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The Great Recession and the risk for child maltreatment[☆]

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ABSTRACT

This study draws on the Fragile Families and Child Wellbeing Study ($N=2,032$), a birth cohort study of families with children from 20 U.S. cities. Interviews occurred between August 2007, and February 2010, when the children were approximately 9 years old. Macroeconomic indicators of the Great Recession such as the Consumer Sentiment Index and unemployment and home foreclosure rates were matched to the data to estimate the links between different measures of the Great Recession and high frequency maternal spanking. We find that the large decline in consumer confidence during the Great Recession, as measured by the Consumer Sentiment Index, was associated with worse parenting behavior. In particular, lower levels of consumer confidence were associated with increased levels of high frequency spanking, a parenting behavior that is associated with greater likelihood of being contacted by child protective services.

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Introduction

Child maltreatment remains a pervasive problem in the United States. Nationally, nearly 2 million reports of child abuse and neglect warranted a response from child protective services in 2010 ([U.S. Department of Health and Human Services \[DHHS\], 2010](#)). Child abuse includes physical, psychological, and sexual abuse and has been linked to higher risk of poor developmental outcomes in childhood and later life. Children who experience abuse are more likely to display aggressive and antisocial behavior as well as a variety of mental health problems ([Gershoff, Lansford, Sexton, Davis-Kean, & Sameroff, 2012](#); [Taylor, Manganello, Lee, & Rice, 2010](#)). In addition, a large body of research has shown that abuse in childhood can have long lasting consequences ([Berger & Waldfogel, 2011](#); [Herrenkohl & Herrenkohl, 2007](#); [Herrenkohl, Herrenkohl, Rupert, Egolf, & Lutz, 1995](#); [Manly, Rogosh, & Cicchetti, 2001](#)).

Previous research by [Elder \(1974\)](#) and [Elder and Conger \(2000\)](#) has investigated the association between economic hardship and child maltreatment both in the context of economic crises such as the Great Depression and the Iowa Farm Crisis, and within families experiencing hardship over time. Elder and Conger find that the links between economic stress and child wellbeing are mediated by changes in parenting that result from economic shocks ([Conger et al., 2002](#)). Other research has demonstrated associations between low-income, stress and child abuse ([Berger, 2004](#); [Berger, Paxson, & Waldfogel, 2009](#); [Drake & Pandey, 1996](#); [Gil, 1973](#); [Gilbert et al., 2009](#); [Paxson & Waldfogel, 2002](#); [Slack et al., 2011](#); [Waldfogel, 1998](#)).

Abbreviations: CSI, Consumer Sentiment Index; CTSPC, Conflict Tactics Scale for Parent and Child; FFCWS, Fragile Families and Child Wellbeing Study.

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In this analysis we examined the association between the Great Recession and the frequency of maternal spanking. Although not constituting child abuse in and of itself (state laws generally define physical abuse as any non-accidental physical injury to a child, and most states do not explicitly include spanking in their definition of physical abuse; DHHS, 2011), frequent spanking may signal elevated risk for child maltreatment (Bugental & Happaney, 2004; MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2011). A range of research has demonstrated that high frequency use of physical discipline may indicate an increased likelihood of child abuse, as parental physical discipline practices escalate to abuse. Associations have also been found between parental beliefs in corporal punishment, reported stress, and physical child abuse potential (Crouch & Behl, 2001; Gershoff, 2002; Haskett, Scott, & Fann, 1995; Rodriguez, Russa, & Harmon, 2011; Whipple & Richey, 1997).

Researchers have long struggled over the implications of spanking and corporal punishment for child wellbeing. Although it is recognized that spanking in and of itself does not necessarily amount to physical abuse, a broad range of research has linked spanking with negative child behaviors (Berlin et al., 2009; Committee on Psychosocial Aspects of Child and Family Health, 1998; Lytton, 1997; MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2013; MacKenzie, Nicklas, Waldfogel, & Brooks-Gunn, 2012; Strassberg, Dodge, Pettit, & Bates, 1994; Straus, 1994; Taylor et al., 2010). Some researchers have found evidence of positive associations between spanking and child behavior in the short term (Baumrind, 1996a, 1996b, 1997; Larzelere, 1996), often as a corrective measure for bad behaviors, but much of the literature and professional opinion indicates that spanking and corporal punishment are associated with a number of negative behavioral outcomes for children. The American Academy of Pediatrics issued a report in 1998 outlining these negative findings and recommending against the use of spanking and corporal punishment.

Corporal punishment and spanking are often conceptualized as occupying points on a continuum of physical abuse (Garbarino, 1977; Zigler & Hall, 1989). In this conceptualization, low levels of controlled spanking used as a corrective measure are often seen as an acceptable parenting tool. However, as corporal punishment increases the continuum quickly moves toward physical abuse (Strassberg et al., 1994). Research by Gil (1973) and Garbarino (1977), and more recent work by Gershoff (2002) and Gershoff and colleagues (2012) has shown that the points on this continuum often meld together as parents who engage in corrective corporal punishment find their actions escalating to physical abuse. Consistent with this, high frequency use of spanking and corporal punishment have been shown to be indicative of a greater probability of further escalation to what might be considered physical abuse (Benjet & Kazdin, 2003).

Prior research has shown that spanking tends to occur most frequently during early childhood and rapidly reduces in frequency between the ages of 7 and 8. Because spanking frequency generally declines as children age, high frequency spanking at older ages may indicate that parents have moved beyond mere corrective punishment and may be at greater risk for abuse (Benjet & Kazdin, 2003). This is particularly relevant for our study, which focuses on children at the age of 9.

The Great Recession, beginning in December 2007 and officially ending in June 2009 (National Bureau of Economic Research, 2010), severely disrupted the American economy and family life. The collapse of housing markets, high levels of unemployment, and events such as the fall of Lehman Brothers in September 2008 and the ensuing stock market crash led to an unprecedented fall in consumer confidence and the deepest recession since the Great Depression. We measure the Great Recession using consumer confidence but also controlling for two additional measures of the economy – unemployment and home foreclosure rates. Specifically, we ask whether declining consumer confidence was associated with increased use of high frequency maternal spanking that may signal a risk for child abuse.

Our study adds to the evidence provided by a few studies that have looked at child abuse rates by year during the Great Recession within specific states and hospitals. However, these studies were cross-sectional and generally not linked to changes in consumer sentiment and other economic indicators (Berger et al., 2011; Huang et al., 2011; Wood et al., 2012). An exception is one recent study that linked individual and county employment data, as well as an indicator of mass layoffs, to reports of child abuse in California and found that male layoffs were associated with increased reports of abuse (Lindo, Hanson, & Schaller, 2013).

The Fragile Families and Child Wellbeing Study is particularly well suited for this analysis. The 9-year follow up survey was collected beginning in May 2007 and ending in February 2010, which provides a survey frame that includes the Great Recession and data prior to and after the recession. In addition, the dataset included a series of measures specifically designed to gauge the risk of child abuse and neglect.

Methods

We draw on data from the Fragile Families and Child Wellbeing Study (FFCWS; see Appendix for demographics table). FFCWS is made up of nearly 5,000 families in 20 large U.S. cities in 15 states, representing a random sample of births in those cities between 1998 and 2001. When weighted, FFCWS is representative of families in large U.S. cities (population 200,000 or more). Families were generally interviewed within 48 hours of birth, with an oversample of socio-economically disadvantaged families and non-marital births (Reichman, Teitler, Garfinkel, & McLanahan, 2001). Follow-up surveys were conducted when the focal child was approximately, 1, 3, 5, and 9 years old. Of the original sample, 87% of mothers were re-interviewed at 5 years and 76% at 9 years (Pilkuskas, Currie, & Garfinkel, 2012).

The FFCWS survey included a module specifically designed to collect information about spanking and other behaviors that might be indicative of risk for child abuse or neglect. Consent was obtained from the study participants at each wave. The FFCWS was approved by the Columbia University and Princeton University Institutional Review Boards.

Maternal Spanking

At both the 5- and 9-year waves, the FFCWS mothers were asked a series of questions drawn from the Conflict Tactics Scale for Parent and Child (CTSPC), one of the most widely used scales for measuring abuse and risk of abuse (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Mothers were asked whether they had spanked their child in the past year and how often. Response categories were: *never*, *once*, *twice*, *3–5 times*, *6–10 times*, *11–20 times*, and *more than 20 times*. We define high frequency spanking as spanking that occurred 11–20 or more than 20 times in the past year. Mothers who reported spanking once or twice in the past year are coded as low frequency spanking, and those who reported spanking 3–5 times or 6–10 times are coded as medium frequency. In our sample, 52% of mothers never spanked in the past year, 24% spanked with low frequency, 20% with medium frequency, and 4% with high frequency.

Consumer Sentiment Index

We measure consumer confidence using data from the Consumer Sentiment Index (CSI) developed by Thomson/Reuters and the University of Michigan (Thomson-Reuters/University of Michigan, 2012). The CSI asks questions targeted at gauging consumer confidence about the national economy and personal finances (Doms & Morin, 2004). CSI data is collected monthly and is normalized to a baseline value of 100 in December 1964 (Thomson-Reuters/University of Michigan, 2012). We append the CSI score from the month/year of the FFCWS interview to each parent's record, as a measure of the national consumer confidence that prevailed at the time they participated in the survey. (Although the spanking measure refers to behaviors in the past year, we append the current CSI score in recognition that in reporting spanking many parents are thinking about recent behavior and are influenced by their current economic circumstances.) We reverse code CSI so that high values of CSI indicate lower consumer confidence.

Unemployment Rate

We obtain unemployment data from the Bureau of Labor Statistics' Local Area Unemployment Statistics (LAUS; Bureau of Labor Statistics, 2012). We attach the relevant monthly local area unemployment rate for each mother based on the Core Based Statistical Area (CBSA) in which she lived at the date of the FFCWS interview (U.S. Census Bureau, 2012).

Home Foreclosure

We obtain state level mortgage foreclosure data from the Mortgage Bankers Association's National Delinquency Survey, a quarterly survey of nearly 44 million mortgage loans serviced by commercial banks, credit unions, and others (Mortgage Bankers Association, 2012). We attach the relevant quarterly state mortgage foreclosure rate for each mother based on her state of residence and date of interview.

Other Variables

We control for a number of socio-economic and demographic variables (all drawn from the baseline [birth] survey, unless otherwise noted): maternal age, education (less than high school, high school, some college, college or higher), race/ethnicity (white, black, Hispanic, and other), immigrant status, relationship status, history of depression between baseline and wave 5 (drawn from the Composite International Diagnostic Interview Short Form, developed for the National Health Interview Survey; Kessler, Andrews, Mroczek, Üstün, & Wittchen, 1998), child sex, low birth weight, age in months (at 9-year survey), and household income-to-needs ratio. In addition, we include in all of our models city fixed effects, to control for variation across the sample cities.

Statistical Analysis

We examine the association between the Consumer Sentiment Index (CSI) and frequency of maternal spanking using four multinomial logistic regression models. Our first model examines the association between CSI and frequency of spanking, holding constant the control variables. Our second model adds a control for city unemployment rate, and our third model adds a control for local home foreclosures. Our fourth model adds a control for the frequency of maternal spanking at the previous wave. This lagged dependent variable model takes into account prior spanking and thus allows us to better assess the influence of CSI holding constant prior parenting.

We also estimated simple logistic regression models examining high frequency spanking. In these models, the dependent variable is set to 1 if the mother reported spanking 11 or more times in the past year, or 0 if she reported less frequent or no spanking. Again, we estimated four increasingly controlled models.

Finally, to assess whether results varied by family disadvantage, we ran logistic regression models examining the association between measures of the recession and high frequency spanking, dividing the sample by mother's education (high school or less vs. greater than high school) and income (less than 200% of the federal poverty line vs. greater than 200%).

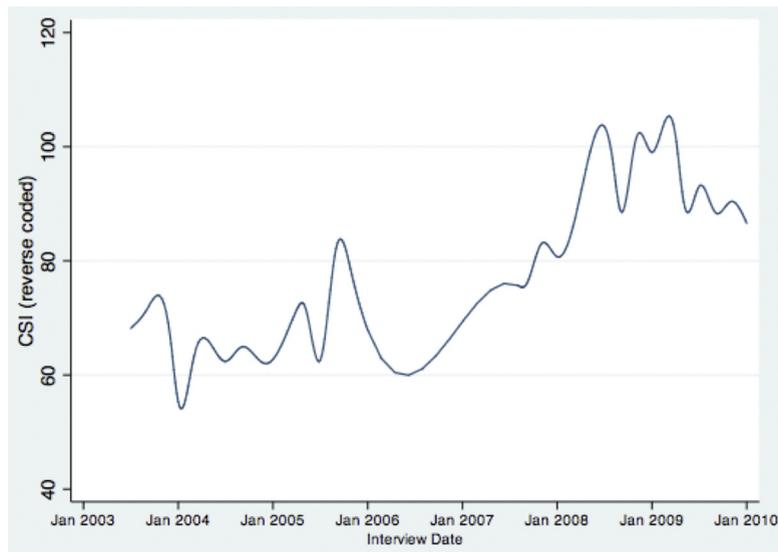


Fig. 1. Trends in Consumer Sentiment Index: January 2003–February 2010.

Results

During the period when the year 9 wave of the FFCWS occurred, the CSI rose from a monthly low of 55.3 in July of 2007 to a high of 90.4 in November of 2008 (CSI reverse coded so that high CSI is worse), eventually recovering to an average of 72.2 during the remaining months that FFCWS was in the field (see Fig. 1). This trend reflects the dramatic worsening in consumer confidence during the Great Recession and the ensuing moderate recovery in the months afterwards.

Table 1 shows results from the multinomial models investigating the association between CSI and maternal spanking. Spanking is operationalized as *never*, *low* (1–2 times), *medium* (3–10 times), and *high* frequency (11 or more times in the past year). We designate *never* as the reference group for our models and present relative risk ratios (RRR) in the tables. Risk ratios lower than 1 indicate that a change in the independent variable is associated with reduced risk, while risk ratios higher than 1 indicate increased risk. Our first model shows that higher CSI (reverse-coded, so indicating lower confidence) is associated with increased risk of high frequency spanking (RRR 1.060, $p < 0.05$), which suggests that as confidence decreased during the Great Recession, risk of high frequency spanking rose. We do not find, however, an association between the CSI and medium or low frequency spanking. Next we add controls for unemployment and home foreclosures. The unemployment rate has no significant association with the frequency of spanking and adding it (in Model 2) does not alter the risk associated with CSI (RRR 1.060, $p < 0.05$). Similar results are obtained when adding both unemployment and the foreclosure rate (in Model 3) (RRR 1.060, $p < 0.05$).

Our final multinomial model (Model 4) controls for maternal spanking at the prior wave, when children were approximately 5 years old. Prior spanking is operationalized in the same manner as current spanking (never, low, medium, high

Table 1

Consumer Sentiment Index (CSI)^a and frequency of maternal spanking: relative risk ratios from multinomial logistic regression models.

	Model 1 CSI ^b	Model 2 CSI & unemployment rate ^c	Model 3 CSI, unemployment rate & foreclosure rate ^d	Model 4 CSI, unemployment rate, foreclosure rate & spanking at previous wave ^e
Frequency of spanking				
Low	0.982	0.982	0.981	0.986
Medium	0.988	0.988	0.988	0.998
High	1.060*	1.059*	1.059*	1.071*

* $p < 0.05$.

^a CSI reverse scaled.

^b Model 1 includes CSI and covariates not shown (measured at baseline): maternal and child age; mother highest level of education; mother race/ethnicity; mothers' history of depression; child sex; child low birth weight, mother immigrant status, mother relationship status; household income to needs ratio; city fixed effects.

^c Model 2 includes CSI, the above covariates, and an additional covariate measuring the unemployment rate.

^d Model 3 includes CSI, unemployment rate, the above covariates, and an additional covariate measuring the foreclosure rate.

^e Model 4 includes CSI, unemployment rate, foreclosure rate, the above covariates, and an additional covariate measuring spanking at the previous wave.

Table 2

CSI and high frequency spanking: odds ratios from logistic regression models.

	Model 1 CSI ^a	Model 2 CSI & unemployment rate ^b	Model 3 CSI, unemployment rate & foreclosure rate ^c	Model 4 CSI, unemployment rate, foreclosure rate & spanking at previous wave ^d
Spanking High frequency vs. all other categories	1.067*	1.066*	1.066*	1.070*

Note: * $p < 0.05$.

^a Model 1 includes CSI and covariates not shown (measured at baseline): maternal and child age; mother highest level of education; mother race/ethnicity; mothers' history of depression; child sex; child low birth weight, mother immigrant status, mother relationship status; household income to needs ratio; city fixed effects.

^b Model 2 includes CSI, the above covariates, and an additional covariate measuring the unemployment rate.

^c Model 3 includes CSI, unemployment rate, the above covariates, and an additional covariate measuring the foreclosure rate.

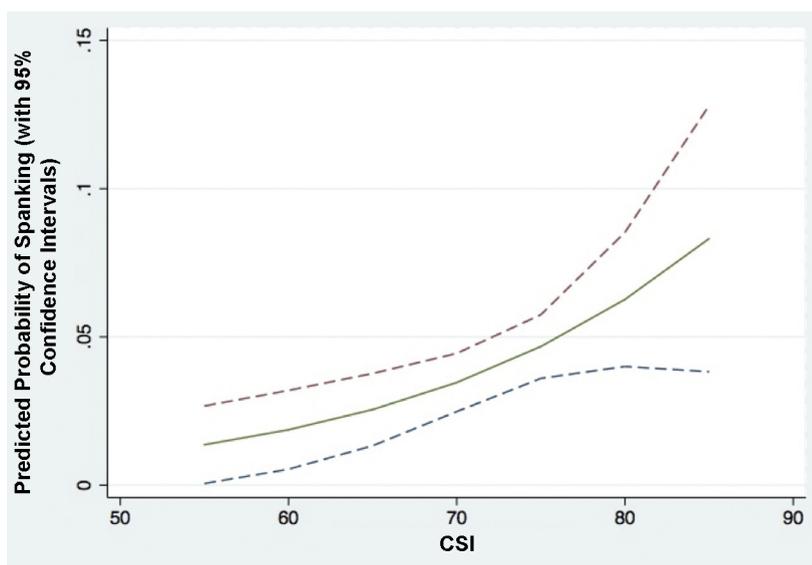
^d Model 4 includes CSI, unemployment rate, foreclosure rate, the above covariates, and an additional covariate measuring spanking at the previous wave.

– with never as the reference category). Again, we find that worse confidence is significantly associated with increased spanking at the highest frequency (RRR 1.071, $p < 0.05$) but not at the medium and low frequencies.

To further investigate the link between level of CSI and high frequency spanking, we next ran a logistic regression model focusing on high frequency spanking. As mentioned, we operationalized high frequency spanking as 11 or more times in the past year versus less than 11 times in the past year (combining the categories for low, medium, or no spanking) and estimated a similar set of four models. Results are shown in Table 2. Model 1 shows a significant association between lower confidence (higher CSI) and increased high frequency spanking (OR 1.067, $p < 0.05$). Adding controls for unemployment and home foreclosures does not alter the results: worse confidence remains significantly associated with increased high frequency spanking (OR 1.066, $p < 0.05$ for both). Last, we control for spanking at the previous wave and continue to find a strong association between worse confidence and increased high frequency spanking (OR 1.070, $p < 0.05$).

These results indicate that worsening CSI is associated with increased high frequency spanking. To provide an indication of the magnitude of the association, we estimated the predicted probability of high frequency spanking when CSI was between 55 and 85 at 5-point intervals (Fig. 2). When CSI was 55, only 1.36% of the children were spanked at high frequency. As CSI increased, indicating worse consumer confidence, the percentage of children spanked at high frequency increased—rising roughly between 0.5 and 1.5 percentage points for every 5-point rise in CSI. When confidence was at its worst (CSI of 85) at the height of the recession, high frequency spanking was predicted to increase to 8.32% of the sample, a rate approximately 6 times what it was when confidence was better (CSI of 55).

We would like to know whether these elevated rates of high frequency spanking are indicative of greater risk of maltreatment. We do not have an objective measure of maltreatment in our dataset, but we do have parents' responses about whether they have been contacted by child protective services (CPS). Relatively few families at the age 9 wave have been contacted by CPS in the past year (just 65 in total), but even with those small numbers, we see a significant correlation between high frequency spanking and being contacted by CPS. Among those families with high frequency spanking, nearly 7% were

**Fig. 2.** Predicted probability of high frequency spanking.

contacted by CPS in the past year, versus only 2% among those who never spanked (and 4–5% among those who spanked at low or medium frequency); chi-squared tests indicated that these differences were statistically significant ($p = 0.036$).

Finally, to investigate whether the association between consumer confidence and high frequency spanking differs by family disadvantage, we estimated logistic regression models separately for families with high vs. low levels of education and high vs. low levels of family income. Results indicate that worse confidence is significantly associated with high frequency spanking for the more advantaged groups, but not for the less advantaged (greater than high school education, $OR\ 1.093$, $p < 0.05$ vs. high school education or less, $OR\ 1.062$, n.s.; greater than 200% federal poverty line, $OR\ 1.308$, $p < 0.001$ vs. less than 200% federal poverty line, $OR\ 1.022$, n.s.).

Discussion

Our analysis examines the association between the Great Recession and spanking among families with young children. We offer a number of key findings. First, in multinomial models, we find that the decline of consumer confidence during the recession, as indexed by the Consumer Sentiment Index (CSI), is associated with an increase in high frequency maternal spanking, but not in lower frequency spanking behaviors. Second, we find a strong association between CSI and our dichotomous measure of high frequency maternal spanking, which in turn is significantly correlated with the likelihood of being reported to CPS. These results indicate that the recession was significantly associated with parents' high frequency use of behaviors that may indicate risk for abuse. Last, we find that the association between CSI and high frequency spanking was particularly marked for more advantaged families.

Controls for unemployment or foreclosure rates were not themselves significant and adding them did not alter these findings. Given this, it seems clear that the association between the Great Recession and spanking is driven by CSI. CSI is likely measuring consumer uncertainty, which we might expect to affect a broader spectrum of the population than experienced unemployment or home foreclosures. This is particularly likely to have been the case during the Great Recession as events like the fall of Lehman Brothers and the stock market crash received such extensive media attention.

This study is the first to examine associations between the Great Recession and maternal spanking in a prospective sample in which prior parenting could be controlled for. Although there are many ways to measure the recession, our CSI variable is particularly well suited for the study of the risk of child abuse. Much of the literature about child abuse centers on the detrimental implications of economic insecurity and maternal stress. CSI is a prime avenue through which to capture these sentiments as they relate to both the economy as a whole, and to personal finances. Our results suggest that it is the decline in consumer confidence that has the strongest association with high frequency spanking.

We find that the association between CSI and high frequency spanking was particularly strong for the better educated and more economically well off families, indicating that these families may have increased spanking during the recession. There are a number of possible explanations for this finding. For instance, more socio-economically advantaged families may have been more likely to have owned homes or stocks that lost value during the recession. It is also possible that more educated and affluent families may have been more aware of media coverage of the recession.

Perhaps the most revealing finding is the association between CSI and high frequency maternal spanking even after controlling for spanking at the previous wave. This result provides robust evidence that there was elevated risk of frequent spanking during the Great Recession.

Our results are potentially in contrast to some findings in the child maltreatment literature, which in recent years has documented a declining long-term trend in physical and sexual abuse (Finkelhor & Jones, 2006). However, as Jones, Finkelhor, and Halter (2006) have noted, there are a number of potential explanations for this decline. For example, much of the research on child physical abuse is based on administrative data that may be influenced by changing legal definitions of abuse and/or changing standards for substantiation by child protective services. Additionally, much of the decline in physical child abuse rates occurred between the mid-1990s and early 2000s a period during which child poverty also fell dramatically (Finkelhor & Jones, 2006).

Prior research about the implications of the macro-economy for child physical abuse is somewhat mixed. Although the 1990–1991 and 2001 recessions were not associated with an increase in official reports of child abuse in administrative data (Sell et al., 2010), work by Elder (1974) and others has demonstrated that exogenous economic shocks can have negative consequences for parenting. It is possible that the magnitude of the Great Recession, like the Great Depression in Elder's work, has resulted in more broad-based changes than less severe recessions. It is also possible that both CSI and mother's reports of spanking are more sensitive measures of how parents are affected by, and react to, changes in the economy than traditional measures like the unemployment rate or administrative data.

Although the Great Recession had its origins in the U.S. financial system, its effects were felt throughout the world economy. Many countries have been faced with the need for bailouts of their banking and financial sectors or have instituted strict financial austerity measures. A limited literature has begun to explore the consequences of the global financial crisis for health and wellbeing in countries like Greece, Portugal, Spain and the United Kingdom, however, these studies have largely been limited to examining outcomes such as suicide rates, alcohol and substance use, and depression (Barr, Taylor-Robinson, Scott-Samuel, McKee, & Stuckler, 2012; Gili, Roca, Basu, McKee, & Stuckler, 2012). Research has shown that in countries like Greece, where the fiscal crisis has been particularly severe, there have been dramatic changes in physical and mental health with large increases in suicide (Karanikolos et al., 2013), depression (Kentikelenis et al., 2011), and declines in self-rated health (Zavras, Tsiantou, Pavi, Mylona, & Kyriopoulos, 2012).

Although no studies that we are aware of have yet linked European economic data from the Great Recession with measures of child maltreatment, the family stress model has been replicated in a number of countries. Studies of families in Finland (Kinnunen & Pulkkinen, 1998; Solantus, Leinonen, & Punamaki, 2004), Korea (Kwon, Reuter, Lee, Koh, & Ok, 2003), Turkey (Aytaç & Rankin, 2009), and the Czech Republic (Hraba, Lorenz, & Pechačová, 2000) have shown that economic hardship is related to increased negative parenting behaviors. Given the severity and longevity of the recession in Europe, and prior work replicating the family stress model, it seems possible that with the appropriate data our findings might be replicated in other countries that have been affected by the Great Recession.

Limitations

This study encountered two primary limitations. First, frequencies of spanking are self-reported by mothers and thus subject to reporting bias. Thus, we might expect that maternal reports undercount the frequency of spanking. Second, the measures of unemployment and foreclosure are state and CBSA specific, but the CSI is a national measure. It is possible that the national measure of CSI may lose some geographic variation, in which case our results would be even stronger if we had regional or more local measures. However, it is unclear if this is the case; the national CSI may capture what was most important in the Great Recession, namely, the sharp decline in consumer confidence associated with developments in the national economy and events such as the fall of Lehman Brothers and the stock market crash.

Conclusions

The study has broad implications as researchers begin to investigate the potentially long lasting implications of the Great Recession for children and families. Additionally, this work adds further insight into the role of economic distress in the risk of child maltreatment. The effects of the macro-economy are often estimated using traditional measures such as the unemployment rate, foreclosure rate, or gross domestic product. Our study demonstrates that the reach of events such as the Great Recession may go beyond these traditional measures, influencing parents and children not only through job loss and housing disruption but also through changes in their perception of the economy and their expectations for their personal finances.

Although our findings demonstrate an increase in high frequency spanking associated with the Great Recession, it may take some time for the implications of the Great Recession for children and families to be fully understood. Although the Great Recession officially ended in 2009, unemployment remains high and many families continue to struggle financially. Further changes in family functioning, like increased harsh parenting or child maltreatment, may occur with some lag as families continue to cope with economic hardship and uncertainty.

Given the international scope of the Great Recession and the global financial crisis, future research should seek to examine whether comparable changes in spanking and child maltreatment have occurred in countries around the world. Many countries, particularly in Europe, have faced double-dip recessions, economic depressions, bank bailouts, financial austerity, and widespread social unrest. Countries that have fared the worst in the face of the global economic crisis may be particularly likely to have experienced changes in family functioning that would lead to an increase in the risk for child maltreatment.

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Appendix 1. Demographic Characteristics

	%
Economic measures	
Consumer Sentiment Index ^b	73.37
Unemployment rate	7.82
Foreclosure rate	3.32
Mother education (baseline)	
Less than high school	29.82
High school or equivalent	31.45
Some college	27.02
College or higher	11.71
Mother marital status (baseline)	
Married	24.85
Cohabiting	34.10
Other	12.85
Mother race/ethnicity	
White	22.88
Black	51.13
Hispanic	23.08
Other	2.90
Immigrant	11.71
Low birth weight	9.99
Male child	52.22
Child age at wave 5 ^a	9.29
Mother ever depressed	26.43
Mother age at birth ^a	25.20
Household income ^b	33,843.29

N = 2,032

^a Mean age in years.

^b Mean.