



Education, Perceived Control, and Volunteering¹

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The consistent effect of education on volunteering has been explained in a number of ways. In this study we test the hypothesis that perceived control beliefs are partly responsible. Using two waves of panel data from National Survey of Midlife in the United States we estimated cross-lagged structural equation models in which education is positioned as the exogenous variable and perceived control and volunteering are allowed to be reciprocally related across the two waves. We find that perceived control predicts volunteering, but there is no reciprocal effect: volunteering has no effect on sense of control. One reason, therefore, that educated people are more likely to volunteer is that they have stronger control beliefs. The findings enrich the theory of volunteering by introducing the idea of agency, showing one way in which resources influence the decision to volunteer.

KEY WORDS: agency; education; MIDUS; perceived control; resource theory; volunteering.

INTRODUCTION

Education plays a prominent role in the resource theory of volunteering. It is treated as a form of human capital enabling people to perform unpaid work for those in need, for organizations to which they belong or that they wish to support, and for causes in which they believe (Wilson and Musick 1997). According to resource theory, volunteer work should be treated like any other kind of productive labor. It, too, draws on resources the individual has accumulated over time—with the exception that it is unpaid. However, the exact nature of education's contribution to volunteering is not clear in the original resource theory and a body of sociological research has been devoted to uncovering the mechanisms that might account for it.

It could be that education acts as an “ability signaler” to organizations anxious to recruit reliable volunteers (Brady, Schlozman, and Verba 1999). Education might well serve as a proxy measure of people's stake in the community as, for example, when it is associated with homeownership (Rotolo, Wilson, and Hughes 2010). More highly educated people also have more extensive and heterogeneous social networks, and this might increase their chances of becoming involved in volunteer work (Egerton and Mullan 2008). Education also has a positive effect on feelings of generativity, a sense of responsibility for improving the welfare of the next generation, sentiments more frequently encountered among volunteers (Son and Wilson

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2011). Educated people are also more likely to espouse and conform to norms of social obligation, which in turn lead to volunteering (Son and Wilson 2012).

In this study we test the hypothesis that part of the explanation for the influence of education on volunteering lies in beliefs people have about the extent to which they are in control of their own lives and events that may impinge upon them. It is not uncommon to hear people say they volunteer because they “want to make a difference.” Even though the odds might seem stacked against them, they step forward to make a personal sacrifice in hopes of helping other people: they coach a sports team, knock on doors during political campaigns, raise money for charities, and mentor children from broken homes. To varying degrees, they believe that volunteers can make a difference in the world (United HealthCare/VolunteerMatch 2010). And besides feeling better because they are improving the lives of others, they also like the feeling of mastery that comes from acting on the world rather than having the world act upon them.

But the majority of people do not volunteer. They explain that they are too busy, they think the activity for which they are being recruited is ineffectual, that their own contribution will not be noticed, or they simply do not know how or where to volunteer. Many will explain that they do not volunteer precisely because they do *not* believe they will make a difference. They lack confidence in their ability to perform the volunteer role effectively, or they believe that most social problems—crime in the neighborhood, environmental degradation, underfunded schools, poor voter turnout—are too intractable to be solved by their efforts.

In this study we argue that these doubts about efficacy should be integrated into the resource theory of volunteering. That theory describes how resources enable people to volunteer but does not tell us whether they feel free to use those resources. It is our contention that people are more likely to volunteer if they feel in control of their lives and if they believe their social environment is malleable, responsive to their efforts to change it. A concept describing beliefs about control should thus play a strategic role in advancing from theories that explain why people *want to* or *could* volunteer to theories explaining why they *will* volunteer. Because control beliefs are known to be positively influenced by education, if it can be demonstrated that they are also positively related to volunteering, they can serve as a mechanism linking the two.

PERCEIVED CONTROL

While some people firmly believe that they can influence what happens to them, that they can be an instrumental force in their own life, and that changes in their social environment are contingent on their own actions, others believe that life events and outcomes are largely outside of their personal control, that their own actions, efforts, and choices make little difference to them (Infurna, Ram, and Gerstorf 2012:2; Lachman 2004:321; Ross and Drentea 1998:322). These sense of control beliefs concern life in general although some individuals who do not believe they control their life in general can nevertheless believe that they exercise control over a particular life domain (e.g., their finances) (Specht, Egloff, and Schmukle 2013:353; Thoits 2010: S47).

The theory of control beliefs has its roots in both psychology and sociology because control beliefs inform not only a perception of the self—the individual is looking inward—but also a perception of the self in relation to others—the individual is looking outward (Gecas 1989:294; Skinner 1996:559). Thus the first dimension of control looks at the self and concerns one's own feelings of efficacy. This is sometimes referred to as internal control or personal mastery. Strongly held beliefs of this kind are considered a "positive self-view" because they consist of people's sense of being able to obtain goals they have set for themselves (Thoits 2012:364).

In the context of volunteerism, this dimension of sense of control creates theoretical room for the idea that people's behavior is not to be interpreted as merely the consequences of their structural position, such as their socioeconomic status. Rather, it is a consequence of both social structure and belief about active engagement in the world. In short, the concept allows for agency in the study of volunteering. It is worth noting that Hitlin and Johnson (2015:1443), in their discussion of the role of agency in sociological theory, describe a scale of personal mastery developed by Pearlin et al. (1981) as "the standard empirical measure of agency."

The second kind of perceived control is beliefs about how responsive the social environment is to our actions. This is "external" control. It describes what we think about social constraints on our life. At one extreme is the belief that there are factors beyond our control that make it more difficult, if not impossible, for us to reach our goals (Lachman 2004:321). At the other extreme exists the belief that the external world is responsive to our efforts to change it (Krause 2007:S28). For example, the feeling of futility that results from a weak sense of control is engendered by low self-efficacy or personal mastery *and* the perception that the social system is not responsive to one's demands. Or an individual might feel quite efficacious with respect to his or her ability to sit for an examination—this is personal mastery—but believe that circumstances outside his or her control make it difficult or even pointless to study hard for exams—this is perceived constraints (Hitlin and Johnson 2015:1441).

Some confusion is caused by the use of different terms to describe this phenomenon. A number of synonyms are used to refer to sense of control or perceived control. They include internal and external locus of control, internal and external efficacy, agency, personal or self-efficacy, personal autonomy, self-directedness, personal mastery, empowerment-powerlessness, instrumentalism, and alienation (Aneshensel 1992:27; Cohen 2009:523; Finkel 1985; Luoh and Herzog 2002:493; Schieman 2008; Skinner 1996).

The most important issue is reaching agreement on the breadth of the concept. How generalized is control believed to be? For example, Pearlin et al. (2007:164) question whether personal mastery is indeed the same as perceived control because it refers to control over the circumstances that are important in one's own life not the controllability of circumstances in general. This definition of personal mastery is quite similar to Bandura's (1977) concept of self-efficacy because it refers to the individual's self-judgment about his or her capabilities to organize and execute actions necessary to achieve desired goals and seems to exclude beliefs about the responsiveness of the system. Finkel's (1985) distinction between "internal" and "external" efficacy, however, is an attempt to recognize both dimensions of control beliefs.

In the research reported here we avoid many of these questions about scope by using a scale that combines a version of the personal mastery scale with a measure of “perceived constraints” in the environment: that is, both internal and external control. This scale has been used in several published studies (Agrigoroaei and Lachman 2011). We agree that both measures are necessary to properly gauge the true influence of perceived control on individual behavior (Slagsvold and Sorenson 2013).

THEORIZING A LINK AMONG EDUCATION, SENSE OF CONTROL, AND VOLUNTEERING

Education and Sense of Control

In the United States, average levels of perceived control are high, but they vary systematically with positions of objective power (Ross and Mirowsky 2013). Objective social conditions shape experiences with success and failures that, in turn, contribute to generalized expectations about personal control. Generally speaking, socioeconomic status, of which education is an important component, has figured prominently in research in this area. Thus Schieman and Plickert (2008:154) refer to education as “one of the potentially most important socioeconomic conditions that increase personal control.” The positive influence of education on control can be explained partly by the way in which education determines general employment opportunities and specific work conditions, partly by its influence over economic security, and partly by its socialization effects: more highly educated people tend to be more trusting and more confident of their powers to solve problems. Without exception, research in this area confirms the positive effect of education on sense of control (Bailis et al. 2001; Hitlin and Johnson 2015:1438; Lachman and Weaver 1998; Mirowsky and Ross 2008:1364; Mitchell et al. 2016; Ross and Mirowsky 2013; Schieman and Narasda 2014; Stafford, Deeg, and Kuh 2016).

Sense of Control and Volunteering

The connection between sense of control and volunteering is not as straightforward as that between education and sense of control. It is not true that people become more generous, compassionate, caring, or altruistic because they feel in control of their lives. Nor does sense of control explain why people feel obligated to help others. Rather, it explains why people believe they *can* help others or they *can* meet their obligations. Feeling in control of their own fate and convinced that their social environment is at least to some degree malleable, they are more inclined to “exert effort, try hard, initiate action, and persist in the face of failures and setbacks; they evince interest, optimism, sustained attention, problem solving, and an action orientation” (Skinner 1996:556). They feel more competent in the face of social, intellectual, and physical challenges (Thoits 1999:361). When they do not feel in control, they behave in a very different manner. They tend to withdraw, retreat, escape, and otherwise become passive. They find it much harder to visualize being successful (Hitlin and Johnson 2015:1436).

Volunteering and Sense of Control

Thus far we have assumed that people are more likely to take up volunteering if they feel in control of their own lives and their social environment. Volunteer work is simply an extension of their readiness to be proactive in their social lives. The process of self-selection into volunteer work on the basis of control beliefs is illustrated in the following quotation:

I think I'm a bit of a control freak, and I think I tend to gravitate toward things where I can have control. I do a lot of volunteer work in the schools and in scouts because I feel like I can have control of what I'm doing there. (Smith and Davidson 2014:115)

This person has chosen volunteer work as an arena in which she can satisfy her need to be in control (or alleviate her fears of losing control).

However, it is quite possible that control beliefs are the result of volunteering rather than a cause. The two following quotations from volunteers illustrate this possibility:

Challenging a culture of racism and classism is still a daunting and seemingly impossible task, but I've now realized that each individual can make a palpable difference.

I do know that issues of race and class matter much more than they did then. . . . I also learned what I am capable of. Action no longer seems futile to me. (Heldman and Israel-Trummel 2012:320)

In both cases, individuals are describing sense of control as a result of their volunteer work.

It is easy to understand why volunteering would affect one's sense of control (Penner, Dovidio, and Piliavin 2005:380). "Generosity itself, by definition, represents a form of agency exercised, that is, a purposeful intervention of giving intended to convey valuable things to others in order to enhance their good" (Smith and Davidson 2014:63). Persistent volunteering almost demands a feeling of mastery. People generally like to control their environment and their fates (Haidt and Rodin 1999:312), and doing volunteer work is one way of achieving this. Through volunteer work people gain confidence in their ability to govern their own lives (Cohen 2009:523). The idea that helping others benefits the helper guides many self-help groups, such as Alcoholics Anonymous. A change in control beliefs as a result of volunteering might also be a response to cognitive dissonance: once people begin performing the volunteer role, they subsequently develop more positive evaluations of their decision to volunteer in order to allow them to continue to perform the role in an effective manner (Quintellier and Hooghe 2011:67). The experience of volunteering, especially if gratifying, helps build self-confidence as a volunteer, as someone who can identify with the volunteer role and respond more readily to future calls for help (Thoits 2013).

In summary, theory indicates that the relation between education and volunteering is mediated by sense of control. But this assumes that control beliefs are causally antecedent to volunteering and an alternative argument could also be made that the relation between volunteering and sense of control is reciprocal, in which case volunteering would mediate the relation between education and sense of

control. In the analytical strategy section below, we describe how we propose to test this theory.

EMPIRICAL EVIDENCE OF THE RELATION BETWEEN SENSE OF CONTROL AND VOLUNTEERING

According to a 2010 survey of American adults, 31% of volunteers agreed they had “very good” control over their life (e.g., not feeling exposed to circumstances beyond their control) compared to 26% of nonvolunteers, a statistically significant difference. Also significant was the difference in “very good” control between regular volunteers (35%) and irregular volunteers (28%). In addition, fewer volunteers (18%) felt “helpless” a few times a month or more often than nonvolunteers (22%) (United HealthCare/VolunteerMatch 2010). While these are only zero-order correlations, multivariate analyses tend to confirm this pattern.

A number of studies have explored the possibility that volunteers score higher on Pearlin’s personal mastery scale. Thoits and Hewitt (2001) find that volunteer hours increased subsequent scores on the personal mastery scale, although no reciprocal effects were evident. This study used only two items from Pearlin’s scale (“Sometimes I feel I am being pushed around in my life,” “There is really no way I can solve the problems I have”) and the resulting scale had rather low reliability (.50). In later studies, Thoits (2012, 2013) used the complete seven-item Pearlin scale, which has better internal consistency (.71), finding that volunteering has a positive effect on personal mastery. However, the effect disappears once a measure of volunteer role identity salience is entered into the model. Salience is an indicator of the extent to which the volunteer role identity is part of the actor’s self.

Research using self-efficacy as the measure of control report finds positive associations with volunteering. For example, an Australian study using a large random sample ($N = 3,318$) of residents of the state of Victoria found that volunteerism was positively related to self-efficacy (e.g., “I can always manage to solve difficult problems if I try hard enough”) even with self-esteem, social connectedness, and various other controls in the model (Brown, Hoyer, and Nicholson 2012). An Israeli study in which welfare clients were divided into an experimental group asked to volunteer for two hours a week over six months and a control group that did not volunteer found that members of the experimental group increased their sense of control (a measure including Bandura’s self-efficacy items such as “When I make plans I am usually convinced of being able to fulfill them”) whereas no change occurred in the control group (Cohen 2009). Volunteering might also help older adults cope with role losses such as retirement or spousal bereavement by increasing feelings of self-efficacy (Li 2007). (But Krause, Herzog, and Baker [1992] found no relation between volunteering and personal mastery among older adults.)

In addition, there are studies that do not use specific measures of volunteering but focus instead on something similar. For example, Baltes, Wahl, and Schmid-Furstoss (1990) find that perceived control is positively related to “volunteer social engagements” among a small sample of older adults in Germany. Menec and Chipperfield (1997) find that “perceived control” among 60- to 95-year-old Canadians had a positive effect on “activity level” (an 18-item index including volunteer work)

seven years later. A German longitudinal study uses “social participation” rather than volunteering: the authors find that over an 11-year period, participants with higher levels of social participation reported higher levels of perceived control (Infurna et al. 2011). Studies of social movements show that beliefs in political efficacy are highly correlated with participation in protests and demonstrations (van Stecklenberg and Klandermans 2013) and with volunteering for political campaigns (Quintellier and Hooghe 2012). Finally, Piliavin and Siegel (2007) include “environmental mastery” in the four-item measure of well-being they find linked to volunteering. (Volunteering is positively related to well-being.)

Not all of these studies deal in a satisfying way with the issue of endogeneity. Which comes first, volunteering or sense of control? In a pioneering use of cross-lagged structural equation modeling, Finkel (1985) examines the relation between political “campaign participation” and internal efficacy (e.g., “People like me have no say about what the government does”) and external efficacy (e.g., “I don’t think public officials care much about what people like me think”). He finds a reciprocal relation between participation and external efficacy but a reciprocal relation between participation and internal efficacy only among respondents with less than a college education. Christens, Peterson, and Speer (2011) estimate two-wave cross-lagged structural equation models with measures of psychological “empowerment” (e.g., “I can usually organize people to get things done”) used to predict “community participation” (e.g., “arranged an agenda for a public meeting”). They find that community participation has a positive effect on psychological empowerment whereas psychological empowerment has no effect on community participation.

In summary, although a number of studies have explored the connection between volunteering and sense of control (or something akin to it) none has thus far put together all the requirements of a sound study: a nationally representative sample of the U.S. population from which longitudinal data with information on volunteering and sense of control are gathered more than once; a proven scale measuring sense of control in which personal mastery and perceived constraints in the environment are combined; cross-lagged structural equation models to test for reciprocal effects and to investigate the mediating role played by sense of control in the connection between education and volunteering.

ANALYTICAL STRATEGY

Because we wish to test for the mediation of the relation between education and volunteering by sense of control but are aware of the possibility of reciprocal effects between sense of control and volunteering, we test two hypotheses:

H1: The positive effect of education on volunteer hours is mediated by sense of control beliefs.

H2: The positive effect of education on sense of control is mediated by volunteer hours.

We identify education as an exogenous variable because the sample we use has an age range of 25–74 (with a very few respondents aged between 20 and 25). All but a few respondents will have completed their education by the time either sense of control or volunteering is measured for the first time. Because theory suggests a

reciprocal relation between control beliefs and volunteering we use cross-lagged structural equation models to estimate both self-selection (sense of control selects into volunteering) and socialization (volunteering changes beliefs about control) effects simultaneously. To determine the mediation effects we calculate the total, direct, and indirect effects (based on multiply-imputed data sets) using Mplus 7.4.

When estimating the models, we control for a number of factors measured at baseline that previous research has shown to be related to both sense of control belief and volunteering. They are *income* (Cobb-Clark 2015; Lachman and Weaver 1998; Pearlin et al. 2007; Pudrovska et al. 2007; Ross and Mirowsky 1992; Schieman and Narasda 2014; Specht et al. 2013), *employment* (Ross and Mirowsky 1992, 2013), *race* (Ross and Mirowsky 2013), *age* (Krause 2007; Lachman 2004), *church attendance* (Schieman, Nguyen, and Elliott 2003), *gender* (Ross and Mirowsky 2002; Slagsvold and Sorenson 2008; Specht et al. 2013), and *marital status* (Ross 1991). All of these factors are related to volunteering (Musick and Wilson 2008).

DATA

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 20 and 74. The baseline national RDD sample was selected in 1995 from working telephone banks. The respondents participated in a computer-assisted telephone interview and also completed two self-administered questionnaire booklets mailed to their households. The MIDUS I 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 whole survey (i.e., $.700 \times .868$).

A follow-up survey of the original MIDUS sample was conducted between 2004 and 2006. The retention rate of the national RDD sample is 71%, adjusting for mortality of the respondents. To encourage participation, incentives were used, and the respondents who completed all phases of data collection received \$60 (MIDUS I participants received \$20). Multivariate logit regression of attrition shows that dropouts were more likely to be nonwhite males with lower education and income levels. MIDUS offers weights to correct the data for unequal stratified probabilities of household and within-household respondent selection in 1995. In addition a sample weight post-stratifies the data 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).

To deal with the problem of data missing due to lack of response and attrition, we use multiple imputation method jointly with the cross-lagged structural equation modeling, employing 10 imputed data sets (Allison 2001). Multiple imputation (MI) is described as “superior to other approaches when analyzing datasets with missing values” (Johnson and Young 2011:928). MI uses the distribution of the observed data to estimate a set of plausible values for the missing data using correlations between observed variables. Random components are incorporated into

these estimated values to reflect their uncertainty. Multiple data sets are created and then analyzed individually but identically to obtain a set of parameter estimates. These estimates are combined to obtain the overall estimates, variances, and confidence intervals. Specifically, the imputation procedure recovers missing values using the MICE (Multiple Imputation by Chained Equations) technique under the assumption of MAR (Missing-At-Random) (Royston 2005; Van Buuren, Boshuizen, and Knook 1999). Each chained equation uses a set of predictors known to be related to the measure being imputed.

MEASURES

Endogenous Variables

Volunteer Hours This variable 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.” These hours in four categories were summed.

Sense of Control A scale composed of four items of personal mastery and eight items of perceived constraints. It was originally constructed by Lachman and Weaver (1998) and includes all seven items from Pearlin’s mastery scale plus five additional items. The 12-item composite measure was computed by averaging scores on two subscales, namely personal mastery (e.g., “I can do just about anything I really set my mind to”) and perceived constraints (e.g., “What happens in my life is often beyond my control”) (α at T1 = .85; α at T2 = .87). The scores range from 1 (strongly agree) to 7 (strongly disagree) and were reverse coded for personal mastery. A higher value indicates higher sense of control (Lachman and Agrigoroaei 2010).

Exogenous Variable

Education 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.

Controls

Age A continuous variable ranging between 20 and 74. (Even though the survey was designed to range in age from 25 to 74 at baseline, it included some respondents aged between 20 and 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.

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

Employed Full Time Where 1 = worked full time (35 + hours/week) in the past year and 0 = other (worked part time [less than 35 hours/week]; no work or worked less than six months in the past year; or full-time student).

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

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.

RESULTS

Descriptive statistics for the analytical sample (N = 3,257) are shown in Table I.

The mean volunteer hours of respondents rose about one and a half hours between 1995 (5.9) and 2005 (7.3). Mean scores on the sense of control scale were more or less the same, the average respondents indicating that they agreed that they held the sense of control in their life at a level between “a little” and “somewhat.” The mean educational achievement for the sample was closest to “some college but no bachelor’s degree”; the mean age was 45; just over half were female; 13% were nonwhite; nearly two-thirds were married; seven out of ten were employed full time; the average health rating was between “good” and “very good”; and the mean church attendance rate was closest to “one to three times a month.” These statistics in many ways describe the typical volunteer, which is one reason, perhaps, that the volunteer rate for the sample as a whole is quite high.

Table I. Variables in the Analyses (multiply-imputed data sets, sample weighted)

Measure	Mean (S.D.)	Range
Final endogenous variables (2005)		
Volunteer hours	7.34 (11.67)	0–200
Sense of control	5.43 (1.02)	1.17–7
Intermediate endogenous variables (1995)		
Volunteer hours	5.88 (12.59)	0–240
Sense of control	5.49 (1.01)	1.08–7
Exogenous variable (1995)		
Education	2.80 (0.97)	1–4
Controls (1995)		
Age	45.45 (12.87)	20–74
Female	0.51 (0.50)	0–1
White	0.87 (0.33)	0–1
Married	0.63 (0.48)	0–1
Income	17.94 (9.96)	1–31
Employed full time	0.69 (0.46)	0–1
Physical health	3.50 (0.98)	1–5
Church attendance	2.77 (1.33)	1–5

Note: N = 3,257.

Table II and Fig. 1 show the results of the estimation of the structural equation model. All control variables are measured in 1995. Volunteer hours in 1995 and sense of control in 1995 are allowed to be correlated as are volunteer hours in 2005 and sense of control in 2005 (shown by double-headed arrows in Fig. 1). Neither correlation is significant though positive. Education has a positive effect on volunteer hours in 1995 and on sense of control in 1995. Education also has a direct effect on volunteering in 2005 and sense of control in 2005. Volunteering shows some stability because volunteer hours in 1995 are a good predictor of volunteer hours in 2005. Control beliefs are also fairly stable. Measured in 1995 they have a positive effect on volunteer hours in 2005. In a sense, control beliefs help explain part of the change in volunteer hours between 1995 and 2005. But volunteer hours in 1995 has no effect on control beliefs in 2005. In other words, there is no reciprocal effect between control beliefs and volunteering.

Table II also shows the association between the confounder variables measured in 1995 and volunteering and control beliefs in 2005. Apart from the strong impacts of the lagged volunteer hours and cross-lagged control beliefs, only two sociodemographic features remain to be significantly associated with volunteer

Table II. Cross-Lagged SEM of 2005 Volunteer Hours and Sense of Control Using Multiply-Imputed Data

	Final endogenous variable (2005)	
	Volunteer hours	Sense of control
Intermediate endogenous variables (1995)		
Volunteer hours	.11 (.03)***	.01 (.03)
Sense of control	.08 (.03)**	.46 (.02)***
Exogenous variable (1995)		
Education	.10 (.02)***	.05 (.02)*
Controls		
Age	.03 (.03)	.01 (.02)
Female	.03 (.02)	.00 (.02)
White	-.00 (.03)	.04 (.04)
Married	.02 (.02)	-.02 (.02)
Income	.01 (.04)	.15 (.04)***
Employed full time	-.02 (.03)	-.02 (.03)
Physical health	.01 (.03)	.12 (.02)***
Church attendance	.08 (.02)**	.00 (.02)
Correlations		
Volunteer hours with Sense of control (1995)		.03 (.02)
Volunteer hours with Sense of control (2005)		.02 (.02)
Model fit indices		
Chi-square	0.00	0.00
CFI	1.00	1.00
TLI	1.00	1.00
RMSEA	0.00	0.00
R ²	.05	.33
N	3,257	3,257

Notes: All estimates are standardized; CFI = Comparative Fit Index, TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; MLR (maximum likelihood parameter estimates with standard errors and a chi-square test statistic) estimator; the analyses employed 10 weighted multiply-imputed data sets; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed).

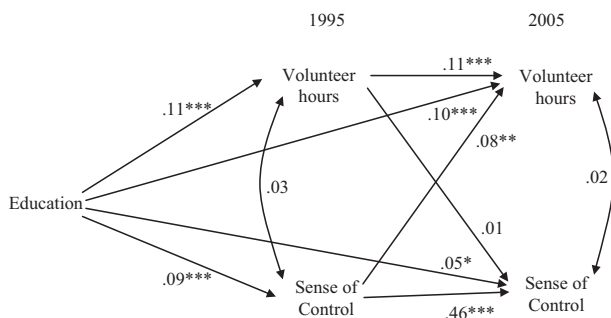


Fig. 1. SEM Path Analysis of Volunteer hours and Sense of Control Using Multiply-imputed Data. *Notes:* $N = 3,257$. All estimates are standardized. Control variables were employed but not displayed in the figure for simple presentation; see Table II for the effects of control measures. Model fits: CFI (Comparative Fit Index) = 1.00, TLI (Tucker-Lewis Index) = 1.00, RMSEA (Root Mean Square Error of Approximation) = .00. R^2 (1995 Volunteer hours) = .05, R^2 (1995 Sense of Control) = .11, R^2 (2005 Volunteer hours) = .05, R^2 (2005 Sense of Control) = .33. The analyses employed 10 weighted multiply-imputed data sets. * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed).

hours in 2005: busy volunteers tend to be better educated and more religious. With regard to the sociodemographic differences in control beliefs, those with a greater sense of control tend to be better educated, healthier, and earn more money. The significance of these confounders is to underline the fact that even though busier volunteers exhibit similar sociodemographic characteristics found in previous studies and even though some part of these differences is also associated with control beliefs, sense of control still has an independent positive effect on volunteer hours.

The standardized total, direct, and indirect effects of education on 2005 volunteering and sense of control are shown in Table III. Education has a strong positive total effect on volunteering in 2005. The decomposition of this total effect is shown in rows three through five. Most of the effect (84%) is direct, unmediated by sense of control. A mediatory path through volunteering in 1995 does, however, contribute something to the overall effect. Most importantly, some of the long-term effect of education measured in 1995 on volunteering is attributable to sense of control thus validating our first hypothesis.

Education also has a long-term effect on sense of control in 2005. About half of this effect (53%) is direct, or attributable to factors not included in the model. The model also shows education having a positive effect on sense of control in 1995 which, in turn, has a positive effect on sense of control in 2005. But no part of the total effect of education on sense of control in 2005 is attributable to volunteering in 1995. This is because, as we have discovered, a change in volunteering does not result in a change in sense of control.

DISCUSSION

Volunteer work is distinctive in being a form of “planned helping” (Snyder and Omoto 2008:4). To become volunteers, people must decide to take action, often

Table III. Standardized Total, Direct, and Indirect Effects of 1995 Education on 2005 Volunteer Hours and Sense of Control

	β
<i>Education to 2005 Volunteer hours (Mediator: 1995 Volunteer hours and Sense of Control)</i>	
E to 2005 V (Total)	0.123***
E → 2005 V (Direct)	0.104***
E → 1995 V → 2005 V (Indirect)	0.012***
E → 1995 SoC → 2005 V (Indirect)	0.007**
<i>Education to 2005 Sense of Control (Mediator: 1995 Volunteer hours and Sense of Control)</i>	
E to 2005 SoC (Total)	0.087***
E → 2005 SoC (Direct)	0.046**
E → 1995 SoC → 2005 SoC (Indirect)	0.040***
E → 1995 V → 2005 SoC (Indirect)	0.001

Notes: E = Education, V = Volunteer hours, SoC = Sense of Control. The SEM software (Mplus) does not provide indirect effects estimates when using multiply-imputed data; thus β (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* < .01; ****p* < .001 (two-tailed).

uncertain as to the true costs of their altruism, whom they will encounter, or whether their efforts will make any difference. This is why examining the role of agency in the volunteer decision is so important and why it is regrettable that it has been somewhat neglected. This study digs deeper into the association between structural properties (e.g., socioeconomic status) and volunteering by identifying a mechanism linking education to volunteering, thus adding to our knowledge of exactly how years of schooling are related to volunteering. While Oesterle, Johnson, and Mortimer (2004:1142) see education's value for volunteering as taking the form of "three forms of resources: civic skills, social connections, and civic values" and Son and Wilson (2011) believe that the "capital" to be found in education is a prosocial disposition in the form of generativity, we argue that education's value lies also in the sense of control it inculcates.

In addition to creating room in resource theory for a mechanism to link education to volunteer work, this study tackles a broader question. What is the relation between attitudes and behavior? Do attitudes predict future behavior with any certitude? Conversely, do people change their attitudes as a result of their behavior? Do people select into volunteer work guided by their control beliefs, or do volunteers increase their sense of control as a result of helping others? We find that control beliefs influence volunteering but not vice versa. This is similar to the pattern reported by van Ingen and Bekkers (2015) showing that generalized trust leads to more volunteering, but volunteering has no effect on generalized trust. Although the findings are based on a nationally representative sample of the U.S. population, it is not clear whether the same results would be arrived at were the study conducted in countries where the volunteer role is less clearly defined and institutionally supported.

Why, despite the speculation that one of the benefits of doing volunteer work is to strengthen one's sense of control, is there no relation in the sample we analyzed? One answer is that our measure of volunteering does not identify the kinds of volunteer activities that would increase sense of control. MIDUS does not ask about

specific volunteer tasks or roles, and its typology of volunteer activities does not identify many discrete categories: for example, religious volunteering is not distinguished. The socialization effects of volunteering to be president of the local branch of the Parent-Teacher Association and packing boxes in the local food pantry are sure to be very different.

Second, sense of control is, by definition, a generalized belief, not specific to a given situation or set of activities. It measures belief in personal control over life as a whole, not over specific areas of life (e.g., politics) or over particular social roles (Krause 2007). Research using more specific measurements of types of volunteering and domains of control might well reach different conclusions. For example, the research on political efficacy and political participation might show different results because in that case, the attitudes and behavior are closely related. Gecas (1989:310) observes that “the causal direction between self-efficacy and political activism... is by no means clear.” However, he believes that positive feelings of *political* efficacy, combined with feelings of environmental control, are most conducive to *political* activism. This might be one reason why the results reported here, where there is no reciprocal effect of volunteering on sense of control, are different from those reported in Christens et al. (2011). They found that community participation has a positive effect on psychological empowerment whereas the current study finds that volunteering has no effect on sense of control. But the concept of psychological empowerment is not a general assessment of control over life. Rather, it “is designed to assess an individual’s self-perceptions of their ability to organize people and influence policy-decisions in the local community” (Christens et al. 2011:341). Community participation is a five-item scale assessing an individual’s civic involvement. This is not a definition that would necessarily include, for example, volunteering for one’s church. The study thus not only focuses on a rather narrow range of volunteer-like activities, but attitudes and behavior are so closely aligned by definition that community participation is described as the “behavioral component” of psychological empowerment.

To investigate the possibility that narrower definitions of both control beliefs and volunteering might produce different results, we conducted some ancillary analyses. First, we used an item in MIDUS that asks respondents how much control they believed they had their “contribution to the welfare of others.” Perhaps volunteering would influence this domain-specific belief rather than control beliefs in general. However, no association was found. Second, we estimated cross-lagged structural equation models just for political volunteering. No association was found. We cannot, however, rule out the possibility that more specific domain measures might produce different results. The problem is the highly skewed distribution of responses to the political volunteering question in MIDUS: only 5% of respondents in 1995 and 6% of respondents in 2005 were political volunteers.

Third, control theory maintains that perceived control is the result of socialization. But we have no measure of length of commitment to or satisfaction with volunteer work. As far as commitment is concerned, some people make a career out of volunteering whereas the involvement of others is more fleeting. Such variations in commitment are bound to affect socialization. It is worth noting in this context that political scientists find that internal efficacy increases as a result of community

activism but not as a result of participation in a political protest because the latter is too sporadic (Valentino, Gregorowicz, and Groenendyk 2009:309). Sense of control theory also assumes that volunteering will be largely a positive experience, but there is no guarantee that this is the case. It is only when people *successfully* cope with environmental threats and challenges that they gain confidence in their ability to do so in the future. Satisfaction with volunteering or strong identification with the volunteer role would thus be highly correlated with sense of control.

Fourth, the lapse of time between the waves of the panel study might help explain lack of reciprocity. Control beliefs are fairly stable (note that their lagged effect term reports an exceptionally high standardized coefficient magnitude of .46 in Table II). It might be too much to expect volunteer work to have a long-term effect on them. In addition, volunteer work might have an immediate, short-term effect on control beliefs which has faded by the time of the follow-up 10 years later. In this respect, our findings are similar to those of a Canadian study where volunteer work was included in a more general measure of “activity.” Perceived control had a positive effect on activity level, but the reverse was not true: activity level measured in 1983 had no effect on perceived control in 1990. The authors speculate that one reason for this might be the seven-year time span during which a variety of factors, not measured in the study, may have weakened the influence of activity level (Menec and Chipperfield 1997). Similarly, Christens et al. (2011) find that community participation positively affects psychological empowerment when measurements are taken only two years apart.

CONCLUSION

We commented earlier on the fact that volunteer theory, and especially resource theory, needs to incorporate the idea of agency. Too much emphasis has been placed on resources that enable people to volunteer and insufficient attention has been paid to their willingness to volunteer. Their willingness is partly determined by their self-assessment and partly determined by their optimism about making a difference in the lives of others. We also think our findings have relevance to volunteer recruiters. Many people have an interest in volunteering for a cause. Successful recruiting, however, might have as much to do with strengthening sense of control as it does with arguing that a cause is just or the need for help is urgent. For example, organizations can develop team or group volunteering (e.g., once a week at the soup kitchen) to overcome individual’s feelings of futility or temptation to free-ride.

Finally, there are broader implications of the finding that people who do not believe they control their lives or the lives of others around them tend to withdraw into their own private world. Today, many people believe they have lost control over their lives and that political and financial institutions dominated by “elites” ignore them and are unresponsive to their demands. When negative events impinge upon them, such as collapse of the housing market or factory closures, they attribute the causes to outside forces rather than blame themselves in order to protect the self-concept. This in turn leads to further loss of sense of control over external

events (Twenge, Zhang, and Im 2004:310). More and more people come to believe that it is futile to make sacrifices to work on behalf of the wider community. Looking at the contribution of sense of control beliefs to volunteerism is therefore more than an academic exercise to see what explains education's effect on volunteering. It also promises to uncover ways in which the health of civil society can be maintained during times of growing social inequality and the alienation of many from mainstream institutions.

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