlooks, exemplified by lower levels of satisfaction and lower control in domains of work, financial situation, health, and life overall. The likelihood of anxiety diagnosis was greater for the postrecession sample compared to the prerecession sample. Positive affect and sense of control were significantly lower in the postrecession sample. The postrecession sample also reported less contact with friends. Environmental mastery and contact with family were two indicators where the postrecession sample demonstrated more positive

outcomes over the prerecession sample. The samples did not differ in negative affect, purpose in life, and life satisfaction.

Multiple dimensions of physical health were examined, including health behaviors, chronic disease, pain, and functional limitations. Across these dimensions, the overall physical health status (except for smoking and headaches) of postrecession respondents was generally worse than prerecession respondents. Specifically, postrecession respondents were more likely than prerecession respondents to report (a) poor self-rated health; (b) multiple types of chronic conditions (multimorbidity); (c) higher body mass index (BMI); (d) difficulties with walking, climbing, and lifting/carrying; and (e) frequent backaches, joint pain, and trouble sleeping.

These differences between the prerecession and postrecession samples implicated the economic context at the time of the two surveys were conducted. Recruitment of the prerecession sample occurred when the economy was stable, with steady job creation, low inflation, and increasing median household income (DeNavas & Cleveland, 1996; Hatch & Clinton, 2000). This contrasted sharply with the unstable economic environment in which the Refresher sample was recruited. Comparisons of prerecession to postrecession incomes largely reflected divergences in population-wide economic prospects and increasing inequality. Adjusting for inflation, postrecession respondents had significantly less income overall compared to the prerecession sample, and differences largely diverged between the lowest and highest income brackets.

p. 505 The findings draw further attention to troubling trends where the postrecession sample showed greater ↳ risk of obesity and chronic health problems relative to prerecession respondents. Prior research has shown that higher educational attainment is typically accompanied by better mental health (fewer psychological disorders, greater well-being; Boehm, Chen, Williams, Ryff, & Kubzansky, 2015; Mirowsky & Ross, 2003). Although a greater proportion of postrecession respondents were more highly educated, few gains in well-being were evident. There were no mean-level differences in life satisfaction, purpose in life, or negative affect, while the postrecession sample fared worse in terms of compromised sense of control and positive affect as well as greater likelihood of reporting anxiety and panic attacks.

Critical to sharpening the claim that the Great Recession is a legitimate explanation for increased stress and health problems are more fine-tuned analyses of individual differences in *exposure to recession-related stressors* (e.g., job loss, home foreclosure, financial loss). Combining information on inequality in exposure to recession-related stressors with information on psychological resources offers unprecedented opportunities to examine whether resilience to inequality and health vulnerability are evident in the postrecession sample. In the discussion that follows, we summarize initial findings on educational disadvantage and inequality in exposure to recession hardship and health vulnerability. Further, we review findings suggesting that the high exposure to recession hardship borne by some Americans may undo the protective benefits of psychological resources.

Recession Hardships and Protective Versus Disabled Psychological Resources

Kirsch and Ryff (2016) examined inequality in exposure to recession hardship and health vulnerability among educationally disadvantaged and the role of psychological resources as moderating influences. The study contrasted two conceptual frameworks regarding the influence of psychological resources on inequality-related health vulnerability. The reserve capacity model, as described previously, emphasizes the role of individual strengths in promoting resilience to socioeconomic adversity. Thus, psychological resources are hypothesized to protect against the negative health impacts of socioeconomic hardship. Few published studies have tested the role of psychological resources in contexts of hardships tied to major historical change. In contrast, the disabling hypothesis, grounded in sociology, proposes that widespread socioeconomic hardship can undo the benefits attributed to protective resources. Figure 35.2 illustrates the contrasting hypotheses of the reserve capacity framework and the disabling framework. According to the reserve capacity framework, psychological resources will buffer against the negative health impacts of socioeconomic disadvantage, including recession hardship and low educational status. Alternatively, the disabling framework posits that socioeconomic hardship will undo the protective influence of psychological resources.

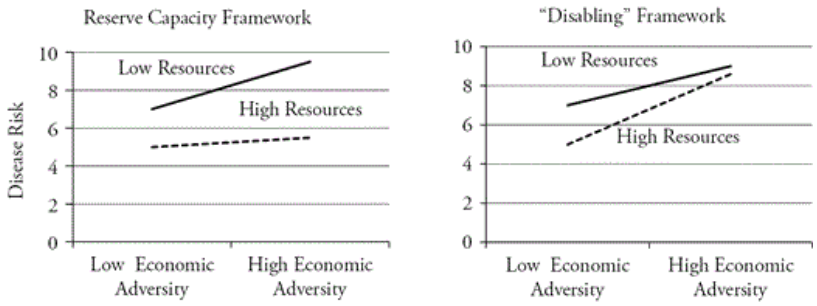

Figure 35.2 Hypothesized results of reserve capacity framework and "disabling" framework. Hypotheses for low levels of psychological resources are graphed in solid lines, and hypotheses for high levels of resources are graphed in dotted lines.

The results are from the MIDUS Refresher sample, as described in the previous section. Analyses focused on several factors: educational status; recession hardships (e.g., job loss, home foreclosure, financial hardship); psychological resources (conscientiousness, sense of control, and purpose in life); and physical health outcomes (self-reported health, chronic conditions, acute symptoms, unhealthy waist circumference). The guiding predictions were that (a) education would emerge as a key vulnerability factor such that the educationally disadvantaged would experience more widespread recession hardships and would show stronger associations between recession hardship and poor physical health; (b) psychological
p. 506 resources would emerge as key ↳ protective factors such that they would attenuate the association between recession hardship and worse physical health; or (c) alternatively, that widespread recession hardship might undo the health-protective role of psychological resources, especially for those with preexisting vulnerability (i.e., low educational status).

As predicted, respondents with less educational attainment reported significantly more recession hardships than those with higher educational standing. Less educated adults also reported significantly more negative health outcomes, specifically more chronic conditions, more frequent somatic symptoms, worse self-rated health, and larger waist circumference. Further, individuals who reported more recession hardships reported significantly worse health (more chronic conditions, more acute somatic symptoms, lower self-rated health, larger waist circumference). Putting those two factors together, interaction analyses between recession hardships and educational status were also examined to assess for whom (what subgroups) were most adversely effected. For chronic conditions, less educated adults were found to be significantly more susceptible to the negative health impacts of recession hardships compared to their higher educated

counterparts. No other health outcomes linked to recession hardships were significantly moderated by educational status.

Bringing psychological resources into the analysis, further interactions between educational status, recession hardship, and psychological resources were investigated. The central question was whether psychological factors would moderate links between vulnerability factors (high recession hardship, low educational status) and health outcomes. To clarify the nature of these findings, we graphed psychological moderators of recession hardship and health relationships separately by levels of low and high educational attainment (Figure 35.3). For those with preexisting vulnerability (i.e., low educational attainment) *and* more widespread recession hardship, the health returns of psychological resources were undermined. That is, having higher purpose in life and higher conscientiousness was *less protective* among educationally disadvantaged adults who reported high recession hardship. These findings supported the disabling hypothesis by demonstrating that psychological strengths appeared to be ineffective (were "disabled") in the face of high recession impact and educational disadvantage.

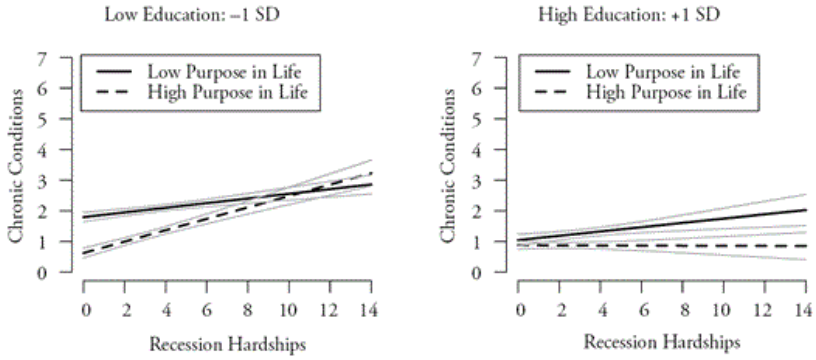

Figure 35.3A The top panels depict the significant three-way interaction between purpose in life, educational status, and recession hardships. The left panel represents model predictions for chronic conditions graphed at 1 standard deviation (*SD*) below the mean for education. The right panel represents model predictions for chronic conditions graphed at 1 *SD* above the mean for education. Solid lines represent model predictions by low purpose in life (1 *SD* below the mean), and dotted lines represent model predictions by high purpose in life (1 *SD* above the mean).

Different patterns emerged for those who had preexisting vulnerability (low educational status) but did not report high levels of recession hardship. Findings for this subgroup were consistent with the reserve capacity model. That is, for less educated adults who experienced less recession hardship, the health returns of psychological resources were evident. A third subgroup pertained to those *without* preexisting vulnerability (higher educated adults) who nonetheless reported *high recession hardship*. For purpose in life, findings converged with conventional perspectives on the protective benefits of high psychological resources. Purpose in life thus attenuated the relationship between recession hardship and health among educationally advantaged adults, although slopes for high versus low purpose in life were not significantly different. ↳

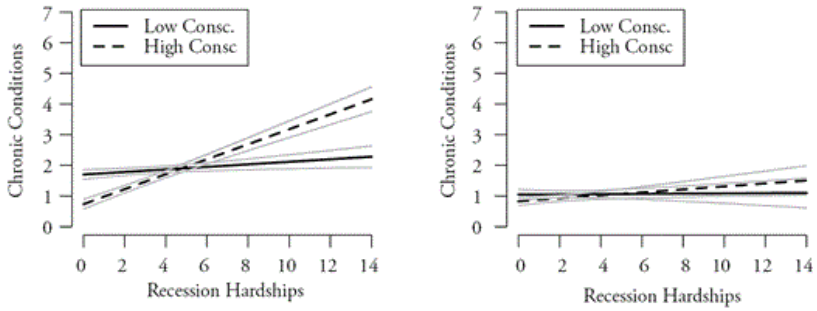

Figure 35.3B The bottom panels depict the significant three-way interaction between conscientiousness (Consc), educational status, and recession events. The left panel represents model predictions for chronic conditions graphed at 1 *SD* below the mean for education. The right panel represents model predictions for chronic conditions graphed at 1 *SD* above the mean for education. Solid lines represent model predictions by low conscientiousness (1 *SD* below the mean), and dotted lines represent model predictions by high conscientiousness (1 *SD* above the mean).

In sum, initial support for the disabling hypothesis coincided with emerging evidence that maintaining self-control and goal-directed behaviors may exert costs on physical health in contexts of economic adversity. In recent studies of adolescents, self-control, conceptualized as a protective resource, also predicted worse cardiometabolic profiles and faster cellular aging among those in low-SES environments (Brody et al., 2013; Miller et al., 2015). Individuals high in conscientiousness and purpose in life may be more likely to engage in effortful, goal-directed behavior when faced with adversity. However, those with preexisting vulnerability (i.e., low education) may have more limited access to opportunities and resources to successfully pursue goals when challenged (Donnellan et al., 2009). That is, to overcome recession hardships, those who are educationally disadvantaged may have to put substantially more effort into maintaining desired goals (e.g., career development, family stability) compared to their more educated counterparts. In contrast, those who are educationally advantaged may benefit from having a greater reserve of psychological strengths in the face of adversity, thus offering support for the reserve capacity model.

It is important to underscore the preliminary nature of these findings, which require replication and extension (as elaborated in the future directions). Exposure to recession hardships and the disabling of psychological resources suggests that an exclusive focus on individual characteristics may overlook important social and environmental factors that also matter. In the following section, we suggest directions for future research that might address a wider array of individual difference factors in thinking about vulnerability to or protection from adverse health outcomes.

Summary and Future Directions

Returning to the national experiment in stress metaphor, this chapter illustrated unique features of MIDUS for investigating the health and well-being impacts of the Great Recession, thereby extending prior research on health inequalities. Findings underscored population-level differences between pre- and postrecession samples that showcased greater disadvantage in the postrecession respondents. Those interviewed after the Great Recession showed more disadvantaged life opportunities in terms of earned income and poorer life outlooks compared to same-aged adults interviewed prior to the recession. The incidence of anxiety and poor physical health was also more common in the postrecession sample. These findings underscored the need to examine exposures to actual recession hardships and their links to health, possibly moderated by psychological resources.

The findings for the recently recruited Refresher sample further revealed that those who were already vulnerable (i.e., having low educational attainment) experienced more widespread recession hardships. In turn, more widespread recession hardships were associated with worse health (i.e., more chronic conditions, larger waist circumference, and frequent somatic complaints). Psychological resources have
p. 508 been increasingly posited as resilience factors that protect against health vulnerability in ↳ SES-disadvantaged persons. Our recent findings, however, indicated that the protective benefits of psychological resources among educationally disadvantaged persons were qualified by the degree of exposure to recession hardships. That is, more widespread exposure to recession hardships seemed to have undone or disabled the health-protective benefits of psychological resources. In summary, our findings add empirical support to the prior descriptive and ethnographic evidence for the disabling hypothesis. The following section proposes two additional approaches needed to disentangle complex relationships among recession hardships, inequality, and health outcomes.

Advancing Biopsychosocial Integration Related to the Great Recession and Health

The findings on exposure to recession hardships, psychological resources, and health vulnerability convey that health is rooted in multiple contexts, which include, but are not restricted to, individual difference factors. A basic tenet of the disabling hypothesis is that social and environmental factors can overpower individual factors in predicting health outcomes. Psychological resources appear to buffer the negative health impacts of low education in contexts of economic stability (low recession hardship), but not in contexts of instability (high recession hardship). What mechanisms undermine psychological strengths in contexts of high recession hardship and preexisting vulnerability? To further understand potential routes of disabling, future work should address mediating processes that contribute to heightened health vulnerability to recession hardship.

One social factor that may undermine psychological resources is the social stigma of economic hardship. Job loss, unemployment, and financial debt are highly stigmatized in the American cultural context, where ideals of self-sufficiency and independence are prominently emphasized (Markus & Kitayama, 2003). Further, the social stigma brought on by these events can lead to psychological and physical health problems (Gathergood, 2012; O'Donnell et al., 2015). Despite clear evidence that fluctuations in the economy during the Great Recession were beyond the control of individuals, unemployment and the crash in the housing market were nonetheless blamed on individual factors, such as laziness and poor decision-making (Sherman, 2013). Consequently, when faced with job loss, some individuals tended to hold themselves personally accountable (Sherman, 2013). Future work is needed to determine whether reducing perceptions of social stigma among disadvantaged subgroups can combat inequality in exposure to recession hardship and improve health outcomes.

In addition to heightened social stigma, hardships of the Great Recession may lead to additional sources of social stress, including work and family conflict and relationship strain, thereby undermining the health protective influence of psychological resources. For example, the Great Recession may have amplified exposure to daily life stressors, including challenges related to work, family, and caregiving, particularly among those experiencing high recession hardship. Previous MIDUS findings have shown that conflict between work and family life predicts worse well-being and physical health outcomes (Versey, 2015; Zilioli, Imami, & Slatcher, 2016). Strained social relationships may also be a factor. According to data from two nationally representative surveys conducted from 1970 onward, trust in others reached historic lows among Americans in 2012 (Twenge, Campbell, & Carter, 2014). Importantly, this decline occurred across all generations, indicating that the overall trend was not specific to any age group. Whether similar patterns are evident in the MIDUS data, perhaps to differing degrees depending on magnitude of recession-related hardships, are important future questions.

Additional research is needed to address potential behavioral and biological processes implicated in recession hardship, inequality, and health vulnerability. For example, individuals experiencing more recession hardship may show more compromised health behaviors, including poorer diet, less physical activity, poorer sleep, and more alcohol abuse, which in turn have a direct impact on physical health. Recession hardship and widening inequality may also lead to maladaptive autonomic and hypothalamic–pituitary–adrenal (HPA) responses to stress that over time exert physiological wear and tear on the body. For example, educationally disadvantaged individuals who were exposed to more severe recession hardships may show heightened reactivity and prolonged recovery to laboratory stressors. Neuroscience assessments may also reveal whether recession hardship predicts poorer profiles of emotional reactivity and recovery.

In summary, individual- and population-level changes in biological, psychological, and social factors corresponding with the Great Recession may combine in unique ways to impact inequality and health. Maintaining conscientiousness and a sense ↳ of purpose in life may become less health protective or even become sources of vulnerability when feelings of social stigma prevail or when sense of trust in others has eroded at both the national and individual levels. Future work is needed to disentangle the relative contributions of each these factors in mediating recession and health relationships.

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Exploiting Longitudinal Assessments

Essential for investigating the impact of major historical events like the Great Recession are comprehensive longitudinal studies that track economic experiences along with psychological, social, and biological/health levels. The findings we summarized in this chapter involved pre- versus postrecession period effects and cross-sectional relationships between recession hardship and health vulnerability and considered the MIDUS Refresher sample. Further, most past studies on the health impacts of economic downturns have been limited to short periods of observation or did not directly test biopsychosocial processes that are theorized to link recession experiences to health (see Burgard & Kulousova, 2015; Catalano et al., 2011). A major strength of the MIDUS study is the opportunity for longitudinal inquiry in the baseline (1995) sample. Followed for over 20 years, baseline respondents are currently in the process of completing the third wave of health and well-being assessments (conducted *after* the Great Recession). Pre- and postrecession measures of psychological, social, and biological factors will thus be key to strengthening causal inferences regarding the influence of recession hardships on health and well-being. For example, it will be possible to parse out whether exposure to recession hardships indeed increased vulnerability to poor health or whether poor health preceded the economic recession and in turn increased vulnerability to recession hardship.

The health impacts of recession hardships are expected to unfold over long periods of time via complex chains of events and related pathways. Individuals who initially appear to be resilient to the impacts of economic downturns may show vulnerability later (Coile, Levine, & McKnight, 2012).

Continued longitudinal follow-ups for both the baseline and the Refresher samples will therefore be essential for testing a key claim put forward at the beginning of the Great Recession, namely, that it would change the life course of some Americans (Peck, 2010). Further, addressing how adults at different life stages (early adulthood, middle adulthood, older adulthood) respond to the impacts of the recession as they age will provide important insights on vulnerability and resilience. Younger adults, for example, experienced disproportionate losses during the Great Recession compared to older adults (Taylor et al., 2010) and therefore may have greater difficulty recovering compared to older adults who had more established incomes and wealth prior to the onset of the Great Recession. Older adults hit hard by the recession, however, may have less opportunity to regain what was lost and may therefore enter retirement with greater vulnerabilities for health and well-being due to compromised financial security and diminished assets.

Conclusion

In conclusion, the recent economic downturn represents a major historical event that is expected to shape the life course of many Americans. The Great Recession has been particularly hard for the educationally disadvantaged, heightening concern about rising social inequalities in health. The emerging evidence summarized in this section suggests that unstable economic periods and heightened inequality are detrimental to health and well-being. Further, psychological strengths may be disabled and even transformed into vulnerabilities among those who are educationally disadvantaged and are exposed to major economic hardship. Future work must identify which routes are effective to promoting health and well-being, especially in low-education contexts. In unpredictable environments, psychological strengths associated with persistence and goal attainment may be less effective at promoting health outcomes. Instead, addressing the social stigma associated with job loss and debt may be more effective routes to promoting recovery and improving health outcomes. Overall, these findings emphasize the importance of attending to heightened health inequalities in the United States tied to the changing economic context and related needs for developing more effective interventions and policies that can help reduce these societal problems.

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