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Volunteer Work and Hedonic, Eudemonic, and Social Well-Being

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Using two waves of panel data from the National Survey of Midlife in the United States (MIDUS), we examine the relationship between volunteer work and three dimensions of well-being: hedonic (e.g., positive mood), eudemonic (e.g., purpose in life), and social (e.g., feeling of belonging to the community). We test for the effects of volunteering measured as a binary and a continuous variable. Results show that volunteering enhances eudemonic and social well-being (but not hedonic well-being) although the number of hours contributed makes no difference. Conversely, people who have greater hedonic, eudemonic, and social well-being are more likely to volunteer and, in the case of hedonic and eudemonic well-being, volunteer more hours.

KEY WORDS: hedonic, eudemonic, social well-being; longitudinal analysis; mental health; volunteering.

INTRODUCTION

Each year, about 63 million people in the United States—about one in four of the population aged 16 and over—perform volunteer work through or for an organization (U.S. Bureau of Labor Statistics, 2011). Many nonprofit organizations, charities, clubs, associations, museums, churches, and government agencies would be unable to function at optimal levels without volunteers and many people rely on volunteers for shelter, food, practical assistance, counseling, emotional support, and advocacy.

Volunteer organizers, faced with a chronic shortage of workers, are keenly interested in what kinds of incentives persuade people to donate their time. Unable to rely on monetary rewards, they emphasize instead the psychological benefits of doing volunteer work, highlighting the 'warm glow' or 'helper's high' that volunteers experience as a result of serving others (Luks, 1991). Significantly, the Corporation for National and Community Service, the government agency mandated by Congress to encourage volunteerism, recently issued a report entitled *The Health Benefits of Volunteering* that was

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clearly intended to motivate people to do volunteer work by pointing to its psychological rewards (Corporation for National and Community Service, 2007).

For their part, social scientists have long been interested in the possibility that helping others is beneficial to the helper because it provides an answer to the question as to why many people, although they are expected to act in their self-interest, routinely engage in social behaviors that put the welfare of others first. By positing private benefits from the provision of public goods, the free-rider problem is solved. The development of a research program on the mental and physical health benefits of social ties, social networks, and social relationships also sparked interest in the individual benefits of volunteerism. If a person's sense of well-being relied as much on the quality of the relationship he or she has with others as it did on inner resources or genetics, then doing volunteer work might be good for you.

In this article we contribute to this research program in several ways. The first contribution is to use an extensive battery of questions to develop measures of different kinds of mental health. Mental health is a syndrome of symptoms consisting of "individuals' perceptions and evaluations of their own lives in terms of their affective states and their psychological and social functioning" (Keyes, 2002:208). It is not possible to accurately associate volunteering with mental health until the latter's meaning has been carefully sorted and categorized. The second contribution we make is that, having decomposed mental health into its various components, we test hypotheses predicting that volunteer work is related to each component in a different way. We argue that volunteer work has a stronger influence on mental health as measured by psychological and social functioning than on mental health as an affective state, which can be short-lived. The third contribution we make is to test for reciprocal relations between volunteering and mental health, using longitudinal analysis. We assume that reciprocal effects will be weaker for mental health measured in the form of affective states and life satisfaction. Finally, we make a contribution by using data from a nationally representative sample of Americans aged 25–74 that has not before been used for this purpose.

THEORY

Social scientists have suggested a number of theories to account for the fact that volunteering has beneficial mental health consequences. They can be sorted into three groups, each of which interprets mental health in a different way. The first group of theories, associated with the work of Diener (2009), defines mental health mainly in terms of emotional and cognitive well-being (life satisfaction). This is typically called "subjective well-being." According to this group of theories, volunteering is beneficial insofar as it encourages positive and discourages negative affect (i.e., insofar as it is a form of "mood regulation" [Schallert and Cialdini, 1998]). For example, witnessing the suffering

of others (sympathizing) is a negative affective state that can be tempered by helping them. Mood can also be affected by the fact that volunteering is typically greeted with intrinsically satisfying social approval and commendation. Expressions of gratitude are also a key source of life satisfaction. Economists typically draw on this theory to offer a cost-benefit explanation of altruism. They assume that "individuals receive private benefits, including the 'warm glow' from the very act of giving" (Handy and Mook, 2011:1). They draw on biological theories to explain that the "helper's high" many volunteers experience is the result of endorphins being released into their bloodstream, similar to the biological reaction to vigorous exercise or meditation. Studies of the way in which volunteerism can alleviate the ill effects of stress also draw on this first group of theories (Greenfield and Marks, 2004:S262). In *Stress of Life*, Hans Seyle (1976) pointed out that external experiences brought about by daily tensions or traumatic events could trigger harmful physiological responses. Subsequent research has shown that the stress response results in the release of neurotransmitters and hormones that serve as the brain's messengers for the regulation of immune and other systems. The reactions are generally adaptive in the short run, but can be harmful if the stress is chronic. Seyle recommended therapeutic practices that would interrupt and relieve stress, including "altruistic egoism," or the creation of feelings of accomplishment and security through inspiring in others love, goodwill, and gratitude.

The second group of theories focuses on self-concept and argues that altruistic behavior can be beneficial to mental health to the extent that it contributes to a person's sense of who he or she is. The philosophical basis of this theory and the history of research to test it are described in Ryff and Singer (2008). The theory describes a number of ways in which altruistic behavior and mental health might be connected. First, being "productive" or "useful" is an important source of self-esteem in the United States, and volunteering consists of providing goods or services to another person, group, or organization. Feeling useful to others could be especially rewarding to people whose sense of well-being has been undermined by a loss of other productive roles, as happens in when people are made redundant or they retire (Baker et al., 2005). Second, volunteering can be beneficial if it enhances one's feeling of personal control (mastery) and autonomy. According to this theory, well-being is fostered by a sense of being in control of one's life and feeling free to make choices and bear consequences. The freedom of choice in volunteering (contrasted with the care provided to close relatives) is crucial to providing the feeling of autonomy. Third, mental health consists, in part, of being able to grow, to develop personally, to meet and overcome challenges. Any activity, such as volunteering, that affords the opportunity to learn new things, acquire new skills, or use old skills in a new way builds competence and self-confidence, especially in connection with value goals (e.g., animal welfare), and will therefore enhance our sense of well-being by changing, perhaps for good, the way we think about ourselves (Ryan and Deci, 2011:156). Fourth,

role identity theory argues that a sense of well-being is fostered by having a stable and coherent sense of who we are and where we belong (Thoits and Hewitt, 2001). Any activity, and especially an activity that is institutionalized in a socially valued role, as is volunteer work, strengthens one's sense of personal identity. In addition, volunteer work can contribute to one's sense of *social* identity as when it entails work on behalf of a group to which one belongs or aspires to belong. Volunteering, especially for political causes, can be an expression of solidarity—with members of one's own race, gender, social class, sexual orientation, or with fellow sufferers or believers—thereby functioning as a means of clarifying and affirming a social identity.

The third group of theories emphasizes the association between mental health and connectedness. They are inspired by Durkheim's writings about the mental illnesses consequent upon isolation (egoism) and anomie (lack of regulation). For example, Piliavin (2009:220) argues that the harm in anomie lies in the way it encourages people to believe they do not matter, no one notices them, they are unimportant to others, and that others cannot be relied on to provide support. These feelings of insignificance, which can be mentally distressing, can be assuaged by doing volunteer work. Both role theory and social integration theory predict that being engaged in meaningful social roles, being embedded in supportive social networks, will bolster mental health (Berkman et al., 2000). For example, empirical research shows that role accumulation (performing a wide range of different roles) is linked to mental health in a positive way for some time and that role loss can be depressing (Greenfield and Marks, 2004; Moen et al., 1992; Sieber, 1974). Adding the volunteer role can be especially beneficial: being involved in a purposive activity in the community, either helping specific individuals or collaborating with others in some joint activity, integrates individuals by attaching them to someone or some cause beyond themselves (Etzioni, 2011). The idea that social connectedness is important to mental health is found in the writings of communitarians such as Robert Bellah and Robert Putnam, who argue that the "joy" of serving one's community is an element of the "good life" (Bellah et al., 1996), whereas "individualistic competition" is harmful to mental health.

LITERATURE REVIEW

By and large, the existing research has validated the theory that the more people volunteer, the better their mental health (Gottlieb and Gillespie, 2008; Luoh and Herzog, 2002:505). Close inspection of the research in this area, however, reveals that the relationship is not as robust as it might at first appear. Several of the studies use depression or some other measure of mental illness as an outcome variable rather than mental health (Choi and Bonham, 2007; Handy and Cnaan, 2007; Hong and Morrow-Howell, 2010; Kim and Pai, 2010; Lum and Lightfoot, 2005; Morrow-Howell et al., 2003; Musick and Wilson, 2003; Sugihara et al., 2008). We cannot be sure that these results for

depression or other mental illnesses generalize to mental health because they are not polar opposites of each other.

Two studies have looked at the influence of volunteering on mental health and they have both used longitudinal data to explore reciprocal effects. Thoits and Hewitt (2001) analyze data from the 1986 and 1989 waves of the Americans' Changing Lives (ACL) survey. Their findings support both causation and selection models: volunteering enhances happiness, life satisfaction, self-esteem, and sense of control over life; reciprocally, people who have a greater sense of well-being are more likely to volunteer. However the design of their study, while ingenious methodologically, is constrained by the fact that "the time referents in the questions measuring our key constructs made documenting … reciprocity impossible" (Thoits and Hewitt, 2001:127). Piliavin and Siegl (2007), on stronger ground because they use three waves of data from the Wisconsin Longitudinal Study (1975, 1992, and 2004), find strong evidence to support the causation model. Although each study makes a valuable contribution, both use measures of mental health in an *ad hoc* manner and neither examines the possibility that not all mental health measures are affected by volunteering in the same way. Our goal is to test for reciprocal effects using longitudinal data, using well-constructed measures of mental health, and comparing the effects of volunteer work across the different measures.

In what follows, we describe in more detail three ways of understanding the term "mental health" and make some proposals as to how volunteering might be linked to each.

Mental Health

Hedonic well-being describes a mental state of being happy or experiencing pleasure. Mental health means feeling good about one's situation in life. Hedonic well-being is typically measured by questions on mood states (or positive and negative affect) and life satisfaction (Ryan and Deci, 2001:149).

Eudemonic well-being describes a mental state of self-realization. Eudemonia occurs "when people's life activities are most congruent or meshing with deeply held values and are holistically or fully engaged" (Ryan and Deci, 2001:146). From this perspective, mental health is the actualization of human potential, as in "fulfilling or realizing one's *daimon* or true nature" (Ryan and Deci, 2001:143). Fully functioning is more important than fulfilling desires. A scale to measure eudemonic well-being, developed by Ryff (1989), has been used widely. It measures autonomy, environmental mastery, positive relations with others, self-acceptance, purpose in life, and personal growth. Piliavin and Siegl (2007) use a truncated form of this scale in their study of volunteers.

Social well-being refers to how people see their relations to others and the wider community (Keyes, 1998:122). The inspiration for the scale comes from a World Health Organization document in which a definition of a person's well-being includes being able "to make a contribution to his or her community"

(Keyes, 2007:98). As with eudemonic well-being, social well-being has several components. Social *acceptance* is the analogue to personal acceptance. Healthy people trust others and think that other people are capable of kindness (e.g., ''People do not care about other people's problems'' [negatively worded]). Social *actualization* ''is the evaluation of the potential and trajectory of society'' (Keyes, 1998:123). Healthier people are optimistic about the condition and future of society and believe they will benefit from social progress (e.g., ''Society is not improving for people like me'' [negatively worded]). Social *contribution* is the assessment of one's value to others and society more generally. Healthier people rate more positively their potential to contribute to social welfare (e.g., ''My daily activities do not create anything worthwhile for my community'' [negatively worded]). Social *coherence* refers to people's understanding of the world around them, the opposite, in many ways, of the sense of meaninglessness referred to by sociologists. This is the social equivalent of the feeling that one's life has purpose and meaning that is part of the psychological well-being measure (e.g., ''I cannot make sense of what's going on in the world'' [negatively worded]). Social *integration* refers to the extent to which people feel they have something in common with others and belong to a wider community. (e.g., ''I feel close to other people in my community'').

LINKING VOLUNTEERING TO WELL-BEING

Given the wording and content of these three scales, it is unlikely they would be related to volunteering in the same way. Hedonic well-being combines a measure of mood with an assessment of one's *current* situation in life: ''positive affect is expected to be the least stable, changing rapidly and frequently in response to stimuli in the immediate environment'' (George, 2010:331). Although hedonic well-being might improve while a person is volunteering or shortly thereafter, it is unlikely the positive state would persist. Volunteering might make a person ''feel good,'' but the sensation is fleeting. On the other hand, volunteering is likely to have a more enduring effect on eudemonic well-being because eudemonia consists of a reconceptualization of the self rather than a mood state (Piliavin, 2010:162). If volunteering is to influence this kind of well-being in a positive way, it would not merely improve our mood or make our life more satisfying, it would give purpose and meaning to life, a sense of being in control of our environment. Finally, the *closest* link between volunteering and mental health should be found in the case of social well-being because, whereas a variety of activities other than volunteering could benefit eudemonic well-being, volunteering seems particularly suited to reshaping a person's feelings and opinions about the quality of his or her relations with others and with the wider community. The social well-being scale has not been used in large-scale volunteerism research before and this study represents its first use as an outcome of volunteering in a nationally representative sample. (In an exploratory cross-sectional study using a small *N*

social survey, Keyes [1998:124] found that those who had volunteered in the past year reported higher levels of social actualization, social integration, social contribution, and social coherence.) We propose that volunteers should experience more improvement in this type of well-being, just as it would make sense that people who score high on the social well-being scale will be more likely to volunteer.

Analytical Strategy

Problems of selection versus causation make it difficult to test theories predicting an effect of volunteering on well-being. A number of studies cited earlier use cross-sectional designs: it is impossible to determine whether volunteering determines health or health determines volunteering (Borgonovi, 2008; Greenfield and Marks, 2004). Although the case for volunteering having an effect on health is a strong one, in the opinion of some scholars it "actually makes more sense" to argue that low mental health inhibits doing volunteer work (Mellor et al., 2009:155). For example, a "personal well-being model" predicts that people are more likely to volunteer if they are in good mental health: they are selected into, or select themselves for, volunteering on the basis of their sense of well-being (Thoits, 1994; Thoits and Hewitt, 2001:117).

We take the position that there are most likely to be reciprocal effects between volunteering and mental health. The primary goal of our analysis is therefore to determine the possible mental health benefits of volunteering when considering selection processes simultaneously. To test for both benefit and selection mechanisms, we estimate nonrecursive structural equation models using Mplus 6 in which baseline measures of volunteering and mental health are intermediary endogenous variables (Kline, 2005). In addition to a binary variable (volunteer or not) we use a linear measure of hours spent volunteering in the past month, including 0 as "no volunteering." In an ordinary linear specification this would imply that an increase in hours from zero to one hour is the same as an increase from one hour to two hours and this would clearly be inappropriate considering that volunteering longer hours is a rare event. We choose negative binomial models to account for this overdispersion and right-skewedness of volunteer hours (Long and Freese, 2006). A negative binomial model is more suitable than a Poisson model when a high probability of low counts exists so that the variance of a dependent variable is significantly larger than its mean. The estimation of a negative binomial model is as follows:

$$\ln \lambda_i = (\beta_0 + \beta_1 x_i + ... + \beta_n x_{in}) + \varepsilon_i,$$

where $\exp(\varepsilon) \sim \Gamma$, λ is the rate at which a rare event occurs, and the first part of the equation, $\beta_0 + \beta_1 x_i + ... + \beta_n x_{in}$, represents the log rate of the rare

event. ε_i is the term for unobserved heterogeneity, which follows a gamma distribution. The two assumptions regarding its expected mean and variance are:

$$E(u_i|x_i) = \lambda_i$$

$$V(u_i|x_i) = \lambda_i(1 + \lambda_i\alpha).$$

In particular, α is the dispersion parameter and when $\alpha = 0$, a negative binomial model becomes Poisson. However, if $\alpha$is significantly greater than 0, the negative binomial model captures the observed proportion of zero and low counts significantly better than Poisson. For the three outcome measures of mental health, we employ an MLR (maximum likelihood estimation with robust standard errors) estimator simultaneously in the negative binomial SEM reciprocal models.

We use both binary and linear measures of volunteering for the following reasons. Surveys typically ask respondents whether or not they volunteer and, if so, for how many hours in a given time period. Some researchers in this field use a simple binary variable to measure volunteer status (Greenfield and Marks, 2004; Lum and Lightfoot, 2005; Musick and Wilson, 2003), while others use a count variable in which nonvolunteers are given a score of zero (Fujirawa and Kawachi, 2008; Kim and Pai, 2010; Morrow-Howell et al., 2003; Thoits and Hewitt, 2001; Van Willigen, 2000). A binary variable makes sense if health consequences derive from simply occupying the status of, or being identified as, a volunteer. Several of the theories as to why volunteering might have health benefits make no predictions about more volunteering being better. For example, social integration or role accumulation theories do not predict that extra hours devoted to volunteering will be better. On the other hand, a count of volunteer hours makes sense for two reasons. First, there might be a "dose-response" effect whereby more volunteering is better. For example, casual and intermittent volunteer work, such as answering telephones at the annual fundraiser for the local public radio station, might be less beneficial than belonging to a church group that staffs a soup kitchen on a biweekly schedule. Second, there might be a curvilinear effect of hours of volunteering on mental health (Windsor et al., 2008). Nonlinear effects could be anticipated on the grounds that role strain or role conflict occurs when a person overcommits to volunteer work or the work becomes emotionally demanding as the volunteer becomes more immersed in it. In this study, we experiment with both measures of volunteer work, including a test for the curvilinear effect of hours.

Hypotheses

To test the causation theory, we formulate three hypotheses about the effects of volunteering on the three scales of well-being, using different

measures of volunteerism. By volunteer status we mean a binary measure of volunteering.

H1: Volunteer status is positively related to well-being but the effect is stronger for eudemonic and social well-being than for hedonic well-being.

H2: The more time contributed by the volunteer, the greater the health benefits, but the time effect is weakest for hedonic well-being.

H3: Volunteer hours and mental health are curvilinearly related. Health benefits increase as the number of hours volunteered increases, but with further increases in hours, health benefits decline. The curvilinear effect is weakest for hedonic well-being.

To test the selection theory we formulate the following hypothesis:

H4: Well-being is positively related to volunteering but the effect is weakest in the case of hedonic well-being and strongest in the case of social well-being.

Finally, we test for reciprocal effects and, in recognition of H1 and H4, we formulate the following hypothesis:

H5: Volunteering is more likely to be reciprocally related to eudemonic and social well-being than to hedonic well-being.

Sample

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 the ages of 25 and 74. 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., $.700 \times .868$).

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 were absent from the second wave were more likely to be nonwhite males with low education and income levels. In light of the attrition rate between waves, we employ multiple-imputed data throughout our analyses (Arbuckle, 1996; Graham, 2009; Peugh and Enders, 2004; Rubin, 1976; Schafer, 2003). This procedure produces

parameter estimates by averaging the set of analyses on the five multiple-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, 2007). The imputed data sets were also weighted to correct for unequal stratified probabilities of household and within-household respondent selection at the baseline. The sample weight poststratified the sample to match the proportions of adults in the 1995 Current Population Survey in regard to age, gender, race, education, marital status, MSA (i.e., metropolitan and nonmetropolitan), and region (Northeast, Midwest, South, and West). The final sample count of the multiple-imputed data sets is 3,257, excluding 228 respondents who died between the two waves and two who are not covered by the weight variable.

Independent and Dependent Variables

The details of the well-being factor measures are shown in Appendix A.

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.

Eudemonic well-being is measured by six scales: autonomy; environmental mastery; positive relations 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 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 eudemonic and social well-being factors in 1995 is 0.54 ($p < .001$), between eudemonic and hedonic well-being factors 0.58 ($p < .001$), and between social well-being and hedonic well-being factors 0.38 ($p < .001$).

Volunteer hours is the sum of the hours per month doing volunteer work for organizations related to health, education and youth work, political organizations, and any other organization, cause, or charity. (“On average, about how many hours per month do you spend doing formal volunteer work of any of the following types?”)

Volunteer status is a dichotomous variable where 0 = not volunteered at all and 1 = volunteered.

Control Variables

Even with longitudinal data it is difficult to make causal attribution without first ruling out the possibility that changes in both volunteering and mental

health could have been induced by some other variable to which they are both related. Most importantly, social stratification affects mental health status: higher education and income groups enjoy better health, as do those who are employed and those who are not members of minority groups (George, 2010; Horwitz, 2010:11). These factors are also related to volunteering (Musick and Wilson, 2008) and we therefore control for them. Other factors that are positively related to both volunteering and mental health are frequency of church attendance (Hackney and Sanders, 2003; Musick and Wilson, 2008) and physical health (Wilson and Musick, 1997; Ryan and Deci, 2001). Previous research has also shown that psychological well-being and volunteering both tend to peak in the middle stages of life (Musick and Wilson, 2008; Ryff, 1989:1076) and we therefore control for age. Women have substantially higher rates of common mental disorders such as anxiety but the ''effect of gender is much less clear when it comes to mental well-being,'' with some studies showing higher scores for men and others for women (Huppert, 2009:146). Because women are more likely to volunteer (Musick and Wilson, 2008), we opt to control for gender despite the uncertainty about its association with well-being. Married people report better psychological well-being (Ryff, 1989:1077) and they are more likely to volunteer and we therefore control for marital status.

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

Gender is a dichotomous variable where 1 = female, 0 = male.

Race is a dichotomous variable where 1 = white, 0 = other.

Marital status is a dichotomous variable where 1 = married, 0 = not married.

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

Income is a 31-category measure of personal income in the past year.

Full-time employment is coded so that 1 = worked full time (35+ hours/week) in the past year and 0 = other (i.e., worked less than 35 hours/week, no work, or worked less than six months in the past year, or is a full-time student).

Church attendance is 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 is 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, percentages, standard deviations, and ranges of the variables used in the analysis.

Table I. Variables in the Analyses (Multiply-Imputed Data [N = 3,257], Sample Weighted)

Measure	Mean (*SD*) or Percentage	Range
Endogenous Measures (T2)		
Social well-being (factor)	−0.08 (1.01)	−3.61 – 3.37
Eudemonic well-being (factor)	−0.06 (1.01)	−4.20 – 3.29
Hedonic well-being (factor)	−0.12 (1.01)	−3.72 – 3.45
Volunteer hours	2.96 (9.63)	0 – 200
Volunteer status (binary)	43%	0 – 1
Intermediary Endogenous Measures (T1)		
Social well-being (factor)	−0.05 (0.99)	−3.81 – 2.82
Eudemonic well-being (factor)	−0.01 (1.00)	−4.33 – 3.07
Hedonic well-being (factor)	−0.04 (1.01)	−3.73 – 2.74
Volunteer hours	4.38 (12.38)	0 – 240
Volunteer status (binary)	39%	0 – 1
Controls (T1)		
Age	42.83 (12.48)	20 – 74
Female	55%	0 – 1
White	87%	0 – 1
Married	67%	0 – 1
Education	2.80 (0.96)	1 – 4
Income	17.90 (9.76)	1 – 31
Full-time employment	70%	0 – 1
Church attendance	2.75 (1.33)	1 – 5
Physical health	3.51 (0.97)	1 – 5

Between 1995 and 2005, average scores on all three well-being factors declined slightly. The percentage of respondents doing volunteer work increased from 39% to 43%, but the average number of hours volunteered fell from 4.38 to 2.96. Just over half the respondents were female (55%), 87% were white, and, at baseline, 67% were married and 70% were employed full time.

Table II shows the SEM results for all three well-being measures. Each measure is estimated with two models, one for volunteer hours and one for volunteer status. Note first of all that well-being in 1995 is a strong predictor of well-being in 2005, the weakest effect being in the case of hedonic well-being, as expected. In short, people's mental health is stable over time. Volunteer status is positively related to social well-being and eudemonic well-being but is not related to hedonic well-being at all. Hypothesis 1 is thus confirmed. Indeed, it could have been stated more forcefully: rather than having a weaker effect on hedonic well-being, volunteering has no effect at all. On the other hand, our prediction that volunteering would have a stronger effect on social than psychological well-being was not borne out. Hypothesis 2 is not validated: volunteer hours are related to none of the three well-being measures. There is no evidence here of a "dose response" to volunteering. Hypothesis 3 is not validated. There is no curvilinear effect of volunteer hours: the hours-squared term is not significant in any of the three well-being models. It seems that just being a volunteer is sufficient to provide social and eudemonic well-being benefits: the amount of volunteering is of no consequence. Nor is there

Table II. SEM Reciprocal Path Analysis Between Mental Health and Volunteering (Outcome: Mental Health)

	Social Well-Being		Eudemonic Well-Being		Hedonic Well-Being	
Endogenous Measure at T2	Model 1 (Volunteer Hours)	Model 2 (Volunteer Status)	Model 1 (Volunteer Hours)	Model 2 (Volunteer Status)	Model 1 (Volunteer Hours)	Model 2 (Volunteer Status)
Measure at T1						
Well-being (social or eudemonic or hedonic)	.50***	.50***	.50***	.50***	.43***	.42***
Volunteer hours	.04	—	.03	—	.04	-
Volunteer hours squared	−.02	—	.00	—	.02	—
Volunteer status (binary, reference: no volunteer)	—	.06*	—	.04*	—	.01
Age	−.01	.01	.08***	.08***	.12***	.12***
Female	−.03	.04	.03	.03	.01	.01
White	.04	.03	.03	.02	.02	.02
Married	.01	.00	.02	−.02	.01	.02
Education	.09***	.08***	.03	.03	.03	.04
Income	.06*	.06*	.10*	.10*	.05	.05
Full-time employment	−.01	.01	.00	.00	.01	.01
Church attendance	.05*	.04	.02	.01	.06	.05
Physical health	.11***	.11***	.10**	.10**	.14***	.15***
Correlation Between Final Endogenous Measures						
Well-being with Volunteer hours at T2	.41***[a]	—	.18*[a]	—	.13[a]	—
Well-being with Volunteer status at T2	—	.08**	—	.04*	—	.03
Model Fit Indices						
α (dispersion parameter)	11.93***	—	12.01***	—	11.94***	—
Log likelihood (# of free parameters)	25,411.664 (34)	—	25,599.451 (34)	—	25,742.769 (34)	—
AIC	50,891.327	—	51,266.901	—	51,553.537	—
Sample-size adjusted BIC	50,990.305	—	51,365.880	—	51,652.515	—
CFI	—	1.00	—	1.00	—	1.00
TLI	—	1.00	—	1.00	—	1.00
RMSEA	—	0.00	—	0.00	—	0.00
R^2	—	.37	—	.33	—	.27
N	3,257	3,257	3,257	3,257	3,257	3,257

[a]Unstandardized correlation coefficient between well-being and volunteer hours.

Notes. Sample weighted; standardized coefficients. Model 1 employs negative binomial model due to the overdispersion with right-skewedness in volunteer hours count measure. Model 2 employs a MLR (maximum likelihood estimation with robust standard errors) estimator to deal with volunteer status binary measure; The analyses employed five multiply-imputed data sets. AIC = Akaike information criterion, BIC = Bayesian information criterion; *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed).

any evidence that if people volunteer a lot their health will suffer. Looking at the control variables, physical health is positively related to all three mental health outcomes. Age is unrelated to social well-being but positively related to both eudemonic and hedonic well-being. Income is positively related to both social and eudemonic well-being. Education is positively related only to social well-being. Church attendance is related only to social well-being and only in the model for number of volunteer hours. Gender, race, marital status, and employment status are unrelated to well-being of any kind.

Table III shows the results for the SEM model where volunteer hours and volunteer status in 2005 are the outcome variables. Note, to begin with, that volunteering is quite stable across time: 1995 volunteer status has a strong effect on 2005 volunteer status. However, volunteer hours are curvilinearly related: 1995 volunteering increases the number of hours volunteered 10 years later, but there appears to be a ceiling effect, suggesting that burnout can occur. Focusing on the hypotheses, social well-being has a positive effect on volunteer status but makes no difference to the number of hours volunteered. Eudemonic and hedonic well-being increase subsequent volunteering regardless of the measure used: that is, they increase the odds of being a volunteer *and* increase the number of hours volunteered. Hypothesis 4 is thus only partially validated because social well-being affects only volunteer status: it does not increase the number of hours contributed. In confirmation of many previous studies, education and church attendance frequency and being female predict volunteering, regardless of the measure of volunteering used. In all three models, whites donate more hours. Finally, Hypothesis 5 is confirmed because social and eudemonic well-being and volunteer status are reciprocally related: social and eudemonic well-being promote volunteer status and, in turn, volunteer status increases social and eudemonic well-being. However, there can be no *reciprocal* relation between hedonic well-being and volunteering because volunteering does not influence hedonic well-being.

In terms of model goodness of fit, the conventional indices of SEM such as CFI, TLI, and RMSEA reported satisfactory results: CFI and TLI were greater than .95, while RMSEA was smaller than .05 (Bentler, 1990; Steiger, 1990). For the negative binomial models when the count measures of volunteer hours were employed, all three indices of log likelihood, AIC, and BIC indicate that the social well-being model has the best fit. Also, the dispersion parameter of α indicates that the use of the negative binomial model captured the low counts of volunteer hours significantly better than the alternative Poisson model.

DISCUSSION

The purpose of this study was to use a nationally representative sample of U.S. adults to test theories about the relationship between volunteering and mental health using a broader range of well-being measures than previous studies and methods appropriate for the assessment of reciprocal

Table III. SEM Reciprocal Path Analysis Between Mental Health and Volunteering (Outcome: Volunteering)

	Volunteering (by Social Well-Being)		Volunteering (by Eudemonic Well-Being)		Volunteering (by Hedonic Well-Being)	
Endogenous measure at T2	Model 1 (Volunteer Hours)	Model 2 (Volunteer Status)	Model 1 (Volunteer Hours)	Model 2 (Volunteer Status)	Model 1 (Volunteer Hours)	Model 2 (Volunteer Status)
Measure at T1						
Well-being (social or eudemonic or hedonic)	.04	.12***	.04*	.10***	.05**	.08**
Volunteer hours	.25***	—	.26***	—	.26***	—
Volunteer hours squared	.17**	—	.17**	—	.17**	—
Volunteer status (binary, reference: no volunteer)	—	.27***	—	.28***	—	.28***
Age	.05*	.06**	.05*	.06*	.05*	.06**
Female	.04*	.08**	.04*	.08**	.04*	.08**
White	.04*	.06	.04*	.06	.04**	.06
Married	.03	.03	.03	.03	.03	.03
Education	.10***	.15***	.10***	.16***	.11***	.18***
Income	.00	.01	.00	.01	.00	.02
Full-time employment	.00	.03	.00	.03	.00	.03
Church attendance	.04*	.12***	.04*	.12***	.04*	.12***
Physical health	.01	.06*	.00	.05	.00	.05
Correlation Between Final Endogenous Measures						
Well-being with Volunteer hours at T2	.41***[a]	—	.18*[a]	—-	.13[a]	—-
Well-being with Volunteer status at T2	—	.08**	—	.04*	—	.03
Model Fit Indices						
α (dispersion parameter)	11.93***	—	12.01***	—	11.94***	—
Log likelihood (# of free parameters)	25,411.664 (34)	—	25,599.451 (34)	—	25,742.769 (34)	—
AIC	50,891.327	—	51,266.901	—	51,553.537	—
Sample-size adjusted BIC	50,990.305	—	51,365.880	—	51,652.515	—
CFI	—	1.00	—	1.00	—	1.00
TLI	—	1.00	—	1.00	—	1.00
RMSEA	—	0.00	—	0.00	—	0.00
R^2	—	.22	—	.22	—	.22
N	3,257	3,257	3,257	3,257	3,257	3,257

[a]Unstandardized correlation coefficient between well-being and volunteer hours.

Notes. Sample weighted; standardized coefficients. Model 1 employs negative binomial model due to the overdispersion with right-skewedness in volunteer hours count measure. Model 2 employs a MLR (maximum likelihood estimation with robust standard errors) estimator to deal with volunteer status binary measure. The analyses employed five multiply-imputed data sets. AIC = Akaike information criterion, BIC = Bayesian information criterion; *$p < .05$, **$p < .01$, ***$p < .001$ (two-tailed).

effects. We expected that the effect of volunteering on hedonic well-being (measuring mood states such as cheerfulness and feeling full of life) would be weaker than its effect on either eudemonic well-being (measured by items such as feeling in charge of one's life and that one is a giving person) or social well-being (measured by items such as feeling that one belongs to a community).

In the case of eudemonic and social well-being, we found evidence of both causation and selection effects. Only selection effects were found for hedonic well-being. However, our hypothesis that social well-being would benefit more from volunteer work than eudemonic well-being was not supported: the difference in the coefficients (0.06* for social well-being and 0.04* for eudemonic well-being) was trivial. Thus, despite the fact that social well-being refers to mental health states that would *seem* to be more susceptible to influence by a social activity such as volunteering, this was not the case. This might well be a reflection of the fact that volunteer work is partly motivated by a desire to strengthen self-concept, to learn more about oneself, to grow personally, and to build self-confidence. These ego-centered drives can be just as salient for volunteers as those that motivate making social connections and earning social acceptance.

As far as the selection effects were concerned (Table III), social well-being did have a slightly stronger influence on subsequent volunteer status (0.12***) than either eudemonic (0.10***) or hedonic (0.08**) well-being. Although the differences in the size of the coefficients are small, they suggest that well-being that consists of positive feelings about one's contribution to society is more likely to predict future volunteer status. Future studies seeking to use mental health states to predict volunteer behavior should be careful to identify which types of mental health are being measured.

We experimented with different ways of operationalizing the volunteer concept because we wanted to know if the *quantity* of volunteer work performed had an effect on later mental health. As it happens, knowing how much people volunteer tells us no more about their future mental health than simply knowing that they volunteer. The theories that anticipate a "dose response" from doing more volunteer work are thus not validated by these results, and neither is the hypothesis that too much volunteering might do harm. Speculatively, this would add support to the "valued identities" argument that people derive satisfaction from thinking of themselves, and being seen by others, as a volunteer. How much they volunteer is inconsequential. It would suggest that, as far as volunteer range is concerned, the important issue is the variety or heterogeneity of the different volunteer contacts and relationships and not the intensity or the number of hours worked. Finally, the theory that volunteering will impart a sense of purpose in life, a sense of mastery of life events, does not assume that more is better: working four hours a week rather than two hours is unlikely to have much effect on these "psychological resources."

In the course of our investigations we pursued a number of possibilities suggested by theory or previous research, all of which proved fruitless. Keyes

(2002) has argued that it takes a combination of hedonic, eudemonic, and social well-being to be considered mentally healthy, a state he calls "flourishing" as opposed to "languishing" at the other end of the continuum. The causes and consequences of flourishing have been analyzed in several studies, although none has connected it to volunteering specifically (Westerhof and Keyes, 2010). The three well-being scales are quite highly correlated and it makes sense to investigate the possibility that a latent factor underlies them and would provide a more parsimonious measure of mental health. We used the MIDUS data to create this latent factor to see if volunteering (either binary or linear) influenced it, but no effects were found.

Several of the previous longitudinal studies of volunteering and mental health have either focused exclusively on elderly populations or compare the results for younger and older subsamples. We tested for interactions between age and volunteering for each of the three well-being scales but no effects were found. Because two previous studies found effects only for women, we tested for gender interactions: no significant results were found.

Finally, although the results of this study indicate that volunteering *can* promote well-being, this should not be taken to imply that volunteering is *always* beneficial. A number of studies have shown how volunteering can be stressful or simply unsatisfying. For example, Ironson (2007:74) reports that depression is "one of the common effects associated with HIV caregiving." This is a specific instance of a more general situation where the volunteer suffers from "empathic overarousal" (Hoffman, 2008), which might also explain why people who volunteer in disaster settings, such as earthquakes, terrorist bombings, or aviation disasters, also experience negative effects (Thormar et al., 2010).

Limitations

There are a number of limitations to this study that should be borne in mind when assessing the results. The measures of mental health in MIDUS draw on standard scales but use short-form versions that demonstrate marginal internal consistency. In addition, one component of hedonic well-being, life satisfaction, consists of a single item. There is also some question about the overlap between the three scales and their degree of independence from each other. This problem has been analyzed by Gallagher et al. (2009), applying confirmatory factor analysis techniques to data from a large sample of undergraduate students and from participants in the second wave of MIDUS. They conclude that the 14 first-order components of the well-being scales "can best be represented via a hierarchical structure of well-being containing three highly correlated, but distinct second order factors of hedonic well-being, eudemonic well-being, and social well-being" (Gallagher et al., 2009:1042). As noted earlier, we did experiment with a single-factor measure of well-being, but it was not significantly related to any mental health outcome measure.

Another possible limitation is that mental health consists of more than subjective well-being. In assessing if an individual is mentally healthy or unhealthy it is necessary to rely not only on what people think about how they feel but also on objective, behavioral characteristics or whether they are impaired in one or more of their mental functions. These more objective measures might be less influenced by volunteerism.

The results should also be assessed in light of the fact that while MIDUS does provide two waves of data spaced 10 years apart, thus permitting the observation of long-term effects, this is a longer timespan than found in the ACL. With our structural design we were able to control for 2005 volunteering while estimating the effect of 1995 volunteering. This ensures that volunteering in 1995 is not simply influencing mental health ''through'' volunteering in 2005 but has a direct effect. This is quite impressive evidence of the sustained influence of having been a volunteer. Nevertheless, 10 years is a long time and many changes in activities, statuses, and perceptions might have happened to confound the relation between volunteering and mental health in the interval. And yet our results for eudemonic well-being are approximately the same as those found by Piliavin and Siegl (2007) and their study covers even longer periods of time: the three waves of Wisconsin Longitudinal Study data were gathered in 1975, 1992, and 2004.

The two measures of volunteerism we use, number of hours and volunteer status, are fairly standard in this field but like most survey data they reveal little about the actual volunteer experience and how it might yield either health benefits or alleviate stress. Future research should look in more detail at the nature of the work involved in volunteering. At the broadest level, this means looking at the domain in which the volunteer work is being performed. Unfortunately, the categorization of volunteer activities in MIDUS is rather poor—most notably, religious volunteering is not distinguished—resulting in very heterogeneous groupings that are theoretically meaningless. An even more fine-grained analysis would look at specific volunteer activities. Simply counting the number of hours volunteered or even the domain in which the volunteer activity occurs (e.g., ''health,'' ''youth'') does not say much about how the actual work might improve mental health.

Finally, the influence of volunteering on well-being would also be detected more accurately if there were measures of the level of commitment of the person to volunteer work, either objective (in terms of length of service) or psychological (in terms of role salience or role identity). Unfortunately, these measures are not included in MIDUS.

CONCLUSION

This is the first study to assess the long-term effect of volunteer work on three separate mental health constructs using a nationally representative sample of Americans and the first to compare the selection effects of these

mental health states on later volunteering. On the basis of this study there are a number of promising avenues of future research. The first has to do with the influence of physical health on mental health. We control for self-rated physical health at Time 1 because of its proven effect on both volunteering and mental health. Poor physical health can be stressful and volunteering might yield mental health benefits by providing a means of coping with this stress. Greenfield and Marks (2007) have explored this idea using continuous involvement in voluntary associations as a possible moderator of the effects of functional limitations on depression. These findings might not extend to mental health, but they suggest that further exploration of the buffering role of volunteerism is warranted. Unfortunately, MIDUS does not have the preferred three waves of data and lacks direct measures of stress.

Second, future research should investigate the mechanisms that might help explain why volunteering has mental health benefits. The social integration theory assumes that volunteering expands people's social networks and social ties. Musick and Wilson (2003) found that high levels of formal social interaction (meeting attendance) helped explain why older volunteers were less likely to be depressed. The same might be true of mental health: volunteering enhances mental health because it increases social resources.

Third, the mental health benefits of volunteer work depend on a favorable assessment of the rewards associated with the activity. Future research should therefore investigate the quality of the volunteer experience. "What happens during the time a person is a volunteer is important … the amount of social interaction, the extent to which the work is meaningful, and the relationship with staff and other volunteers" (Morrow-Howell, 2010:2). This is largely unchartered territory, but Morrow-Howell et al. (2009) have made a start in a study asking volunteers whether they perceive benefits from their work (e.g., "I feel better about myself since joining the program") and asking if these perceptions are linked to mental health. Unfortunately, their study did not report individual benefits (e.g., to the volunteer as opposed to the community) but merely summed them and it is cross-sectional so that, while it does report a positive effect of volunteer hours and experience on mental health, it is not clear whether the benefits are the effect of the intensity of volunteering or their cause.

Finally, none of the measures of volunteer work described earlier captures the timing of volunteer service. The same number of hours might indicate the activities of a weekend or a year and it is likely that the mental health benefits are more likely to accrue to sustained volunteering (Thoits and Hewitt, 2001:127). This is important not only because it is easier to theorize about the effect of volunteerism if more is known of its scheduling, as would be true of paid employment, but also because there is evidence to suggest that in recent years volunteer work has begun to change its role, becoming less of a long-term, regular commitment and more of a sporadic intervention in people's lives that allows for more discretion by the volunteer over the intensity of the

commitment he or she is willing to make. If the health benefits have anything to do with the regularity and pacing of the commitment, this more irregular form of volunteering might not be so beneficial.

APPENDIX A: MENTAL HEALTH COMPONENTS AND THEIR DIMENSIONS AND SCALES

Component	Dimension (# of Items)	Scale (Range)	Internal Consistency (α) 1st Wave	Internal Consistency (α) 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)		

(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)		

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