

Income Poverty and Capability Deprivation
*How Strong Is the Association?**

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Abstract

Amartya Sen has written extensively of how poverty should be viewed as the deprivation of basic capabilities rather than merely the lowness of income. While researchers have generally assumed that more severe experiences of income poverty are more strongly associated with other—perhaps intrinsically more important—material well-being outcomes, this paper is one of the first to empirically examine the extent of these relationships. Using data from a longitudinal household survey, we find that families experiencing deeper income shortfalls (poverty gaps), longer durations of poverty, more poverty spells, and more recent spells are indeed more likely to experience food insecurity, have difficulty meeting basic needs, and be less likely to possess consumer durables. While the income poverty indicators also had a significant association with the other three well-being measures considered—housing problems, neighborhood problems, and fear of crime—these associations were not as strong, as the latter are likely more affected by other factors such as assets and location of residence. Our findings therefore suggest that various measures of well-being should not be considered monolithically either conceptually or even from a policy perspective, where, for example, income transfers would likely have different effects on different dimensions of well-being.

Introduction

Researchers have at their disposal a number of measures designed to capture the well-being of people facing economic deprivation of one sort or another. Among the most widely-used measures is *poverty*, which typically gauges shortfalls in family or household income available to meet basic needs in a given time period—usually a year. Past research using longitudinal data has revealed that people experience poverty in very different ways: many people are poor for short periods of time while others are mired in poverty; some have incomes just below the poverty line while others are in “extreme” poverty; some experience a single bout of poverty while others have multiple spells (Proctor and Dalaker 2003; Iceland 2003a; Bane and Ellwood 1986; Gottschalk et al. 1994; Rank and Hirschl 2001; Stevens 1999).

Some researchers, however, have argued that poverty should be viewed as more than merely the lowness of income, as income only indirectly captures people’s capabilities and material deprivation (Sen 1999; Brady 2003). Other, perhaps more direct, measures of deprivation fall under the general rubric of *well-being* measures, where respondents are asked about their well-being along a variety of dimensions, including housing and neighborhood conditions, ability to pay bills, food security, and possession of basic consumer durables.

Research has generally shown only a moderate association between income poverty and these other hardship measures (Boushey et al. 2001; Rector et al. 1999; Beverley 2000a). This is not wholly surprising since these measures are to some extent, by design, meant to capture different dimensions of well being. Poverty is usually a measure of transitory income deprivation, while reports of some types of material well-being, such as neighborhood problems, are likely to be more affected by longer-term income and other resources (e.g., assets), while others, such as reports of food insecurity, are more affected by very short-term income flows.

Few studies have examined the link between different experiences of income poverty—in terms of its severity, depth, and persistence—and other well-being outcomes. This paper addresses this gap in the literature.

Using data from the 1996 Survey of Income and Program Participation (SIPP), a longitudinal survey that followed respondents for four years, we explore how reports of material well-being during a one-year period near the middle of the panel varied by poverty spell length, timing, depth, and frequency of occurrence. We find that income poverty, and more severe bouts of poverty in particular, are indeed strongly associated with food insecurity, difficulty meeting basic needs, and possession of consumer durables. While income poverty had a significant association with the other three well-being measures considered—housing problems, neighborhood problems, and fear of crime—these associations were not as strong.

Poverty Measurement

Poverty, as defined here, refers to income deprivation. Annual “official” poverty statistics produced by the U.S. Census Bureau are based on guidelines issued by the Office of Management and Budget. This poverty measure has two components—poverty thresholds and the definition of family income that is compared to these thresholds. Basically, the thresholds were originally devised in the 1960s to represent the cost of a minimum diet multiplied by three to allow for expenditures on other goods and services. The thresholds vary by family size and composition and have been updated yearly for inflation using the Consumer Price Index (CPI). The definition of family resources used consists of gross annual cash income, including earnings, pensions, interest income, rental income, asset income, and cash welfare. A family and its

members are considered poor if their income falls below the poverty threshold for a family of that size and composition (Proctor and Dalaker. 2003).

It is important to note that official poverty statistics are based on an annual reference period—one year's worth of income is compared to an annual threshold to determine a family or person's poverty status. Most past research on poverty has also relied on data that came from studies conducted at one point in time, or from annual studies conducted on a different set of people every year. It has mainly been since the 1970s and 1980s that researchers analyzed information from newer longitudinal studies—which follow the same set of people for several years—that a dynamic view of poverty began to emerge. Some of these studies, particularly those that used data from the SIPP (which collects monthly data), calculated poverty using a different reference period, such as a month (e.g., Iceland 2003a; Ruggles and Williams 1989).

In general, longitudinal data show that a majority of poor individuals actually remain poor for only short periods of time and relatively high proportion of people have experienced poverty at one point or another (Bane and Ellwood 1986; Gottschalk et al. 1994; Rank 2003; Rank and Hirschl 2001; Stevens 1994, 1999). One study found that one in three Americans experienced at least one year in poverty between 1979 and 1991 (Blank 1997), and another estimated that about half of Americans will experience at least one year of poverty between the ages of 25 and 75 (Rank and Hirschl 2001).

Attesting to the relatively short nature of many poverty spells, Iceland (2003a) finds that among people who were poor in the first year of the 1996 SIPP panel, 35 percent were no longer poor in the following year, and about half were not poor in 1999, the last year of that panel.

Another study has found that only 12 percent of poverty spells last ten years or more (Bane and

Ellwood 1986).¹ Despite the shortness of many of these spells, it is quite common for people who leave to fall back into poverty a short time later. About half of those who ended poverty spells (based on annual data) returned to poverty within four years (Stevens 1999).

If poverty is calculated using a monthly rather than an annual time frame, we see even higher poverty rates and more turnover in the poverty population. For example, the percentage of people who were poor for at least two consecutive months in 1999 was 19.5 percent according to the SIPP, significantly higher than the percentage of people who were poor using annual data from the same survey-- 10.1 percent (Iceland 2003a). About half of the poverty spells are over after four months when using monthly data. Of course, many of those who are poor for just a couple of months are people who may have higher annual incomes but who may work seasonally.

Research using the Panel Survey of Income Dynamics and a few other data sources has provided a reasonable understanding of the relation of poverty dynamics to human capital related factors. In particular, the long-term poor the lowest levels of human capital, as measured by educational attainment, while people experiencing short-term poverty have higher levels (Duncan 1984, Bane and Ellwood 1986). This research informs us about the types of people experiencing poverty, but it says considerably less about how different types of poverty spells impact people's lives. It is common for people to undergo short spells of poverty (Iceland 2003a), for example, but it is not known whether these spells make an important difference in their daily living. We do not know the extent to which the number of spells, depth of poverty, or recency of poverty experienced by people and families affect their ability to get by. In short, past research does not tell us how poverty dynamics affects well-being.

¹ Bane and Ellwood's (1986) analysis excluded left-censored spells; this likely underestimates the actual length of all poverty spells, given that poverty spells whose beginning are not observed in a given longitudinal survey tend to be longer in duration (Iceland 1997).

Material Well-Being

Interest in keeping track of material well-being has arisen from several sources. One has been the work being done on understanding weaknesses in the current poverty measure. For example, the measure of income for calculating official poverty does not take into account factors such as the cost of work, the effect of health status, the cost of health care, taxes, non-cash benefits, and geographic differences in cost of living, among other issues (National Research Council 1995; Ruggles 1990; Short et al. 1999; Iceland 2003b). Researchers have looked toward non-monetary measures to improve our understanding of these issues.

Some researchers have pointed out that the goal of poverty policy is to lessen material problems experienced by individuals and families more than it is to address lack of resources per se (Mayer and Jencks 1989, Beverly 2000b). This has led to a closer examination of material well-being indicators and their relation to poverty.

Finally, interest in material well-being has arisen from work that has compared the relative well-being of the working and the non-working poor. In particular, while working poor families have higher income than their non-working counterparts, other measures of well-being show working poor families – especially single-parent families – to be no better off (Eden and Lein 1997, Bauman 2002).

The idea of pursuing a non-monetary measure of well-being has led to a variety of approaches. One has been to treat housing and neighborhood conditions as a measure of well-being. Neighborhoods have been associated with a number of individual and household problems such as dropping out of high school, unwed childbearing, and weak labor force attachment (Crane 1993; Wilson 1987; Massey and Denton 1993; Rosenbaum and Popkin 1991). Another

has been to measure the availability of essential material resources within a family or household. Some researchers have made use of expenditure data (Slesnick 1993; Betson 1990; Lazear and Michael 1988; Mayer and Jencks 1993; Johnson and Smeeding 1998). Others have examined the degree to which families experienced financial problems and budget shortfalls (Beverly 1999; Edin and Lein 1997; Mayer and Jencks 1989, 1993; Cook et al. 1986). And yet others have examined food security, possession of consumer durables, fear of crime and other indicators (Nord et al. 2002, Rector et al. 1999, U.S. Census Bureau 2003).

Association between Material Well-Being and Poverty

Material hardship is only moderately correlated with income and poverty (Beverly 2000a; Boushey et al. 2001; Rector et al. 1999; Mayer and Jencks 1989, 1993; Mayer 1995). On the one hand, poor people are more likely than non-poor people to report suffering a variety of material hardships. For example, Boushey et al. (2001) reported that while about 13 percent of respondents under 200 percent of the poverty level reported not having enough food to eat, only 2 percent of those over 200 percent of the poverty line said the same. While 25 percent of those under 200 percent of the poverty line were unable to make housing or utility payments, the figure for those about 200 percent of the poverty line was 8 percent. On the other hand, as these findings indicate, many people with low income do not report various types of material hardship, and some people who are not poor do. One of the best-developed measures of well-being, the food security scale, correlates with income and poverty at approximately 0.33 (Hamilton et al. 1997).

Layte et al. (2001) examined the effect of length of time in poverty on measures of material well-being in Europe. They found that the overlap between poverty and shortfalls in

well-being was greater among those who were in poverty for a longer time. However, due to data constraints, they did not examine sub-annual poverty spells. They were also unable to control for a number of factors that may cushion households from the impacts of low income, such as health, assets and family stability. Finally, the work by Layte and his colleagues focused on a single hardship measure, which they termed “current life-style deprivation,” and did not test for differential effects of poverty patterns on different types of material well-being.

Long-term poverty may affect well-being for at least three reasons: 1) it creates a greater cumulative monetary shortfall in resources versus needs, 2) it creates a longer time span over which poverty occurs, leading to potential barriers as lack of accumulated monetary resources, lack of social connections or psychological problems, 3) it may reflect greater (or less) volatility of income, which, in turn, might increase or decrease material well-being. Little is known about how these three aspects of poverty – depth, duration and volatility – affect the well-being of individuals and families.

Consider depth of poverty. It stands to reason that deeper poverty should lead to lower material well-being. However, this is tempered by two observations. First, since poverty itself does not correlate very strongly with material well-being, the depth of poverty can probably explain material well-being only up to a point. Second, the previously-mentioned work by Layte et al. (2001) found, unexpectedly, that families with moderate income-to-poverty ratios were sometimes more likely than families with lower ratios to have shortfalls in well-being. Despite these caveats, the simple logic of the situation dictates that more severe shortfalls in income should lead to more severe shortfalls in well-being.

It is less clear, however, how much impact depth of poverty should have on material well-being net of the influence of assets. Income cushions against material hardship in part by

allowing families to build resources that can buffer against hard times. Current income may be a much less important influence on material well-being than home-ownership, availability of savings, good health and stable family relationships.

The situation is even less certain with respect to duration of poverty and volatility of income relative to poverty. All things equal, long-term poverty should produce lower material well-being than short term poverty-- unless, however, one of those things held equal is the depth of poverty. It is far from certain which is worse – having income just below the poverty threshold for a long period, or having extremely low income for a brief time. Similarly, income volatility may increase well-being because of the ability to gain resources during good times that increase the ability to weather hard times. Conversely, variance of income may decrease material well-being due to difficulty of planning and adapting. Either way, fluctuation of income relative to the poverty threshold, and the amount by which the family fell short of poverty overall, may affect well-being along with the length of time poverty has affected the family.

Another aspect of the relationship between poverty and well-being is the period of time elapsed between the experience of poverty and the measurement of material well-being. Presumably, poverty experienced many years ago would have a negligible impact on current material conditions. However, we have no knowledge of how fast (if at all) the relationship fades. In order to understand how the experience of poverty impacts individuals and households, it is helpful to gauge not only how deep and long, but how recent a spell of poverty must be to affect material well-being.

It is also important to note that different types material well-being may be associated with poverty in predictable ways. In particular, types of material well-being almost certainly differ in their sensitivity to short-term changes in circumstances. Some types of material well-being can

change over a short period of time, such as food insecurity and difficulty meeting basic needs. Other well-being measures, such as neighborhood conditions, fear of crime, and housing conditions, likely reflect longer-term changes. Short-term poverty spells, therefore, are likely to have a stronger relationship with food insecurity than with neighborhood conditions. Other ways in which types of material well being are associated with poverty are unexplored and difficult to predict.

We feel it is important to follow-up on earlier analyses with data that allow more careful specification of the timing of poverty, indicators of assets, and a variety of measures of material well-being. Because our data allow us to examine various dimensions of the severity of poverty and various measures of material well-being, we can ask more detailed questions than has been possible in earlier research. The data examined below shed light on the following four sets of questions:

1. How does the “intensity” of poverty and its recency relate to material well-being? In particular:
 - a. Does the length of time a family has spent in poverty affect their current material well-being?
 - b. Do fluctuations in poverty, as represented by the experience of multiple spells, affect material well-being?
 - c. Does current poverty have a greater effect on material well-being than poverty experienced in the recent past?
 - d. Is the overall monetary shortfall associated with poverty strongly associated with well-being?

2. How intense must the experience of poverty be in order to show a significant association with material well-being? Do short (sub-annual) spells, single spells, spells taking place in the distant past, and spells where income barely dips below the threshold affect material well-being?
3. Finally, how are all types of material well-being affected by spells of poverty? Are types of well-being that likely reflect short-term shortfalls (food, bill payment) more affected by poverty spells than well-being associated with long-term conditions (neighborhood, housing)?

It is important to note that this analysis is to some extent exploratory in nature, given the relative dearth of research in this area. Yet our aim is to provide greater understanding of what the different measures of poverty and well-being conceptually mean, and to test, as the literature tends to indicate, whether we should indeed expect the relationship between poverty and well-being measures to vary by severity of poverty over time and the dimension of well-being considered.

Data

This research uses the 1996 panel of the Survey of Income and Program Participation (SIPP) (U.S. Census Bureau 2001). Interviews (called waves in SIPP) are conducted every four months. Each wave in the panel consisted of a core interview, with standard questions on demographics, labor force and income, and a topical module interview, with questions on topics that changed from one wave to the next. The eighth wave of the 1996 panel, in the field in August through November of 1998, contained a topical module on “adult well-being.” This was

an extensive battery of questions on consumer durables, housing conditions, neighborhood conditions, ability to meet basic needs, ability to get help when in need, and food security.

The unit of analysis for this research is the family.² Because families changed in their formation over time, the unit of analysis is perhaps more accurately described as the reference person for the family in the wave 8 topical module interview. For prior interviews, information is used on the family in each month that contained the family reference person identified in wave 8. Where possible, characteristics that applied to the family are used, although where data are only available at the household level, household data are used. When data are missing, the analysis uses information from available waves — which is to say, cases are not dropped. This final sample size consists of 30,247 individuals who were family reference people in wave 8.

For the purposes of this research, the numerous indicators of well-being are grouped into six categories: possession of basic consumer durables, housing conditions, fear of crime, neighborhood conditions, material hardship, and food insecurity. Possession of consumer durables included such things as refrigerators, computers, air conditioners, clothes washers, and telephones. Housing conditions involved items such as problem with pests and unsatisfactory repair, and whether or not the respondents would like to move. Fear of crime was measured by answers to questions about fear of leaving the home and feeling safe in the home. Neighborhood conditions included street noise, streets in need of repair, litter in the streets, rundown or abandoned buildings, industrial or other nonresidential uses, and smoke or fumes.

Questions on material hardship asked in the SIPP were very similar to those used by Mayer and Jencks (1989) in their analysis of poverty and material hardship in Chicago.

Household reference persons were asked if during the past 12 months there had been a time

² We also include single unrelated individuals in the study. Even though these individuals are not a “family,” per se, they are counted as a separate unit for the purposes of this analysis.

when they did not meet its essential expenses. They were then asked about instances when the household did not pay the full amount of rent or mortgage, did not pay the full amount of utility bills, had telephone service cut off due to nonpayment, needed to go to the doctor or hospital but did not go, or needed to see a dentist but did not go. Finally, household reference persons were asked about food security, in terms of worry about food lasting, lack of balanced meals, or cutbacks in consumption. These questions were based on the food security scale developed by the U.S. Department of Agriculture (Hamilton et al. 1997). Table 1 shows the items used in each category of well-being, and the distribution of positive responses to each item.

(Table 1 here)

We also examine various measures of severity of poverty in this analysis. We use poverty measures indicating: 1) the proportion of time the wave 8 family reference person was poor over the course of the panel, 2) the number of spells experienced, 3) the amount of time since the end of the last spell, and 4) an adjusted poverty gap while poor. Because not all families were observed for the full 32-month period, a measure of the proportion of time poor was thought to be preferable to the absolute number of months (for example, two people with 3 months of poverty would presumably be different if one was observed 32 months and the other 4 months). Poverty “spells” are considered to occur only if family income is below the poverty line in at least 2 consecutive months, as is most common in studies that use monthly data (e.g., Iceland 2003a).³

³Spell information is used in the first three poverty items listed. The poverty gap measure (the fourth) does not depend on spell information—as it more directly refers to the gap between one’s family income and their family threshold in a given month (in the months when income is below the poverty threshold). The gap was then adjusted in such a way as to indicate the total monetary shortfall, rather than the average monthly shortfall. So a family with a four-month poverty-spell would have twice the poverty gap as an otherwise identical family with a two-month spell. However, the total gap was normalized so that the figure would be approximately on the scale of a monthly shortfall. The average family with a spell of poverty had a four-month spell. If their income came to 80 percent of the poverty threshold each of those months, the “adjusted gap” would be 0.2, to indicate that it would take income

Results

Table 2 provides basic descriptive statistics of the population based on sample members present in the sample, which, for this analysis, extended for 32 months from early 1996 to autumn of 1998 when the well-being topical module was administered. The monthly poverty rate, calculated in month 32 of the panel (the last month in wave 8), was 12.9 percent, the wave 8 poverty rate was 12.5 percent and the panel poverty rate was 10.7 percent. Monthly poverty is calculated by comparing one month of income to a monthly poverty threshold. A wave poverty measure is calculated by summing four months of income data in wave 8 and comparing it with a summed four-month poverty threshold. A panel poverty measure involved summing income over the whole panel and likewise comparing it to monthly thresholds summed over the panel. These figures indicate that, as expected, people are more likely to experience short-term (monthly) shortfalls in income than longer-term ones (Iceland 2003).

(Table 2 here)

Results in the table also indicate that roughly two-thirds of U.S. families did not experience poverty during their time in the panel. The percentage of people who were never poor is slightly lower when using the poverty gap measure because even one-month poverty experiences were counted there, while the other measures used a two-month spell as a minimum as previously noted.

The first measure of severity in the table is proportion of time poor. About 11.0 percent of all families (and about one third of poor families) were poor 1 to 20 percent of the time, and only 4.6 percent of all families (15 percent of poor families) were poor in all months they were

equal to 20 percent of the poverty threshold to bring the family above the line for that period. If their income were lower or their spell of poverty longer, the “adjusted gap” would be correspondingly larger.

observed. The second measure is number of spells. About 20.6 percent of all families had 1 spell only (two-thirds of poor families), another 8.5 percent had 2 spells (one quarter of poor families), and 2.6 percent of all families had 3 or more spells.⁴ With respect to the measure of recency of spells, the table shows that the majority of poor families (19 percent out of 32 percent) had their most recent spell end come to an end within 8 months of the final interview-- months 25 to 32. The balance of spell endings were fairly evenly spread among the three other 8-month periods from months 1 to 24. The adjusted poverty gap was spread fairly evenly across three categories, with a slight plurality falling into the category indicating the smallest monetary shortfall during months when income was under the poverty threshold.

Table 2 also contains summary measures of material well-being. Each of these indicators consists of the number of positive responses from a set of questions about a particular topic. The number of positive responses indicating lack of material well-being was chosen so as to make the population falling short of the threshold as close as possible to 20 percent, within the constraints of the particular list of indicators available. (Twenty percent was chosen because it was the lowest value that could be represented in all 6 areas of concern while being reasonably close to the percent in poverty.) For example, according to Table 2, about 16.4 percent of the population lacked more than 4 of 8 consumer durables. Other summary indicators ranged from 13.5 percent of the population (food insecurity) to 26.7 percent (housing conditions).

Table 3 shows the bivariate relationship between material well-being and various poverty indicators. Perhaps the most important lesson learned from the table is that reports of material hardship vary across the various poverty measures. The first set of poverty indicators shows poverty rates using different time horizons—from 1 month to 12 months. In general, those who are poor under longer time frames are modestly more likely to report hardships than those poor

⁴ The minimum spell length is two months. Spells are separated by two or more months of not being poor.

when using a shorter window of observation. For example, among those who were poor in the last month of wave 8, 43.0 percent reported difficulty meeting at least 2 of 7 basic needs. The analogous figure using an annual poverty measure was 46.2 percent.

(Table 3 here)

People who were poor every month they were in the panel were considerably more likely to report various types of hardship than those who were poor in a given month (such as month 32), and certainly much more than those who were never poor. As would be expected, the greater the proportion of months poor, the more likely respondents were to report hardships. There was somewhat less variation across the number of spells reported. Those who had more spells were more likely to report hardship, but only moderately more than people who had only one spell. Of course, those who had only one spell includes people who were poor for the whole panel.

There is a strong correlation between people's average monthly income -to-poverty ratio during the panel and their reports of material hardship. Those who averaged under 1.0 were considerably more likely to report hardships than all others. Likewise, reports of hardship also vary by the average monthly poverty gap, where those who report a greater depth of poverty are more likely to report hardships, as expected.

The association between poverty and material well-being exists across all the well-being measures used, though the magnitude does vary. The relationship appears to be greatest when considering consumer durables, difficulty meeting at least 2 of 7 basic needs, and food insecurity. For example, the linear bivariate correlations between annual poverty status and the material well-being indicators are, in descending order: 0.27 (consumer durables), 0.25 (food security), 0.20 (basic needs), 0.12 (housing conditions), 0.11 (fear of crime), and 0.09 (neighborhood conditions).

In short, Table 3 shows that considering poverty dynamics yields a more refined picture of the association between poverty and material well-being. As we might expect, the relationship between poverty and hardship is considerably stronger among people who are poor for a greater proportion of time during the panel. Likewise, those who have incomes that continue to be well below the poverty line for an extended period of time are also more likely to report hardships—particularly food insecurity, difficulty meeting basic needs, and a lack of consumer durables.

Figures 1 through 4 visually compare the four indicators of severity of poverty to the six indicators of material well-being in Table 3 in terms of odds ratios calculated using bivariate logistic regressions. Figure 1 shows that the greater the proportion of time one is poor is strongly related to reports of a variety of hardships. For example, those who were poor 1 to 20 percent of the time were 2.4 times more likely to be food insecure than those who were never poor; this figure rises to 7.7 times among those who were always poor (versus those who were never poor). One place where long-term poverty had a somewhat larger impact, interestingly, was on the lack consumer durables. This may indicate that long-term poor never get the opportunity to acquire these items because they do not have “flush” times in which to make these investments or because they have less access to credit. Neighborhood conditions have a weaker link with proportion of time poor, indicating that the choice of one’s neighborhood might be more affected by other factors, such as assets, than time in poverty specifically.

(Figures 1-4 here)

This relationship between poverty and material well being is still large, if perhaps slightly less pronounced when considering number of poverty spells and recency of spells (Figures 2 and 3). Figure 3 indicates, for example, that families whose poverty spell ended in the time immediately before the material well-being questions were administered were 4.1 times more

likely to report difficulty meeting basic needs than if the person had no spell of poverty. In contrast, those whose last poverty spell ended in months 1 to 8 of the panel were 2.4 times more likely to report difficulty meeting basic needs than if the person had no spell of poverty.

The relationship between poverty gaps and reports of material well-being were quite striking (Figure 4). Those who were food insecure were 7.6 times more likely to report being food insecure than those who were never poor. Those whose poverty gap was between 0.0 and 0.2 were 3.0 times more likely to report being food insecure than those who were never poor. Thus, it appears that the two dynamic indicators of poverty that have moderately stronger relationship with material hardship are those that indicate the depth of income poverty (the poverty gap) and the duration of poverty, rather than those which specify the number of short-term dips in income (number of poverty spells) and recency of poverty.

As was clear in Figure 1, Figures 2 through 4 also indicate that material well-being problems that are hypothesized to be affected by factors less affected by flows of income (and more by factors such as assets and region of residence) -- neighborhood conditions, housing problems, fear of crime -- were less strongly related to dynamics of income poverty than problems that were assumed to be sensitive to recent changes in income, such as difficulty meeting basic needs and food insecurity. Patterns for lack of consumer durables tended to fall in the latter category as well.

Discussion

While the poverty literature often assumes that people who experience more severe bouts of income poverty are more likely to experience material hardships, there is little empirical literature that actually documents it. We feel that this type of analysis is essential because income

poverty is (implicitly) used as an important social and economic indicator mainly in that it is thought to correlate with other intrinsically important indicators of well-being (Sen 1999). Thus, using data from the 1996 SIPP panel, we explore how respondents' reports of material well-being varied by poverty spell length, timing, depth, and frequency of occurrence.

We find that, as would be expected, people with more severe experiences of poverty (a greater proportion of time poor, a large poverty gap, more spells, and less duration since the last poverty spell) were considerably more likely to report hardships than those with less severe experiences. However, significant decreases in material well-being were associated even with what might be considered "mild" poverty experiences – short (2 to 4 month) spells of poverty, single spells, spells that were completed as much as two years prior to the assessment of well-being, and spells where income dipped below poverty by only a small margin.

Notably, the effects of poverty are largest when considering reports of food insecurity, difficulty meeting basic needs (such as meeting expenses and paying rent), and possession of various types of consumer durables. The effects are smaller when considering housing problems, reports of fear of crime, and neighborhood problems. These findings support the view that these measures in particular would be less affected by shorter-term income flows (i.e., poverty) and more affected by other factors, such as assets, geographic location, and such.

Thus, our study indicates that various measures of hardship should not be considered monolithically. From a policy perspective, this suggests that different interventions would have different effects on well-being outcomes. For example, because food insecurity is sensitive to shorter-term income flows, a program such as food stamps, which in essence is meant to increase income through near-cash transfers in a particular time period, is indeed appropriate. On the other hand, neighborhood problems and fear of crime in particular are probably not simply

resolved through short-term cash transfers, such as a temporary housing subsidy. They are more a function of other factors.

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Table 1. Construction of Material Well-Being Indicators

Percent of U.S. Households Reporting Problems with Components of Well-Being in 1998

Consumer Durables		Housing Conditions		Fear of Crime	
Component	Percent	Component	Percent	Component	Percent
No Computer	58.0	Insect, Pest Problems	12.7	Nearby Place Afraid to Walk	28.8
No Dishwasher	44.0	Would Like to Move	7.9	Stay at Home for Fear	12.9
No Air Conditioner	22.3	Unsatisfactory State of Repair	7.5	Goes Out With Others	11.5
No Clothes Dryer	22.2	Roof Leaks	6.9	Neighborhood is Unsafe	8.6
No Clothes Washer	18.0	Broken Windows	4.1	Carries Something for Protection	7.5
No Microwave Oven	9.3	Cracks in Wall	4.0	Unsatisfied with Crime	4.4
No Telephone	3.8	Plumbing Problems	2.6	Home is Unsafe	4.1
No Refrigerator	0.7	Holes in Floor	0.9		
		Exposed Wires	0.8		
Neighborhood Conditions		Difficulty Meeting Basic Needs		Food Insecurity	
Component	Percent	Component	Percent	Component	Percent
Noise Problems	21.4	Did Not Meet Expenses	14.0	Food Didn't Last	11.5
Street Repair Problems	16.4	Did Not Pay Utility Bill	9.2	Did Not Eat Balanced Meals	9.7
Trash, Litter	8.2	Did Not Visit Dentist	7.9	Ate Less Than Should	4.6
Abandoned Buildings	8.0	Did Not Visit Doctor	6.1	Skipped Meals	4.4
Problem with Industry	7.3	Did Not Pay Rent	5.4	Didn't Eat Whole Day	1.2
Would Like to Move	5.8	Phone Disconnected	3.9		
Smoke, Odors	4.9	Utility Disconnection	1.3		

Source: 1996 Survey of Income and Program Participation, wave 8.

Table 2. Poverty and Material Well-being Indicators: 1996-1998

<i>Percent poor with different time horizons</i>	
Monthly poverty rate ¹	12.9
Wave 8 poverty rate ²	12.5
Annual poverty rate ³	11.2
Panel poverty rate ⁴	10.7
<i>Proportion of time poor</i>	
Never poor	68.3
Poor 1-20% of the time	11.0
Poor 20- 50% of the time	7.6
Poor 50-99 % of the time	8.5
Poor 100 % of the time	4.6
<i>Number of poverty spells</i>	
No spells	68.3
1 spell	20.6
2 spells	8.5
3 or more spells	2.6
<i>Recency of spells</i>	
No spells	68.2
Last spell ended in months 1-8	3.8
Last spell ended in months 9-16	4.0
Last spell ended in months 17-24	5.3
Last spell ended in months 25-32	18.7
<i>Poverty gap</i>	
Never poor	62.8
Adjusted gap gt 0.0 but under 0.2	16.4
Adjusted gap gt 0.2 but under 0.8	13.9
Adjusted gap gt 0.8	7.0
<i>Material well-being indicators</i>	
Neighborhood conditions -- at least 2 of 7 indicators	18.1
Fear of crime -- at least 3 of 7 indicators	19.0
Housing conditions -- at least 1 of 9 indicators	26.7
Lacks more than 4 of 8 consumer durables	16.4
Difficulty meeting at least 2 of 7 basic needs	20.0
Food insecure -- at least 1 of 5 indicators	13.5

Source: 1996 Survey of Income and Program Participation, waves 1 to 8.

¹Compares income in month 32 (the final month in wave 8) to the poverty threshold in that month.

²Compares summed income over the 4 months in wave 8 to summed poverty thresholds.

³Compares summed income over the 12 months in waves 6-8 to summed poverty thresholds.

⁴Compares summed income over 32 months of the panel to summed poverty thresholds.

Table 3. Components of Material Well-Being by Various Indicators of Poverty: 1996-1998

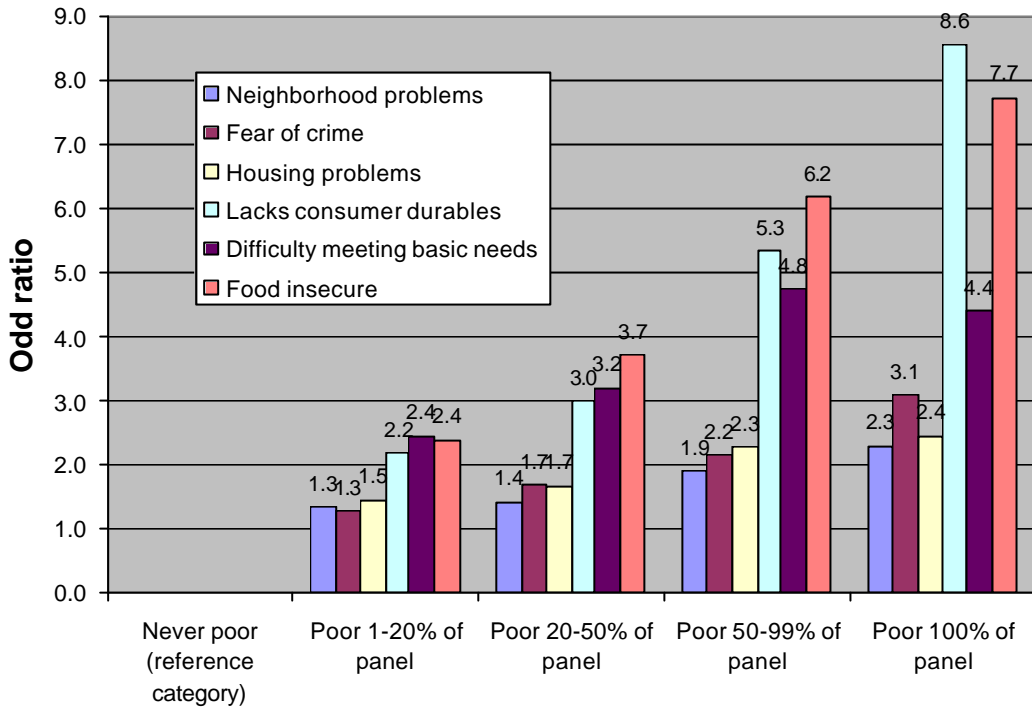
	Material Well-Being Indicators					
	Lacks more than 4 of 8 consumer durables	Housing conditions -- at least 1 of 9 indicators	Fear of crime -- at least 3 of 7 indicators	Neighborhood conditions -- at least 2 of 7 indicators	Difficulty meeting at least 2 of 7 basic needs	Food insecure -- at least 1 of 5 indicators
Poverty Using Alternative Time Horizons						
Monthly poverty status (month 32)*						
Poor	37.6	42.7	29.2	27.1	43.0	38.4
Not poor	10.0	26.3	16.7	16.9	18.5	11.6
Poverty status in wave 8 of the panel*						
Poor	38.3	43.4	29.8	28.0	43.9	38.9
Not poor	10.1	26.3	16.7	16.9	18.5	11.7
Annual poverty status (waves 6-8 of the panel)						
Poor	40.7	45.9	31.6	28.7	46.2	41.9
Not poor	10.1	26.2	16.7	16.9	18.6	11.7
Proportion of time poor						
Poor 100 % of the panel	51.0	48.8	36.1	33.5	47.0	45.6
Poor 50% to under 100 % of the panel	36.2	45.5	29.7	27.2	47.8	40.4
Poor 20% to 50% of the time	22.8	36.4	23.5	22.7	35.7	27.5
Poor up to 20% of the time	15.3	32.0	18.7	20.2	28.1	17.5
Never poor	7.4	23.8	15.3	15.5	14.6	8.5
Number of poverty spells						
3+	33.0	42.9	26.9	27.2	48.3	35.8
2	29.3	41.7	25.7	24.7	44.2	36.5
1	25.5	36.9	24.4	23.8	33.1	25.8
Average monthly income to poverty ratio during panel						
Under 1.0	42.1	47.4	32.9	30.0	48.2	43.2
1.0 to 2.0	22.5	35.9	23.5	22.8	33.9	25.9
2.0 to 3.0	11.5	28.6	18.0	18.5	22.6	12.7
3.0 to 4.0	6.2	23.7	15.5	15.8	15.7	8.3
4.0 to 5.0	4.5	21.0	12.8	14.6	10.2	5.0
over 5.0	2.7	18.8	11.0	11.1	5.7	2.7
Poverty gap						
Income \$300 or more below poverty	46.0	51.0	33.7	32.3	51.7	46.4
Income within \$300 of poverty	34.1	40.1	28.6	25.0	39.6	34.5
Income over poverty by more than \$300	8.9	25.5	16.1	16.5	17.5	10.6

*The Material Well-Being topical module is administered in wave 8 of the SIPP instrument.

Note: Data are weighted. N= the number of people with valid wave 8 data on material well being indicators.

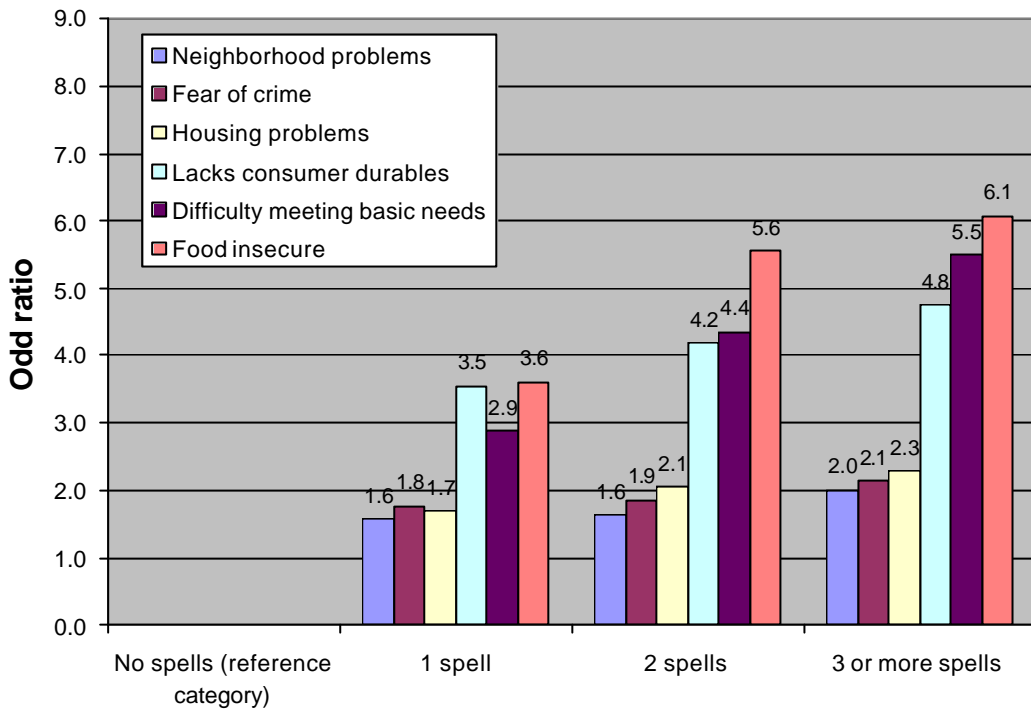
Source: 1996 Survey of Income and Program Participation, waves 1 to 8.

Figure 1. Odds of Experiencing Material Hardship by Type of Hardship and Proportion of Time Poor



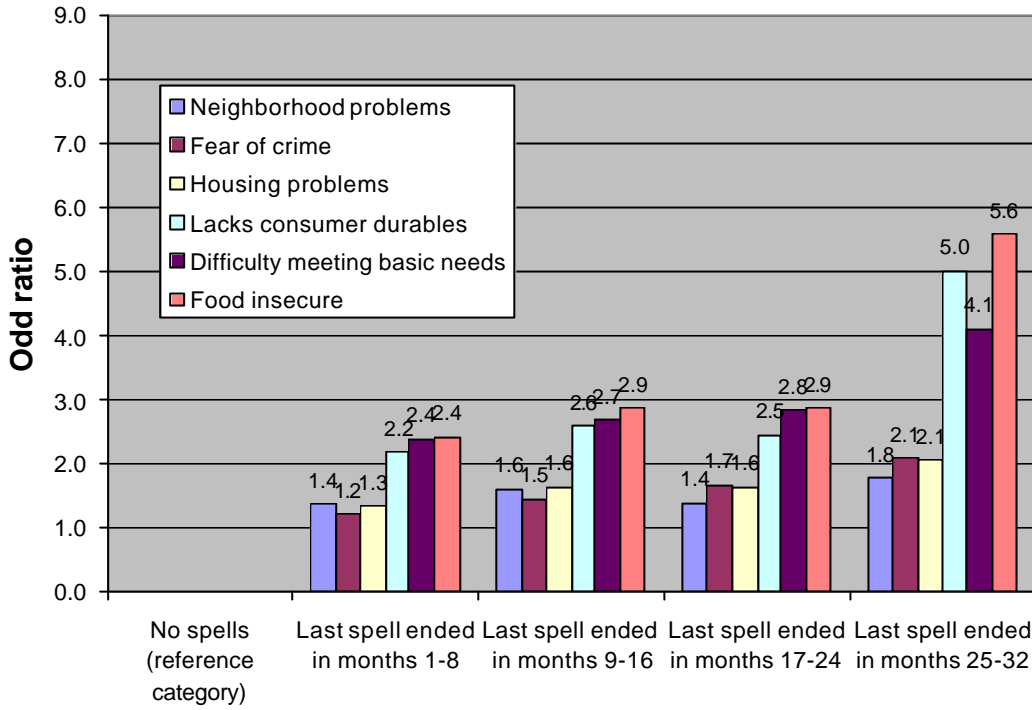
Source: 1996 Survey of Income and Program Participation, waves 1-8.

Figure 2. Odds of Experiencing Material Hardship by Type of Hardship and Number of Poverty Spells



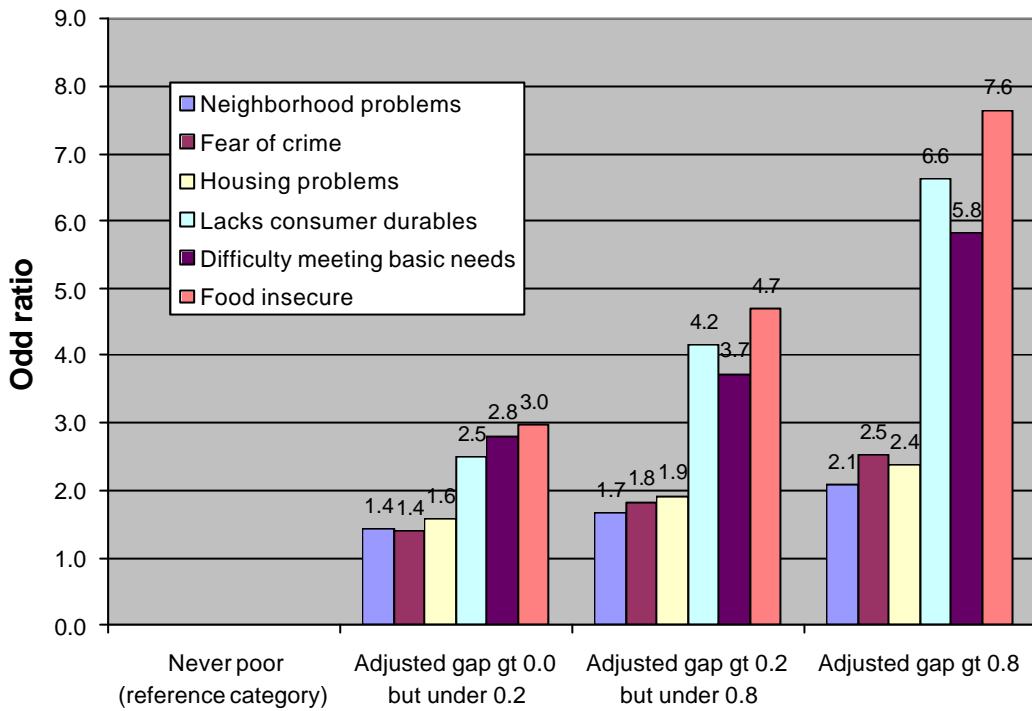
Source: 1996 Survey of Income and Program Participation, waves 1-8.

Figure 3. Odds of Experiencing Material Hardship by Type of Hardship and Recency of Poverty Spell



Source: 1996 Survey of Income and Program Participation, waves 1-8.

Figure 4. Odds of Experiencing Material Hardship by Type of Hardship and Poverty Gap



Source: 1996 Survey of Income and Program Participation, waves 1-8.