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The Psycho-Social Processes Linking Income and Volunteering: Chronic Financial Strain and Well-Being

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The positive effect of income on volunteering found in many studies is conventionally explained in utilitarian terms: volunteer work is "costly" or demands "resources." This explanation overlooks important sociopsychological processes. By situating the income-volunteering relationship within the stress process framework, we develop a theory that traces the influence of income on chronic financial strain which in turn affects subjective well-being, which functions as a psychological resource for volunteers. Data taken from two waves of the National Survey of Midlife in the United States confirm this theory: household income has no direct effect on volunteering once chronic financial strain and two measures of subjective well-being—social and eudaimonic—are taken into account.

KEY WORDS: economic sociology; financial strain; income; mental health; volunteering; well-being.

INTRODUCTION

Volunteer work consists of the provision of labor to assist others, typically through a voluntary association or nonprofit organization, without monetary reward. Devoting a few hours a month to taking care of others suggests that the most valuable resource for a volunteer is spare time. There is little reason to think that one's income plays much of a role in the decision to volunteer. Yet survey data consistently show that even controlling for characteristics associated with income, such as education and employment, volunteers earn more than nonvolunteers. For example, a recent study of the United States population (sample size $N = 233{,}901$) showed that household income was linearly and positively related to the chances of volunteering even with education, age, race, employment, marital status, and parental status controlled (Rotolo and Wilson 2012).

After reviewing the economic and sociological approaches to this matter, we conclude that neither discipline has developed a very convincing theory as to why poor people are less likely to volunteer. We turn to social psychology for a more promising approach because psychologists have expressed their skepticism about utilitarian approaches to the problem—"people do not volunteer because they earn high salaries" (Penner 2004:649)—and because studies have suggested that there is something about the experience of economic hardship that ill-disposes people to think about volunteering. For example, a well-known report on philanthropy in the

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United States showed that people who were worried about having enough money for the future were much less likely to volunteer (Independent Sector 2001:7).

The rest of the article proceeds as follows. We first review the economic and sociological literature on income and volunteering. Next, we present a conceptual framework that formalizes an alternative social psychological theory highlighting the role of psychological resources in the decision to volunteer. This framework consists of three parts. In the first, we draw a link between income and financial strain. We argue that the relevance of income for volunteering lies in *how it is perceived*. Income that is seen as inadequate to one's needs indicates "economic hardship," which is considered a major stressor in social life. The second part of the framework draws a link between economic hardship or financial strain and subjective well-being, building on an extensive literature on the psychological impact of stressors. The third part of the framework links subjective well-being to volunteering. To establish this link, we draw on experimental and survey data showing that volunteers enjoy better mental health than nonvolunteers and that high levels of well-being predict volunteer behavior (Stukas et al. 2014:4). We then describe the methods we use to test the mediation theory, list the variables employed in the analysis, and identify the data set from which we draw them. This is followed by a description of the results and a more general discussion of our main findings.

THE ROLE OF INCOME IN CONVENTIONAL THEORIES OF VOLUNTEERING

Economists claim that volunteering is based on utility-based decision making, that individual choices to minimize expected costs and maximize benefits guide the decision to volunteer (Butricia, Johnson, and Zedlewski 2009). Based on this assumpion, they have developed not one but two theories as to how income and volunteering are related. The first assumes that each added hour of volunteer work means less time for paid work and a subsequent loss of income, and the higher the hourly wage the greater the financial loss. This is called the "low-cost hypothesis" because people are expected to give their time more freely to others if their opportunity costs are low (Bekkers 2005). Hence, a negative relationship should exist between income and volunteering. The second theory defines volunteering as a "conscience good": an activity that gives pleasure in the form of a "warm glow" of good feeling that results from being generous to others. If volunteer work is an object of consumption or a "normal good" those with more disposable income should consume more of it (Freeman 1997). In short, "volunteering should behave like any other source of utility, increasing as income rises" (Bauer, Bredtman, and Schmidt 2012). Economists acknowledge that "The relative importance of the two effects is uncertain" (Andreoni, Gale, and Scholz 1996:7).[3] In cross-sectional analysis it is impossible to distinguish between the "consumption" and "investment" model.

[3] It should be noted that economists also propose an "investment model" of volunteering in which income and volunteering are positively linked, but the argument in this case is that volunteering is the cause of subsequently higher incomes (Hackl, Halla, and Pruckner 2007).

Some sociologists agree with economists that volunteering can be a "symbolic good" the rich can more easily afford to buy (Wilson and Musick 1997). Given the same rewards, "volunteering is more attractive to the resource-rich than to the resource-poor" (Musick and Wilson 2008:113). For the most part, however, sociologists view the relationship between income and volunteering through the lens of social status. A well-known monograph on women's volunteering explains the greater propensity of middle- and upper-middle-income women to volunteer in terms of status affirmation . Likewise, the "dominant status" theory of volunteering predicts that the volunteer population will be drawn disproportionately from those "high in income and wealth" (Smith 1994:247), the reason being higher-income people are more attractive targets for volunteer recruiters for whom income level serves as a credential or status marker. Likewise, the "resource theory" of volunteering assumes that higher income renders a person "more attractive to agencies seeking volunteer labor" (Wilson and Musick 1997:698).

The research on income and volunteering appears to support the consumption and resource theories, finding a positive relationship between level of income and volunteering (Bauer et al. 2012; Brown and Zhang 2013; Freeman 1999; Gomez and Gunderson 2003; Pho 2008; Rotolo and Wilson 2012; Wilson and Musick 1998). Occasionally, a study fails to replicate these findings (Bekkers 2005; McNamara and Gonzales 2011) or finds a negative relationship between income and volunteer hours (Choi and DiNitto 2012), but in general, the assumption is that even controlling for education and employment status, higher wage earners are more likely to volunteer.

THEORIZING THE LINK BETWEEN INCOME AND VOLUNTEERING

In this study, we propose a new theory relating income to volunteering. It has three components. The first is the link between income and financial strain. We describe how income can lead to a condition known as financial strain or economic hardship. In the second component, we argue that because financial strain is a major stressor, it has negative consequences for mental health. In the third component, we identify subjective well-being as a salient measure of mental health on the grounds that theory has associated well-being with prosocial behavior in general and studies have shown that well-being is empirically related to volunteering in particular.

First Component: Income and Financial Strain

A key element in our theory is the difference between actual income and how it is perceived in relation to needs. Income can be directly measured by a third party and is in this sense objective, but the subjective sense that one's income is inadequate cannot be directly observed (Angel et al. 2003). Financial strain, or economic hardship, is measured by asking people if they have enough money to pay bills, to buy necessities such as food and clothing, or to pay their medical bills. Unlike a question on income, a financial strain measure takes into account a person's

assessment of his or her needs. Thus, although there will naturally be some relationship between income and perceived economic hardship, they are not identical (Mirowsky and Ross 1999:549; Ross and Huber 1985; Young and Schieman 2012). For example, among families with low household incomes, young children will increase perceived financial strain. This is why, at any given level of household income, psychological discomfort is greater among couples with young children. They are an inescapable drain on the family's economic resources (Ross and Huber 1985). Furthermore, in the survey we use, respondents are asked to assign themselves a score ranging from the "worst possible" to the "best possible" financial situation. They are thus invited to think of their financial circumstances in relation to what they imagine is realistic or feasible. To gauge the magnitude of financial strain, we therefore measure *perceived* economic distress or hardship, as originated by Pearlin et al. (1981) and used by Ross and Huber (1985) and Mirowsky and Ross (2001).

Second Component: Financial Strain and Subjective Well-Being

For the second part of our theory, linking financial strain to psychological outcomes, we draw on research into the stress process—a sequence in which a stressor precipitates stress, which in turn causes distress (Wheaton and Montazer 2010:177). Financial strain is an often-cited example of a stressor (Angel et al. 2003:537; Aneshensel 1992:20; Mirowsky and Ross 2001; Wheaton et al. 2013). If financial strain persists, it becomes a chronic stressor, which is believed to be more damaging (i.e., cause more distress) than a stressor in the form of a discrete life event such as a divorce (Avison and Turner 1988; Kahn and Pearlin 2006; Thoits 2010).

The consequences of being exposed to a chronic stressor can be physiological, such as high blood pressure, or psychological, such as depression or generalized anxiety. An extensive body of research has linked economic or financial strain to mental health outcomes (Wheaton and Montazer 2010:196). Financial strain has been shown to negatively affect people's self-perceptions, feelings of self-esteem, or personal control and to lead people to doubt their abilities and competence. Specifically, financial strain has been associated with lower levels of psychological well-being (Martin, Grunendahl, and Martin 2001), decreased trust in others (Krause 1991), dissatisfaction with life in general (Dolan, Peasgood, and Mathew 2008), depression (Kahn and Pearlin 2006; Piff et al. 2010; Thoits 2010; Young and Schieman 2012); low self-esteem (Pearlin et al. 1981); and feeling "worn down and hopeless" (Ross and Huber 1985:315).

Third Component: Subjective Well-Being and Volunteering

In recent years there has accumulated a large body of evidence showing a positive relationship between volunteering and mental health.[4] Here, we are only interested in well-being as a determinant, not a consequence, of volunteering. To establish a link between subjective well-being and volunteering, we draw on the

[4] For recent surveys, see McDougle et al. (2014) and Wilson (2012) and, for older adults, Hao (2008) and Morrow-Howell (2010).

"personal well-being model" of volunteerism (Thoits and Hewitt 2001:116), the basic premise of which is that "individuals' personal resources and well-being" facilitate their involvement in volunteer work. It assumes that people who feel good about themselves, who believe that others see them positively, and that their life has meaning and purpose are more likely to feel good about other people, interpret social situations optimistically, and as a result are disposed to be tolerant of and generous toward others.

Experiments have shown that when subjects are induced into a positive mood, they are more likely to later exhibit prosocial behavior. Similar findings have been produced outside the laboratory, for example in work settings.[5] In observational studies, subjective well-being has been implicated as a predictor of volunteering (Mellor et al. 2009:145; Stukas et al. 2014:4). Thus, happy people are more likely to volunteer (Aknin, Dunn, and Norton 2012:349; Huppert 2009:154; Plagnol and Huppert 2010:164) and anxious people are less so (Handy and Cnaan 2007). Depression inhibits volunteering (Gracia and Herroro 2003; Thoits and Hewitt 2001), whereas greater life satisfaction and higher self-esteem encourage it.

One problem with these studies is a lack of consistency in the assessment of well-being due to failure to use measures that have wide acceptance in the social sciences (Mellor et al. 2009). Son and Wilson (2012) go some way toward rectifying this problem by employing standardized measures of well-being that have been used in a number of studies outside the area of volunteer research. Using longitudinal data, they found selection effects for social, eudaimonic, and hedonic well-being. People who feel more connected to their community, who experience higher psychological well-being, and who are more satisfied with their lives are more likely to volunteer. Overall, the research supports the theory that working as a volunteer is contingent on the adequacy of personal resources, calling for motivation and the expenditure of energy that is in short supply among the psychologically distressed (Mellor et al. 2009:155).

In summary, the theory we use in the third component of the study predicts that personal well-being will select individuals into volunteer activities. And yet there is some possibility that the distress associated with financial strain could lead to an increase in volunteering rather than acting as a deterrent to it. Volunteer work could operate as a coping mechanism. It might be an attempt to "increase one's self-esteem and feelings that one is valued in society" (Penner 2004: 652). Similarly, volunteering might be a compensation mechanism whereby people in poor mental health turn to volunteerism as a means of overcoming low morale and restoring self-esteem (Li and Ferraro 2005:70). In these cases, there would be a negative relationship between subjective well-being and volunteering.

ANALYTICAL STRATEGY

The analytical strategy used in this study is a path analysis of panel data gathered in 1995 and 2005 consisting of the following connections:

[5] For a description of these studies, see Carlson, Charlin, and Miller (1988), De Neve et al. (2013), Konrath (2014).

Household Income → Chronic Financial Strain → Subjective Well-Being → Volunteering

The variables used in the analysis will be described in detail below, but here it is necessary to outline the reasons why each was chosen. Household income, the exogenous variable measured in 1995, is favored over personal income because it is a more accurate gauge of the monetary resources available to the survey respondent.

The chronic financial strain measure combines data from both waves of the panel study. It compares those who reported high levels of financial strain in both waves with those who never reported financial strain or those who reported strain in only one wave. Many studies linking financial strain to subjective well-being and other psychological outcomes assume that, by definition, the strain is pervasive and enduring. However, measuring strain at two or more points in time provides a better assessment of its chronicity than a one-time measurement.

A number of studies of chronic strain have used this method of combining data from two waves to distinguish between those whose strain is long lasting from those for whom strain exists sporadically or not at all. In their study of the relationship between economic hardship and depression, Mirowsky and Ross (2001) create dummy variables for hardship in both waves: hardship present at T1 but absent at T2, hardship absent at T1 but present at T2, and hardship absent in both waves. Another study of the influence of chronic everyday discrimination on levels of E-selectin (an indication of endothelial or blood vessel dysfunction) uses two waves of data to sort respondents into three categories: those who never experienced discrimination, those who reported discrimination in both waves, and those who reported discrimination in at least one wave (Friedman et al. 2009). And in their longitudinal study of the influence of social strain between family and friends on diurnal cortisol rhythms over a 10-year period, Friedman et al. (2012) calculate a separate strain score for each wave and on this basis construct a combined score for the two waves by dividing the scores from each wave into quartiles. Of course this method of measurement does not fully tap variations in the frequency of strain between waves of data collection, but it nevertheless provides insights that are not available from strain measured at one time. In our case, we use information on financial strain reported by the same respondents in two waves of data collection to construct an ordinal variable measuring chronic financial strain where those who scored in the top quartile of the scores on the financial strain scale in both waves are classified as high in chronic financial strain. The variable is ordinal in the sense that strain in the second wave is considered less stressful than strain over both waves, but more stressful than strain only in the first wave (because it is more recent) which is, in turn, more stressful than no strain in either wave.

To measure subjective well-being, we use three scales that have been used and validated in many studies. To measure affective states, we use a scale of *hedonic* well-being. This is a state of being happy or experiencing pleasure. It consists of feeling good about one's situation in life (Ryan and Deci 2001). The second scale measures *eudaimonic* well-being. This is a state of self-realization, a feeling that one is fulfilling or realizing one's true nature. For example, a person feels deeply that he or she has a purpose in life (Ryff and Singer 2008). This scale has been used in more

than 350 publications (Ryff 2014). The third scale is *social* well-being, a measure of how people see their relationship to others: whether they feel accepted by others, the extent of the contribution they make to the welfare of others, and how much they have in common with members of the wider community (Keyes 1998). This measure is an important addition to the assessment of mental health because it extends the eudaimonic tradition of well-being from the intrapersonal focus of Ryff's model to the interpersonal realm (Gallagher, Lopez, and Preacher 2009).

DATA AND METHODS

We use the national random-digit-dialing (RDD) sample from the National Survey of Midlife in the United States (MIDUS) two-wave panel survey. Eligible respondents were noninstitutionalized, English-speaking adults in the coterminous United States between ages of 25 and 74 (we include a few individuals whose age was between 20 and 24). The baseline national RDD sample was selected in 1995 from working telephone banks. Males between 65 and 74 were oversampled. The respondents participated in a computer-assisted telephone interview and also completed two self-administered questionnaire booklets mailed to their households. The sample consists of 3,487 respondents. The response rate estimates are 70% for the telephone interview, 86.8% for the completion of the self-administered questionnaires, and 60.8% for the combined response (i.e., .700 x .868).

A follow-up survey of the original MIDUS sample was conducted between 2004 and 2006. The longitudinal retention rate of the national RDD sample is 71%, adjusting for mortality of the respondents. Multivariate logit regression of attrition revealed that those who failed to respond to the second wave were more likely to be nonwhite males with low education and income level.

In light of the attrition rate between waves, we employ multiply-imputed data throughout our analyses (Graham 2009). Multiple imputation was performed using a method of chained equations in which missing values of each variable are predicted by an equation that employs a set of predictors (Royston 2004). Then parameter estimates are produced by averaging the set of analyses on the multiply-imputed data sets, their standard errors being calculated on the basis of the average of the standard errors over the set of analyses and the between-analysis parameter estimation variation (Muthén and Muthén 2014). The 10 imputed data sets were weighted to correct for unequal stratified probabilities of household and within-household respondent selection at the baseline. In addition, a sample weight poststratified the sample to match the proportions of adults in the 1995 Current Population Survey with regard to age, gender, race, education, marital status, metropolitan statistical area (i.e., metropolitan and nonmetropolitan), and region (Northeast, Midwest, South, and West). The final sample count of the multiply-imputed data sets is 3,257 excluding those who died between the two waves.

To conduct the path analysis and measure mediation effects, we test structural equation models using Mplus 7.3. We employ the MLR (maximum likelihood estimation with robust standard errors) estimator that generates a correct asymptotic matrix of the estimates without relying on the assumption of normality

(Asparouhov and Muthén 2003; Kaplan, Kim, and Kim 2009:594). This estimator is fitted to deal with nonnormal categorical endogenous variables such as the ordinal (i.e., chronic financial strain) and binary (i.e., volunteer status) measures that the present study employs.

VARIABLES

We describe variables following the standard error of the mean (SEM) path analytic flow of exogenous, intermediary endogenous, and final endogenous measures.

Exogenous Measure

Logged household income is a variable based on a measure of total household income in the first wave, a continuous variable summing *all* types of earnings in the past 12 months received by a respondent and his/her household members. The mean of the raw variable is $54,784 with a standard deviation of $45,919. Due to its highly skewed nature, the logged household income variable is employed in the analysis.

Intermediary Endogenous Measures

Chronic financial strain is an ordinal variable summing up responses to four measures of financial strain in two waves of data collection. The first asks a respondent to rate his/her financial situation at the time of interview from (0) the best possible to (10) the worst possible (reverse coded). The second asks a respondent to rate the amount of control over his/her financial situation at the time of interview from (0) very much control to (10) no control at all (reverse coded). The third probes if a respondent and his/her family had (0) more money than needed, (1) just enough money, or (2) not enough money. The last queries the difficulty level of paying monthly bills from (0) not at all difficult to (3) very difficult. Considering that the response categories of the relevant items vary, we first standardized each item and then created a summated scale from which we formed a quartile variable. Based on the quartile variables from each wave, we created an ordinal measure of chronic financial strain. Assuming that those belonging to the highest quartile are under the most severe strain, we made response categories of the ordinal measure as follows: (1) no financial strain, (2) past strain (highest quartile in wave 1), (3) concurrent strain (highest quartile in wave 2), and (4) chronic financial strain (highest quartile in both waves).

Hedonic well-being is measured by six questions in which respondents are asked how much time during the past 30 days (all, most, some, a little, or none of the time) they felt cheerful, in good spirits, extremely happy, calm and peaceful, satisfied, and full of life, and by a single life-satisfaction question.

Eudaimonic well-being is measured by six scales: autonomy, environmental mastery, positive relationship with others, self-acceptance, purpose in life, and personal growth.

Social well-being has five components: social acceptance, social actualization, social contribution, social coherence, and social integration. (The well-being scales are shown in detail in Appendix A.)

The internal consistency (α) of the three measures of well-being in the two waves ranged from .78 to .91. The scales are related to each other but independent: the correlation between eudaimonic and social well-being factors in 1995 is 0.54 ($p < .001$), between eudaimonic and hedonic well-being factors 0.58 ($p < .001$), and between social well-being and hedonic well-being factors 0.38 ($p < .001$).

Final Endogenous Measure

Volunteer status is based on a survey question asking "On average, about how many hours per month do you spend doing formal volunteer work of any of the following types?—(1) Hospital or nursing home; (2) School or other youth-related volunteer work; (3) Political organizations or causes; or (4) Any other organization." Given that these response categories are limited in scope and detail (e.g., religious volunteering is not identified), we use a dichotomous variable indicating volunteer status where 0 = Not volunteered at all and 1 = Volunteered.

Control Variables

Because changes in volunteering, mental health, and chronic financial strain could have been induced by some other variables to which they are jointly related, we use a number of controls in our models. Higher education groups enjoy better health as do those who are employed and those who are not members of minority groups (George 2010; Horwitz 2010:11), factors which are also related to volunteering (Musick and Wilson 2008). Other factors positively related to both volunteering and mental health are frequency of church attendance (Hackney and Sanders 2003; Musick and Wilson 2008) and physical health (Musick and Wilson 1997; Ryan and Deci 2001). Previous research has also shown that both psychological well-being and volunteering tend to peak in the middle stages of life (Musick and Wilson 2008; Ryff 1989:1076) and we therefore control for age. Women enjoy better mental health than men (Ryff 1989:1076) and they are also more likely to volunteer (Musick and Wilson 2008) and we therefore control for gender. Married people tend to report better psychological well-being (Ryff 1989:1077) and they are more likely to volunteer and we therefore control for marital status. Part-time workers are more likely to volunteer than either those outside the labor force or full-time workers (Musick and Wilson 2008:150) and thus we control for employment status taking outside the labor force as the reference category.

Age A continuous variable ranging between 20 and 74 (even though the survey designed age range to be 25–74, it kept some respondents aged 20–24).

Gender A dichotomous variable where 1 = Female, 0 = Male.

Race A dichotomous variable where 1 = White, 0 = Other.

Marital status A dichotomous variable where 1 = Married, 0 = Not married.

Education A variable indicating the highest educational grade of the respondent: (1) some grade school to some high school, (2) General Educational Development (GED) or high school diploma, (3) some college (no bachelor's degree), or (4) bachelor's degree or more advanced degree.

Full-time employment Where 1 = worked full time (35+ hours/week) at the time of interview and 0 = other.

Part-time employment Where 1 = worked part time (less than 35 hours/week) at the time of interview and 0 = other.

Church attendance A variable measuring frequency of attending religious service where 1 = never, 2 = less than once a month, 3 = one to three times a month, 4 = about once a week, and 5 = more than once a week.

Physical health A self-evaluation of physical health status where 1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent.

RESULTS

Table I shows the means and percentages for the variables used in the analysis together with correlations between all variables (including controls) and volunteer status at T2, the three measures of well-being at T2, and chronic financial strain. Thirty-eight percent of MIDUS respondents reported volunteering in 1995 and 43% in 2005.[6]

Nearly two-thirds (60%) of the MIDUS respondents report no chronic financial strain at all. Fourteen percent scored in the highest quartile of the financial strain measure in both waves, 12% reported strain only in the first wave, and 14% reported strain only in the second wave. The average age of the MIDUS respondents at baseline was 43, 55% were female, 86% white, 68% married, 64% were employed full time, and 19% part time. On a scale of 1–4, the mean education level was 2.8, somewhere between high school diploma and some college; on a scale of 1–5, the mean church attendance rate was 2.8, which is close to one to three times a month; and on a scale of 1–5, the mean self-reported health status was 3.5, indicating a health status between good and very good.

The third column of the table reports correlations with volunteer status in 2005. The correlation with volunteer status in 1995 is quite strong (0.35***). Volunteer status in 2005 is also positively correlated with all three measures of well-being in both 1995 and 2005 with not much difference between the waves. The

[6] These are higher rates than those reported in Census data. For example, the Current Population Survey (CPS) supplement on Volunteering for September 2005–September 2006 reports a volunteer rate of 26.7% (U.S. Bureau of Labor Statistics 2006). This is probably due to the fact that the CPS includes people aged 16 and over, whereas MIDUS is mainly limited to people aged 25 or more and volunteer rates for young adults are low. It might also have something to do with the fact that the MIDUS sample is skewed toward more highly educated Americans who are more likely to volunteer.

Table I. Variables in the Analyses (multiply-imputed data [$N = 3{,}257$], sample weighted)

Measure	Mean (SD) or Percentage	Range	Correlation With Volunteer Status (T2)	Correlation With Social Well-Being (T2)	Correlation With Eudaimonic Well-Being (T2)	Correlation With Hedonic Well-Being (T2)	Correlation With Chronic Financial Strain
Final endogenous measure							
Volunteer status (T2)	43%	0–1	—	.16***	.13***	.06***	–.10***
Intermediary endogenous measures							
Social well-being (T1)[a]	66.23 (13.05)	16–104	.17***	.31***	.25***	.17***	–.14***
Social well-being (T2)[a]	68.32 (12.60)	24–104	.16***	—	.34***	.29***	–.17***
Eudaimonic well-being (T1)[a]	99.27 (14.24)	37–126	.12***	.29***	.33***	.25***	–.18***
Eudaimonic well-being (T2)[a]	98.50 (14.69)	38–126	.13***	.34***	—	.35***	–.19***
Hedonic well-being (T1)[a]	27.67 (5.53)	6–40	.08***	.20***	.25***	.29***	–.20***
Hedonic well-being (T2)[a]	27.90 (5.45)	8–40	.06***	.29***	.35***	—	–.20***
Chronic financial strain[b]	1.83 (1.13)	1–4	–.10***	–.17***	–.19***	–.20***	—
(1) No strain	60%	0–1	—	—	—	—	—
(2) Past strain (T1 only)	12%	0–1	—	—	—	—	—
(3) Concurrent strain (T2 only)	14%	0–1	—	—	—	—	—
(4) Chronic strain (both T1 and T2)	14%	0–1	—	—	—	—	—
Exogenous measure							
Logged household income (T1)	10.60 (0.87)	6.21–12.61	.17***	.15***	.16***	.10***	–.37***
Controls (T1)							
Age	42.82 (12.48)	20–74	–.06***	.04*	.03	.14***	–.14***
Female	55%	0–1	.07***	–.07***	–.06**	–.00	.06***
White	86%	0–1	.06**	.08***	.07***	.07***	–.11**
Married	68%	0–1	.12***	.05**	.04*	.05**	–.16***
Education	2.80 (0.96)	1–4	.26***	.23***	.22***	.06***	–.15***
Full-time employment	64%	0–1	.02	.05**	.05**	.00	–.03
Part-time employment	19%	0–1	.02	.02	.01	–.04	.02
Church attendance	2.76 (1.33)	1–5	.15***	.05**	.04*	.06***	–.02
Physical health	3.51 (0.97)	1–5	.10***	.29***	.27***	.30***	–.20***
Volunteer status	38%	0–1	.35***	.12***	.08***	.04*	–.04*

[a]See Appendix A, [b]Chronic financial strain is an ordinal variable where 0 = no strain in either T1 or T2, 1 = past strain in only T1, 2 = concurrent strain in only T2, 3 = chronic strain in both T1 and T2. The criterion of financial strain is if a respondent's score of financial strain belongs to the highest quartile of the distribution. The significance levels of pairwise correlations are as follows: *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed).

relationship with social well-being is strongest. Volunteering at T2 is negatively related to chronic financial strain (–0.10***) but positively related to household income at T1 (0.17***). As far as control variables are concerned, older respondents are less likely to volunteer, but otherwise all the control variables are positively related to volunteer status, with the exception of employment status, which is insignificant.

The fourth column of Table I shows the correlation between all the variables in the model and social well-being at T2. We see that household income is positively related to social well-being (0.15***), but chronic financial strain is negatively related. As far as control variables are concerned, social well-being is higher among the more highly educated, married, frequent churchgoers, full-time employed, white, and healthier respondents. Higher social well-being scores were also more likely to be reported by those who were volunteering. Females reported lower levels of social well-being.

The fifth column reports correlations with eudaimonic well-being at T2. The results are very similar to those for social well-being, albeit the correlation with volunteer status at T2 is somewhat weaker and the correlation with chronic financial strain is somewhat stronger. Older respondents have higher eudaimonic well-being scores and, unlike social well-being, there is no correlation with age.

The sixth column reports correlations with hedonic well-being at T2. The correlation with volunteering at T2 is weaker, but otherwise the results are similar to those reported in the previous two columns with some exceptions among the control variables: hedonic well-being is not related to gender or employment.

The final column in Table I reports correlations with chronic financial strain. The higher the household income at baseline, the less likely was the respondent to report chronic financial strain (–0.37***). Chronic financial strain is negatively related to all measures of well-being at both T1 and T2. All control variables are negatively related to chronic financial strain with the exception that women are more likely to report strain than men and the coefficients for employment status and church attendance are insignificant. Only with multivariate analysis will it be possible to see if these factors help determine chronic strain when income is controlled.

Table II-1 shows the results (standardized coefficients) for the SEM path analysis. As expected and as Model 1 shows, more household income means less chronic strain (–0.31***). Controlling for income, chronic financial strain is less likely to be reported by respondents in good physical health and by older respondents and is inversely related to social well-being at T1. Model 2 shows that household income is not directly related to social well-being at T2, indicating that its influence on mental health is mediated by chronic financial strain. In short, MIDUS respondents who experienced economic hardship over the 10 years between surveys have poorer mental health in 2005, net of their mental health in 1995. As far as the control variables are concerned, social well-being in 2005 is positively related to level of education and physical health in 1995. Although volunteer status in 1995 is correlated with social well-being at T2 (see Table I) it is not related to social well-being at T2 in the multivariate model probably because the model includes the lagged effect of social well-being at T1 (0.24***). Model 3 reports the estimates for the final endogenous variable: volunteer status in 2005.

Table II-1. SEM of Chronic Financial Strain, Social Well-Being, and Volunteering

	Model 1 Chronic Financial Strain	Model 2 Social Well-Being at T2	Model 3 Volunteer Status at T2
Exogenous measure			
Logged household income	–.31***	.01	.04
Intermediary endogenous measures			
Social well-being at T1	–.06**	.24***	—
Social well-being at T2	—	—	.09**
Chronic financial strain	—	–.06**	–.04
Controls			
Age	–.13***	.04	–.07**
Female	.04	–.04	.07*
White	–.04	.05	.04
Married	.01	–.02	.04
Education	–.03	.17***	.15***
Full-time employment	–.01	.01	–.00
Part-time employment	.01	.01	.01
Church attendance	–.00	.02	.06**
Physical health	–.12***	.16***	.01
Volunteer status at T1	.01	.04	.28***
Model fit indices			
CFI		0.998	
TLI		0.922	
RMSEA		0.026	
R^2	0.176	0.201	0.192
N		3,257	

Sample weighted; All estimates standardized; CFI = Comparative Fit Index, TLI = Tucker-Lewis Index, RMSEA = Root Mean Square Error of Approximation; MLR (maximum likelihood estimation with robust standard errors) estimator employed to deal with ordinal (chronic financial strain) and binary (volunteer status) measures; The analyses employed 10 multiply-imputed data sets; *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed).

There is no direct effect of household income. (Recall that the zero-order correlation between 1995 household income and volunteer status in 2005 was 0.17***). Social well-being is positively related to volunteer status (0.09**). There is no direct effect of chronic financial strain on volunteer status. (Recall that the zero-order correlation between chronic financial strain and volunteer status at T2 was –0.10***). As far as the control variables are concerned, the strongest association with volunteer status at T2 is volunteer status at T1 (0.28***). The remaining control variables behave as might be expected from conventional analyses of volunteerism: MIDUS respondents who were volunteering in 2005 were more likely, at baseline, to be younger, female, highly educated, and frequent churchgoers.

Table II-2 reports the SEM results where eudaimonic well-being is the mediating variable. The results are very similar to those for social well-being. Logged household income is negatively related to chronic financial strain, chronic financial strain is negatively related to eudaimonic well-being which is, in turn, positively related to volunteer status at T2. To save space we will not comment on the control variables in detail, but the results are very similar to those shown in Table II-1.

Table II-3 reports the SEM results where hedonic well-being is the mediating variable. We see that logged household income is negatively related to chronic

Table II-2. SEM of Chronic Financial Strain, Eudaimonic Well-Being, and Volunteering

	Model 1 Chronic Financial Strain	Model 2 Eudaimonic Well-Being at T2	Model 3 Volunteer Status at T2
Exogenous measure			
Logged household income	–.30***	–.00	.04
Intermediary endogenous measures			
Eudaimonic well-being at T1	–.10***	.24***	—
Eudaimonic well-being at T2	—	—	.05*
Chronic financial strain	—	–.10***	–.04
Controls			
Age	–.13***	.07**	–.07**
Female	.04	.01	.07*
White	–.04	.04	.04
Married	.02	–.02	.04
Education	–.03	.10***	.16***
Full-time employment	–.01	.04	–.00
Part-time employment	.01	.02	.01
Church attendance	–.00	.01	.07**
Physical health	–.10***	.14***	.02
Volunteer status at T1	.01	.02	.28***
Model fit indices			
CFI		0.999	
TLI		0.986	
RMSEA		0.011	
R^2	0.181	0.175	0.188
N		3,257	

Notes are the same as those for Table II-1.

financial strain, which is negatively related to hedonic well-being. But the next link in the chain is missing: hedonic well-being at T2 and volunteer status at T2 are not related.

Table III displays the total, direct and indirect effects for each of the three models. In the first model, where social well-being is the mediator, there is no direct effect of income on volunteering at T2. Instead, there is an indirect effect through chronic financial strain and an additional indirect effect through chronic financial strain, to social well-being and thence to volunteering at T2. The second model that has eudaimonic well-being as a mediator displays results identical to the first. The third model shows that the effect of income is mediated by chronic financial strain on volunteering at T2, but there is no indirect effect through hedonic well-being.

Income Compared With Education

Although we have identified a pathway linking household income to volunteering through chronic financial strain and mental health, it is important to put these findings in perspective. First, we have no intention of exaggerating the significance of income when it comes to volunteering. Overall, its influence is slight in comparison with other "resources" such as education. In subsidiary analyses we compared the total, direct and indirect effects of education and income. The total effect of education through social well-being was .152, compared to a total effect of income

Table II-3. SEM of Chronic Financial Strain, Hedonic Well-Being, and Volunteering

	Model 1 Chronic Financial Strain	Model 2 Hedonic Well-Being at T2	Model 3 Volunteer Status at T2
Exogenous measure			
Logged household income	–.31***	–.01	.04
Intermediary endogenous measures			
Hedonic well-being at T1	–.11***	.20***	—
Hedonic well-being at T2	—	—	.03
Chronic financial strain	—	–.11***	–.05
Controls			
Age	–.12***	.14***	–.07**
Female	.04	.02	.07*
White	–.04	.01	.04
Married	.01	.01	.04
Education	–.05	–.02	.17***
Full-time employment	–.01	.02	–.00
Part-time employment	.01	–.02	.01
Church attendance	.00	.02	.07**
Physical health	–.09***	.21***	.02
Volunteer status at T1	.01	.00	.28***
Model fit indices			
CFI		0.999	
TLI		0.964	
RMSEA		0.014	
R^2	0.187	0.163	0.183
N		3,257	

Notes are the same as those for Table II-1.

through social well-being of .055** (see Table III). Similar differences were found with respect to eudaimonic well-being. In short, the total effect of education on volunteering was about three times stronger than that of income.

Nevertheless the analysis of indirect effects shows that the influence of income is mediated by chronic financial strain and social and eudaimonic well-being, whereas the influence of education is mediated only by social or eudaimonic well-being—and most of the effect of education on volunteering is direct, through neither of the mediators. Thus, although income has only a weak direct effect on volunteering it also has significant indirect effects through both chronic financial strain and social and eudaimonic well-being. The size of the indirect effects are .016 (via social well-being) and .014 (via eudaimonic well-being and hedonic well-being), indicating that as far as these indirect effects are concerned, the influence of income is comparable to (.017, via social well-being) or greater (.005 via eudaimonic well-being and –.001 via hedonic well-being) than education.

DISCUSSION

In a recent review of volunteering scholarship Wilson (2012:178) calls for more interdisciplinary research. He suggests that the economic study of the rewards and costs of volunteer work could be embedded in a psychological theory that subjective dispositions, such as empathy, condition the rationality of certain behaviors. In this

Table III. Standardized Total, Direct and Indirect Effects of 1995 Household Income on 2005 Volunteering

1995 Household Income to 2005 Volunteering	β
1995 Household Income to 2005 Volunteering (Mediator:1995 Social Well-Being)	
1995 HI to 2005 V (Total)	0.055**
1995 HI → 2005 V (Direct)	0.039
1995 HI → 2005 SW → 2005 V (Indirect)	0.000
1995 HI → CFS → 2005 V (Indirect)	0.014*
1995 HI → CFS → 2005 SW → 2005 V (Indirect)	0.002*
1995 Household Income to 2005 Volunteering (Mediator:1995 Eudaimonic Well-Being)	
1995 HI to 2005 V (Total)	0.053**
1995 HI → 2005 V (Direct)	0.039
1995 HI → 2005 EW → 2005 V (Indirect)	0.000
1995 HI → CFS → 2005 V (Indirect)	0.013*
1995 HI → CFS → 2005 EW → 2005 V (Indirect)	0.001*
1995 Household Income to 2005 Volunteering (Mediator:1995 Hedonic Well-Being)	
1995 HI to 2005 V (Total)	0.056**
1995 HI → 2005 V (Direct)	0.041
1995 HI → 2005 HW → 2005 V (Indirect)	0.000
1995 HI → CFS → 2005 V (Indirect)	0.014*
1995 HI → CFS → 2005 HW → 2005 V (Indirect)	0.001

HI = Household Income, V = Volunteering, SW = Social Well-Being, EW = Eudaimonic Well-Being, HW = Hedonic Well-Being, CFS = Chronic Financial Strain. The SEM software (Mplus) does not provide indirect effects estimates when using multiply-imputed data; thus, standardized coefficients were averaged across 10 multiply-imputed data; *z*-scores were also averaged across the 10 data sets to produce two-tailed *p*-values for β estimates. *$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed).

study, we examine not the moderating effects of dispositions but their mediating role: do they help explain the link between income and volunteering?

We have argued that utilitarian theories of why income is positively related to volunteering are inadequate because they misconstrue the psychology behind volunteerism by relying too heavily on the assumption that would-be volunteers engage in a cost–benefit analysis of the activity before making up their minds to volunteer. We endorse the theory that volunteer work is a productive activity that consumes resources, but we contend that these should include psychological resources. The resource theory is thus enriched by incorporating a subjective element.

Drawing on the personal well-being model of volunteering, we identify subjective well-being as a mechanism linking chronic financial strain to volunteering. This decision is based on experimental evidence and previous observational studies showing that well-being encourages people to act prosocially. We find that volunteering is most closely related to social well-being. This is hardly surprising considering that the scale includes items such as "I have something valuable to give to the world." Eudaimonic well-being is also related to volunteering, and this is also to be expected given that the scale contains items that measure environmental mastery, such as "I am good at managing the responsibilities of daily life." Hedonic well-being was lower among those experiencing chronic financial strain, but this did not translate into less volunteering because hedonic well-being is unrelated to it. This scale consists of items measuring positive affect and life satisfaction. It is a study of mood and in this sense might be measuring psychological processes that are more fleeting and changeable, whereas the other scales

tap more stable self-conceptions, the kind of attitudes more likely to support regular engagement in volunteer work.

Although we focused on three measures of well-being in our analysis, it is quite possible that other psychological processes could explain the relationship between chronic financial strain and volunteering. For example, stress has been associated with feelings of loss of control over one's life (Mirowsky and Ross 2001) and this might act as an impediment to volunteering.

Because MIDUS contains a measure of mastery, we were able to test this theory. Although we found a positive association between higher incomes and mastery, we did not find a relationship between mastery and volunteering.[7] Another possible mediator was positive or negative mood, which is a widely used indicator of well-being (Mrozek and Kolarz 1998) and which might well be a link between chronic financial strain and volunteering. Using positive and negative affect scales in MIDUS, we found that neither scale was related to volunteering.

Although it is evident that psychological processes play some role in forging a relationship between income and volunteering, and although we found no direct effects of household income once well-being was controlled, there might still be more material reasons why volunteers have higher incomes. No doubt income, even when education is controlled, acts as a proxy for the possession of civic skills, knowledge, influence, and contacts (Choi and DiNitto 2012:97). Some forms of volunteering, such as serving on boards of trustees, carry with them obligations to donate money to the organization or cause and will be more accessible to the wealthy. Other forms of volunteering are closely tied to membership in clubs, societies, and voluntary associations many of which expect members to pay dues and bear other expenses. The costs associated with participating in a voluntary association would discourage the poor from volunteering (Musick and Wilson 2008:128). It is also likely that income—or what money can buy in the way of social status in the community—acts as a credential for volunteer work. People with household incomes of $75,000 a year or more are twice as likely to be asked to volunteer as people with household incomes of $25,000 or less (Musick and Wilson 2008:291). Higher incomes might also encourage stronger social integration into the community and this in turn would encourage volunteering (Penner et al. 2005). Conversely, social exclusion from the community as a consequence of low income might deter volunteering. To the extent that low income marginalizes a person from normal involvement in the community, it will undermine one's sense of belonging to the community and discourage one's willingness to perform prosocial acts on its behalf. In experiments, feelings of being rejected or excluded by others render people less likely to offer to perform volunteer tasks, possibly because it lowers empathy or decreases trust in others (Twenge et al. 2007).

LIMITATIONS

We argue in this study that people who feel insecure financially are drained of the psychological resources necessary for volunteer work. We believe the data

[7] Thoits and Hewitt (2001) also failed to find any relationship between mastery and volunteering.

support this novel interpretation of why income is associated with volunteering. We use a single measure of volunteering because of the limited range of volunteer types identified in MIDUS, but it is plausible that a more detailed measurement of types of volunteering and tasks involved in volunteering would reveal a more nuanced picture of how chronic strain is associated with volunteering showing that it is not always a deterrent. As mentioned earlier, volunteer work can function as a coping mechanism (Midlarsky 1989; Pavlova and Silbereisen 2014). One way to deal with chronic strain—to give some meaning to one's suffering—is to busy oneself with helping others. Volunteer work can also help restore beliefs in the justice and benevolence of the world to those who feel underprivileged and unfairly treated. It is common for victims, or friends or relatives of victims, of personal distress to volunteer for organizations intended to help such victims or address the underlying circumstances that lead to the distress (e.g., Mothers Against Drunk Driving). This is sometimes referred to as "altruism born of suffering." But this type of volunteer work constititutes only a fraction of all volunteer labor, most of which is a more mundane activity focusing on organizational maintenance (e.g., fund-raising), management (e.g., committee work), hands-on care (e.g., delivering Meals on Wheels), instititional support (e.g., guide at a National Park), and instruction and tutoring (e.g., coaching a sports team). It is not credible that much of this activity is the expression of a need to cope with suffering or stress.

Another limitation of the study is the fact that it is based on data gathered in two surveys conducted 10 years apart. The benefit of this data structure is that it makes possible a true measurement of chronic financial strain, but nothing is known about levels of financial strain in the years between the two waves of data gathering. Nevertheless, by constructing an ordinal variable to measure strain across the two waves, we come closer to filling this gap and showing how long-lasting strain might affect well-being. Another limitation is that with only two waves of data, we measure volunteering and well-being at T2 simultaneously. It is possible that the relationship between these two factors is recriprocal (Son and Wilson 2012). And it is also conceivable that volunteer work, through subjective well-being, makes people view their economic position more optimistically.

CONCLUSION

The tendency for higher income people to volunteer at a higher rate than low-income people is common knowledge among social scientists working in this area. In this study, we offered an alternative to utilitarian theory by placing income and volunteering within the stress processes framework. We find that income has no direct effect on volunteering, thus undermining the assumption that income comprises a material resource for the volunteer. This strategy might also be useful in other areas where resources have been identified as important for volunteering. Self-reported physical health, a frequently mentioned material resource, could also function mainly as a psychological enabler. Even time—the resource whose scarcity is most often associated with volunteering—has a psychological dimension that could influence people's readiness to engage in volunteer work. Further research

should look at other possible strains in people's lives to see if they also influence volunteerism through mental health. These could include strains experienced in the workplace, in the family, and in the fit between workplace and family. They could also include chronic strains such as the prolonged experience of gender or race discrimination.

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APPENDIX A. MENTAL HEALTH COMPONENTS AND THEIR DIMENSIONS AND SCALES

Component	Dimension (# of items)	Scale (range)	Internal Consistency (α) 1st wave	2nd wave
Hedonic Well-Being	Positive Affect (6)	• Cheerful (1–5) • Good spirit (1–5) • Happy (1–5) • Calm and peaceful (1–5) • Satisfied (1–5) • Full of life (1–5)	.91	.91
	Life Satisfaction (1)	• Life satisfaction (0–10)		
Eudemonic Well-Being	Self-Acceptance (3)	• Like most parts of my personality (1–7) • Pleased with how things turned out so far (1–7) • Feel disappointed about my achievements (1–7)	.82	.84
	Positive Relations With Others (3)	• Maintaining close relations difficult and frustrating (1–7) • Giving person, sharing time with others (1–7) • Not experienced many warm and trusting relations (1–7)		
	Personal Growth (3)	• Life has been continuous process of growth (1–7) • Challenging new experiences are important (1–7) • Gave up trying to make big improvements (1–7)		
	Purpose in Life (3)	• Some people wander aimlessly, but not me (1–7) • Don't think about future (1–7) • Feel as if I've done all there is to do in life (1–7)		
	Environmental Mastery (3)	• Demands of life often get me down (1–7) • Feel I am in charge of situation in which I live (1–7) • Good at managing responsibilities of daily life (1–7)		
	Autonomy (3)	• Influenced by people with strong opinions (1–7) • Confidence in my own opinions (1–7) • Judge myself by what I think is important (1–7)		

Appendix A. (Continued)

Component	Dimension (# of items)	Scale (range)	Internal Consistency (α) 1st wave	2nd wave
Social Well-Being	Self-Actualization (3)	• World is becoming a better place for everyone (1–7) • Society has stopped making progress (1–7) • Society isn't improving for people like me (1–7)	.78	.80
	Social Contribution (3)	• Have something valuable to give to the world (1–7) • Don't create anything worthwhile for community (1–7) • Have nothing important to contribute to society (1–7)		
	Social Coherence (3)	• World is too complex for me (1–7) • Cannot make sense of what's going on (1–7) • Easy to predict what will happen next in society (1–7)		
	Social Integration (3)	• Don't feel I belong to a community (1–7) • Feel close to other people in my community (1–7) • My community is a source of comfort (1–7)		
	Social Acceptance (3)	• People who do a favor expect nothing in return (1–7) • People don't care about other people's problems (1–7) • I believe that people are kind (1–7)		