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RESEARCH PAPERS

# Growing the Volunteer Pool: Identifying Non-Volunteers Most Likely to Volunteer

**Leonie Lockstone-Binney[1] · Kirsten Holmes[2] · Lucas C. P. M. Meijs[3] · Melanie Oppenheimer[4] · Debbie Haski-Leventhal[5] · Ross Taplin[2]**

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**Abstract** There are ongoing management and societal challenges affecting volunteering participation. These place a premium on organizations identifying individuals that currently do not volunteer but have the willingness and capacity to do so, the "Potentials". Supplementing the limited non-volunteer literature, we seek to quantify this potential volunteer pool using constructs aligned to the willingness, capability and availability dimensions from Meijs et al.'s (Volunt Action 8:36–54, 2006) volunteerability framework. Using binary logistic regression testing with a nationally representative sample of Australian volunteers and non-volunteers, we found partial support for the framework's willingness and capability dimensions determining volunteer status. We then applied a predictive equation to the non-volunteer sample to calculate their percentage likelihood of volunteering, to identify a cohort of "Potential" volunteers. Further testing revealed statistically significant differences between this cohort compared to other non-volunteers based on various interventions for promoting volunteering. The implications of our novel study and an associated research agenda are discussed.

**Keywords** Non-volunteers · Volunteers · Volunteering participation · Volunteerability · Potentials

✉ Leonie Lockstone-Binney
l.lockstone-binney@griffith.edu.au

Kirsten Holmes
k.holmes@curtin.edu.au

Lucas C. P. M. Meijs
lmeijs@rsm.nl

Melanie Oppenheimer
melanie.oppenheimer@flinders.edu.au

Debbie Haski-Leventhal
debbie.haski-leventhal@mgsm.edu.au

Ross Taplin
r.taplin@curtin.edu.au

[1] Griffith University, Parklands Drive, Southport, QLD 4215, Australia

[2] Curtin University, GPO Box 1978, Perth, WA 6845, Australia

[3] Rotterdam School of Management, Erasmus University, The Netherlands, P.O. Box 1738, 3000DR Rotterdam, The Netherlands

[4] Flinders University, GPO Box 2100, Adelaide, SA 5001, Australia

[5] Macquarie Graduate School of Management, 99 Talavera Rd., North Ryde, NSW 2109, Australia

## Introduction

The volunteering landscape is increasingly complex, with amplified demands on volunteer-provided services concurrent with long-term declines in volunteer participation. Wilson and Musick (1997) suggested over 20 years ago that demand for volunteer labour was outstripping supply. Declines in volunteer participation rates continue to be noted in several developed countries. In Australia, the setting of the current study, 29% of people volunteered in 2019, down from 36% in 2010 (ABS, 2020). A 15-year low in volunteering participation in the USA was reported in 2015 with only 24.9% of Americans volunteering (Bureau of Labor Statistics, 2016). Unsurprisingly in light of these trends, volunteer-involving organizations report substantial difficulties recruiting volunteers, as evidenced by a 2015 Australian survey of 881 volunteer-involving

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organizations, 86% of which indicated they needed more volunteers (Volunteering Australia, 2016).

Exerting pressures on the demand for volunteers, there has been a shift in the roles and expectations of volunteers by governments, particularly in developed economies, where essential social services are increasingly delivered by volunteer-involving organizations and volunteers (Oppenheimer & Warburton, 2014). This increased demand for volunteers comes at a time when population ageing is likely to exacerbate the need for a range of community and health services offered by volunteers (Davies et al., 2018).

Compounding this complex picture, volunteering is changing and diversifying to encompass a range of flexible and temporal forms, such as episodic and online volunteering (Dunn et al., 2016). Concurrently, this diversification of volunteer effort has witnessed a move away from the traditional model of volunteering as a face-to-face service activity, undertaken in a designated location and at a designated time, through an organization (Kragt & Holtrop, 2019).

Against this backdrop, there is a lack of dedicated research focused on non-volunteers (Boezeman & Ellemers, 2008; Sundeen et al., 2007). The available evidence on people who do not volunteer generally comes from national statistics, which provides micro-level demographic data on factors associated with non-participation such as poor health and unemployment (ABS, 2015). This descriptive profile cannot predict or explain the full picture of factors affecting (non-) volunteering and possible interventions to improve participation rates (Law & Shek, 2011).

Lacking in the literature is a nuanced understanding of the heterogeneity of non-volunteers as they are typically represented as one cohort distinguishable only from current volunteers. As Niebuur et al., (2019, p. 2) highlights, the differences between volunteers and non-volunteers are often "implicitly assumed" but in order to predict likely participation in volunteering, a better understanding is required of non-volunteers. Beyond the traditional categorical assessment of volunteer versus non-volunteer, Dury et al. (2015) suggest that the "potential" of people to volunteer may be a new way of assessing volunteering capacity. We concur with this view and seek to study this "potential" pool, the Potentials hereafter, which we define as the group most likely to move from non-volunteer to volunteer status. To do so, we apply the theory of volunteerability (Meijs et al., 2006), which comprises three dimensions, namely, an individual's willingness, capability and availability to volunteer. In particular, the investigation aims to address the following research questions: RQ1) Which constructs aligned to the willingness, capability and availability dimensions of the theory of volunteerability predict volunteering propensity amongst non-volunteers? RQ2) Based on these predictors, can a cohort of potential non-volunteers be identified in a general population?

## Literature Framing

There is a vast body of work examining who volunteers are and the reasons why individuals choose to volunteer. Current limited understandings of non-volunteers generally come from volunteering participation studies that involve non-volunteers as a comparison group relative to volunteers to provide insights on current volunteers and volunteering (Niebuur et al., 2019). Less well understood is non-volunteers in terms of their heterogeneous nature and interventions that might attract them to take up volunteering.

Speaking to the willingness of people to volunteer, motives for volunteering have been a popular topic of interest in the volunteering literature (Clary et al., 1996; Cnaan & Goldberg-Glen, 1991). However, there is limited understanding of how to motivate non-volunteers (Niebuur et al., 2019). Clary et al. (1996), for example, undertook a comparative study using a US national sample to validate the authors' seminal volunteer motivation scale, the volunteer functions inventory (VFI). The findings indicated that non-volunteers (those who had not volunteered in the 12 months prior to the study) rated five of the six functional motives lower than volunteers. These motives included values (opportunities to express altruistic values), understanding (opportunities to learn new knowledge and skills), social (opportunities to engage socially), protective (opportunities to protect the ego from negative features of self) and enhancement (opportunities to promote personal growth), with the career motive (opportunities to gain career related benefits) the exception to the directionality of these findings.

More recently, Lai et al. (2013) used the VFI items to examine differences between a convenience sample of Chinese volunteers, non-volunteers and potential volunteers on associations between their motives and national identity. Volunteer status was self-reported by respondents on the basis of whether they currently volunteered and would continue to do so (volunteers), did not currently volunteer but were willing to do so in the future (potential volunteers), and those who did not volunteer and were unwilling to join in the future (non-volunteers). They found across all six motive types, volunteers and potential volunteers demonstrated similar motivation levels. However, the ratings for non-volunteers on these measures were significantly lower than the other two groups combined (Lai et al., 2013). Differing from Clary et al. (1996), the Social function was found to be the most salient factor

discriminating between potential volunteers and non-volunteers.

Attitudes and beliefs held by volunteers and non-volunteers may also affect willingness and capability to volunteer. Evidence suggests that pro-social attitudes towards giving and helping others are more widespread amongst volunteers (Janoski et al., 1998). In a nationally representative Canadian study, Reed and Selbee (2003) investigated the beliefs of those who had (volunteers) and had not volunteered (non-volunteers) during the past 12 months and found few differences between the cohorts in a series of logistic regression models. Additionally, further discriminating amongst the volunteer cohort, they compared those volunteers who volunteered once a week or more (active volunteers) to non-volunteers. Reed and Selbee (2003) noted there was greater discrimination between active volunteers compared to non-volunteers. Active volunteers had a greater sense of community belonging, felt more strongly that society should help the needy and were more concerned about conditions in their local area than non-volunteers, suggestive that they were more socially responsible. In one of the first studies to examine the negative beliefs of non-volunteers, Law and Shek (2011) tested the beliefs against volunteering (BAV) scale on a large convenience sample of Chinese adolescents. Univariate analysis revealed that the mean score for non-volunteers (adolescents who had not volunteered in the previous 12 months) on the BAV scale was significantly higher than that of volunteers, indicating greater levels of agreement with items such as "volunteering is a waste of time".

Studies have additionally compared volunteers and non-volunteers in terms of their available social resources as affecting willingness, capability and availability to volunteer. Dury et al. (2015) tested a hybrid theory of volunteering propensity incorporating individual characteristics (religiosity and altruism), resources (education, household income, health status) and social factors (home ownership [as a measure of the social context in which volunteering takes place], marital status) using a Belgian sample of 31,581 people aged over 65. Akin to Lai et al.'s study, the returned sample was differentiated into actual volunteers (volunteered in the past 12 months), potential volunteers (not currently volunteering but willing to do so in the near future) and non-volunteers. In a series of binary logistic regression models, Dury et al. (2015) compared the combined actual and potential volunteers with the non-volunteer cohort and found that volunteers had more social resources. Respondents who rated the importance of religiosity and altruism more highly, had frequent contact with friends, cohabited and provided informal help were more likely to volunteer or have the potential to do so in the future.

Education and income have been linked as a stable predictor of volunteering participation (Wilson, 2012). Higher education levels are correlated with higher rates of volunteering (Dury et al., 2015). In a nuanced study of income effects, DeVOE and Pfeffer (2007) conducting binary logistic regression analysis on nationally representative time use data, found that respondents paid at an hourly rate were less likely to have volunteered on the day they were sampled compared to their non-hourly paid counterparts. Evidence is mixed as to how time spent in paid work affects formal volunteering. Part-time workers, for example, have been found to have higher rates of volunteering than full-time workers (Rotolo & Wilson, 2004). In contrast, studies of large cohorts in Germany and the USA have found that volunteers spend more time in paid work than non-volunteers (Dittrich & Mey, 2019; Mutchler et al., 2003).

Finally, the relative well-being of volunteers and non-volunteers has been investigated. Brown et al. (2012) found support for the hypotheses that volunteers report higher levels of well-being compared to non-volunteers, and that they also report higher levels of self-esteem, self-efficacy and social connectedness, all of which mediate the relationship between volunteer status and well-being. In an earlier study, Mellor et al. (2009) found that volunteers had higher levels of well-being and exhibited more positive psychological attributes (e.g. optimism) than non-volunteers. Unlike Brown et al.'s (2012) findings, however, no differences were noted between volunteers and non-volunteers based on their levels of self-esteem. Other studies have also evidenced higher levels of well-being for volunteers compared to non-volunteers although the causal direction of this link has been questioned (Windsor et al., 2008).

We can conclude that non-volunteers are less motivated to volunteer, have less favourable attitudes and beliefs about volunteering and generally have fewer social resources affecting their willingness, capability and availability to volunteer. Dury et al. (2015) and Lai et al. (2013) provide tentative evidence of a "potential" group of non-volunteers who are similar to actual volunteers but different from other non-volunteers. These studies may be affected by a positive sociological bias in asking respondents to self-report this status, a limitation Kamerade and Bennett (2018) contend has been a feature of much volunteering research. The current study responds to this concern by using a data-driven approach to test for the existence of the potentials in a nationally representative sample. We will now turn to examine the holistic framework underpinning this work, the theory of volunteerability.

### Volunteerability

Volunteerability is based on the concept of employability from the paid work literature (McQuaid & Lindsay, 2005), which focuses on the ability of the individual to be employed. The theory developed by Meijs et al. (2006) has three dimensions: willingness, capability and availability, which if increased, are posited to enhance the prospect of an individual volunteering.

Examining the dimensions of volunteerability in turn, willingness is influenced by psychological motives and individual attitudes. Examining the literature on volunteer motivations, it is evident that individuals begin to volunteer to fulfil particular motives or functions (Clary et al., 1998). In addition, it is possible to understand willingness based on positive or negative attitudes and beliefs about volunteering. Attitudes reflect the individual's overall evaluation of a target (in this case—volunteering), based on the person's feelings or emotions about it (Morris, 1997). Beliefs are an acceptance of cognitive propositions, statements or doctrine (Reber, 1995).

A person may have higher levels of volunteerability if they have the skills, competencies and knowledge required to volunteer in a specific role or organization (Haski-Leventhal et al., 2009). Capability includes actual and perceived skills required to volunteer. Furthermore, capability concerns an individual's self-efficacy. Applied to volunteering, self-efficacy is the extent of one's belief in one's own ability to complete tasks and reach goals (Ormrod, 2006).

Availability is related to actual and perceived amounts of time available to accommodate volunteering. Research highlights that lack of time is a prominent barrier to volunteering (Sundeen et al., 2007). Paradoxically, individuals most likely to volunteer are typically in professional occupations and married with children (ABS, 2015). Despite limited hours of free time, these people manage their time constraints to volunteer. It is also likely that having a job increases people's likelihood of finding volunteering opportunities and/or being asked to volunteer (Wilson, 2012).

Testing of the volunteerability dimensions as measures of volunteer capacity has received tentative support in profiling differences between volunteers and non-volunteers (Haski-Leventhal et al., 2018). To address RQ1, we will now examine which constructs aligned to the willingness, capability and availability dimensions of the theory of volunteerability predict volunteering propensity amongst non-volunteers. Following, in response to RQ2, this will enable us to examine the heterogeneity of non-volunteers in order to confirm if a cohort of potentials can be identified in a general population.

## Methods

### Participants and Procedures

An online questionnaire was administered to a nationally representative sample of volunteers and non-volunteers in Australia during November and December 2015. A panel survey company that complied with national industry standards (AMSRS, 2012) was employed to access the difficult to identify non-volunteer sample. The questionnaire was piloted online with 26 responses received (n = 16 volunteers and n = 10 non-volunteers). Overall the pilot confirmed that the question flow, routing and readability were acceptable.

The panel company was commissioned to deliver 1,000 responses. To achieve a representative sample, it was stratified by a 70%/30% split of Australian non-volunteers and volunteers, based on national volunteering participation data (ABS, 2015) and by age (30% for 18–34 years, 37% for 35–54 years and 33% for 55 + years), gender (50% males; 50% females) and location (all States and Territories, metropolitan and regional split). At the close of the survey period, 1,007 responses were received using these sampling criteria (volunteers n = 311, non-volunteers n = 696). There were slight variations (9 responses or less) across the geographic breakdown of the target and returned sample. Respondents in the 18–34 age group and males were marginally underrepresented; however, in both cases over 90% of the planned quota was obtained, which was considered acceptable.

On average, it took panel members approximately 25–30 min to complete the questionnaire. Quality checks were conducted to mitigate against illogical or inconsistent responses, the overuse of non-response categories and overly quick survey completion (where completion was less than 30% of the median completion time).

### Measures

#### *Dependent Variable*

A series of filter questions were used to determine *volunteer status*: Q1 "Have you given time/volunteered in the last 12 months?", Q2 "Have you given time/volunteered in the last five years?" and Q3 "Have you given time/volunteered to any of the following within the last five years?" 1) Your kid's school or sport, 2) Your church, 3) Your work, 4) As part of your studies, 5) None of these). To be classified as a non-volunteer, respondents had to select the "no" option to Q1, Q2 and Q3 1–4 as well as selecting the Yes option to Q3(5). This level of screening is more robust than studies that define a non-volunteer as someone who

has not volunteered in the previous 12 months (Clary et al., 1996; Sundeen et al., 2007). As a result of this screening, volunteers were coded 1 and non-volunteers (had not volunteered in any capacity in the last 5 years) 0.

*Independent Variables*

Table 1 provides a summary of the independent measures employed in the binary logistic regression analysis. Where possible, replicable scales were used to assess the constructs underpinning the volunteerability framework. These were measured on 5-point Likert scales, with Betz (1996) noting five-to-seven response categories are ideal.

One replicable scale was adapted prior to pilot and final administration following considered review and debate by the research team. Given the lack of scales examining the beliefs of non-volunteers, *Beliefs* about volunteering were assessed using the five items judged most appropriate from the BAV 14-item scale. It was determined that the more emotive items of the original scale be removed (e.g. "only idiots will volunteer", "only problematic people volunteer") as it was considered these would not translate well to the Australian setting, which has a long accepted tradition of volunteering, as opposed to the shorter history of volunteering in China (Salamon et al., 2011) where the original scale was tested. Additionally, items (e.g. "volunteering is meaningless", "we volunteer, but we are eventually fooled") were also removed to avoid conceptual ambiguity as recommended by de Vaus (2002) when refining sets of indicators. The item "volunteering affects my study negatively" was removed as whilst relevant to Law and Shek (2011)'s study of adolescents, it was not appropriate for the general population of the current study.

The two measures aligned to the availability to volunteer dimension were recoded for subsequent analysis. The open-ended response to *hours of free time* in a typical week, not accounting for time spent at work, sleeping or on other obligated commitments was collapsed based on the median hours calculated (10 h). *Employment status* was the second variable recoded. As Sundeen et al., (2007, p. 283) note "employment status not only suggests a level of wealth and stability, but also the amount of time that an individual may have to commit to volunteering". In describing the availability dimension of the volunteerability framework, Haski-Leventhal et al. (2009) also link employment to limited time to volunteer. As such, this proxy measure of available free time was adopted and subsequently collapsed into a categorical measure (as detailed in Table 1). The choice to group those employed (in various forms) versus those not active in the paid labour force acknowledged the mixed effects of employment on volunteering (Piatak, 2016).

Other variables included in the study not linked to the volunteerability framework included the demographic variables of *age* and *gender*. As volunteering has been linked to other giving behaviours (Dawson et al., 2019; Dury et al., 2015), respondents were asked a series of related questions to assess the predictive capability of these behaviours relative to the volunteerability constructs.

*External Validation Variables*

A series of 49 items were tested to assess interventions to promote volunteering to non-volunteers. These were developed by Haski-Leventhal et al. (2018) and aligned to the volunteerability dimensions. Non-volunteers were asked to indicate the likelihood of each item affecting their decision to start volunteering in the next 12 months (1 "very unlikely" through to 5 "very likely"). Additionally, as an overall indication of intention to volunteer, non-volunteers were queried using the same scale as to whether they intended to "start volunteering locally in the next 12 months".

## Data Analysis

The statistical analysis was conducted in four stages.

As a precursor to the latter analysis stages, in Stage One, Exploratory Factor Analysis (EFA) was conducted on the newly created scale for *perceptions of skills* using IBM SPSS version 23. Additionally, confirmatory factor analysis (CFA) in Amos 24.0 was used to assess the validity of combining the replicable scales as input into the stage two analysis. Fit statistics including the chi-square/df, root mean square residual (RMR), root means square error of approximation (RMSEA); standardized RMSR (SRMR) and comparative fit index (CFI) were examined along with item loadings, average variance explained (AVE) and convergent reliability. Discriminant validity was examined using the Heterotrait–Monotrait (HTMT) ratio method (Henseler et al., 2015). Based on the EFA and CFA, new variables were created to represent the underlying (directly unobservable) factors based on the scales tested.

In stage two, to address RQ1, binary logistic regression was conducted to examine the multivariate predictors of volunteering status. Of the 1007 responses, a test sample (n = 630) was created to develop the discriminant function containing all volunteer responses (n = 311) together with a roughly equivalent number of non-volunteer responses (n = 319), which were selected from all non-volunteer cases (n = 696) using the random sample of cases option in IBM SPSS statistics. All non-volunteer responses not contained in the test sample (n = 377) and all volunteers formed the basis of the holdout sample (n = 690). The holdout sample was used to test the discriminant function

**Table 1** Summary of the independent measures

| Dimension/Construct | Question type | Range | Measure | Coding |
|---|---|---|---|---|
| *Willingness* | | | | |
| Motives | Likert | 1–5 | 30 items from VFI (Clary et al., 1996), 6 factors | 1 = Very unimportant, 5 = Very important |
| Attitudes to giving | Likert | 1–5 | 9 items from Attitudes Influencing Monetary Donations to Charitable Organizations scale (Webb et al., 2000), 2 factors | 1 = Strongly disagree, 5 = Strongly agree |
| Beliefs about volunteering | Likert | 1–5 | 5 items from Beliefs Against Volunteering scale (Law & Shek, 2011) | 1 = Strongly disagree, 5 = Strongly agree |
| *Capability* | | | | |
| Self-efficacy | Likert | 1–5 | 8 items from General Self-Efficacy scale (Chen et al., 2001), 1 factor | 1 = Strongly disagree, 5 = Strongly agree |
| Perceptions of skills | Likert | 1–5 | 12 items, new scale developed by the authors | 1 = Strongly disagree, 5 = Strongly agree |
| Actual skills | Closed option | 0–1 | Do you feel that you have the required skills/competencies to volunteer? | 0 = No<br>1 = Yes |
| *Availability* | | | | |
| Hours of free time in a typical week | Open option | 1–2 | How many hours of free time do you have in a typical week (time excluding sleep, work and other obligated commitments)? | 1 = 0–10 h, 2 = 11 + hours |
| Employment status | Closed option | 1–2 | Which of the following categories best describes your employment status?<br>1—Employed, working full-time<br>2—Employed, working part-time<br>3—Self-employed, working full-time<br>4—Self-employed, working part-time<br>5—Student, studying full-time<br>6—Student, studying part-time<br>7—Unemployed, looking for full-time work<br>8—Unemployed, looking for part-time work,<br>9—Not in the labour force | 1 = Employed, self-employed<br>2 = Student, unemployed, not in labour force |
| *Demographics* | | | | |
| Gender | Closed option | 1–2 | What is your gender? | 1 = Male<br>2 = Female |
| Age | Closed option | 1–3 | What is your current age? | 1 = 18–34<br>2 = 35–54<br>3 = 55 + |
| *Giving Behaviours* | | | | |
| Donated money | Closed option | 0–1 | In the last 12 months, have you personally donated money/goods to an organization/charity/cause? | 0 = No<br>1 = Yes |
| Donated blood | Closed option | 0–1 | In the last 12 months, have you donated blood? | 0 = No<br>1 = Yes |
| Helped or supported anyone beyond their immediate family | Closed option | 0–1 | In the last 4 weeks, did you help anyone who is not part of your immediate family with the following activities?<br>1—Domestic work, home maintenance or gardening<br>2—Providing transport or running errands<br>3—Any unpaid childcare<br>4—Any teaching, coaching or practical advice<br>5—Providing any emotional support<br>6—Any other help<br>7—Did not help anyone | 0 = No<br>1 = Yes |

**Table 1** continued

| Dimension/Construct | Question type | Range | Measure | Coding |
|---|---|---|---|---|
| Current member of organization or group | Closed option | 0–1 | Are you a current member of an organization or group (e.g. sporting club, professional association, service club, environmental group, political party, religious group)? | 0 = No<br>1 = Yes |
| Parents or guardians undertaken voluntary work | Closed option | 0–1 | Have either of your parents or guardians ever done any voluntary work in the community? | 0 = No<br>1 = Yes |
| Child/youth volunteering | Closed option | 0–1 | When you were a child/youth, did you:<br>1—Volunteer with other members of your family?<br>2—Volunteer through your school?<br>3—Volunteer on your own initiative? | 0 = No<br>1 = Yes |

as recommended by Hair et al. (1998). Categorical variables were transformed into dummy variables using the default "indicator" setting in IBM SPSS statistics.

In stage three, based on the logistic regression output, the beta weights of the significant predictors were entered into a logit equation to calculate the predicted probability of volunteering amongst the non-volunteer sample given by:

$$\frac{\exp(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_p x_p)}{1 + \exp(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_p x_p)}$$

where the $\beta_i$ are the estimated regression coefficients and the $x_i$ are the independent variables (ABS, 2012).

In addressing RQ2, the equation was applied to the entire non-volunteer sample to quantify the number of potentials. A decision rule was applied to the percentage output, with those cases scoring above 50% classified as a potential. Before doing so, the intercept $\beta_0$ was adjusted by subtracting 0.336 to produce unbiased estimates of the potentials given the proportion of volunteers in the test sample was 49.4%, compared to the general population of Australian volunteers estimated to be 31% (ABS, 2015). This 0.336 equalled the logodds of volunteers in the general population (ln(0.31/0.69) minus the logodds of volunteers in the stage two data used to estimate the logistic regression (ln(0.494/0.506). Frequency and descriptive analysis was conducted to profile the resulting potential and non-volunteer sub-samples based on the assessed measures.

In stage four, the two groups (0 = non-volunteers; 1 = potentials) were externally validated using additional variables as recommended by Hair et al. (1998) to observe for group differences. Mann–Whitney U tests were conducted on the 49-items assessing a range of interventions that might promote the uptake of volunteering.

## Results

The results of the analysis stages are outlined in sequential order. The stage one results detail the findings of the EFA and CFA testing conducted. The stage two results outline the predictors found to best discriminate between the volunteer and non-volunteer samples. Using the stage two output, stage three calculates a percentage probability of volunteering for each non-volunteer, the findings of which allow for quantification of the number of potentials. Finally, stage four externally validates that the potentials are a distinct cohort from the non-volunteer sub-sample based on significant differences between the cohorts in terms of their likelihood to adopt interventions aimed at promoting the uptake of volunteering.

To determine the underlying dimensions of the newly created 12-item *perceptions of skills* scale, it was analysed using EFA with principal axis factoring and a varimax rotation. The results revealed three factors with eigenvalues greater than one accounting for 61.5% of the total variance explained (TVE) (KMO = 0.861). All factor loadings were above 0.40, except for one item "I fear that the volunteer organization will not value my skills", which was discarded from the resulting solution. The resulting factors were labelled: *skills development* (3 items, 33.4% TVE), *skills deficit* (5 items, 17.7% TVE) and *inclusive skills* (3 items, 10.3% TVE). One item, "I feel overqualified to volunteer" was removed from the *skills deficit* factor as a result of reliability testing. The CFA confirmed support for replicable scales used as input to stage two, namely, the six *motives* (*protective, values, career, social, understanding and enhancement*), *attitudes towards helping others*, *attitudes towards charitable organisations*, *beliefs against volunteering* and *self-efficacy*. Fit statistics were satisfactory (chi-square/df = 3275/1229 = 2.66; RMR = 0.041;

RMSEA = 0.041; SRMR = 0.050; CFI = 0.933); however, the AVE for *attitudes towards charitable organisations* and *beliefs against volunteering* were slightly lower than 0.5 (0.411 and 0.498, respectively). This was due to loadings less than 0.5 for three items: for *attitudes towards charitable organisations,* "much of the money donated to charities is wasted" had a loading of only 0.466 and for *beliefs against volunteering* "volunteers are cheap labour" and "I like helping people but I do not want to volunteer" had loadings of 0.398 and 0.427. These items were removed from further analysis, which increased all AVE values above 0.5 and marginally improved the other fit statistics. Discriminant validity was satisfactory with all HTMT ratios equal to 0.8 or less (so satisfying the benchmark of less than 0.85) except for the *enhancement* and *protective* motives with an HTMT ratio of 0.89, just below the benchmark of 0.9 for closely related constructs. The summary statistics for the original items and resulting factors are outlined in Appendix I.

Stage two determined the combination of variables that discriminated volunteer status. Using the test sample, all predictors were entered and then independent variables with the highest probability of having no effect on the dependent variable were progressively eliminated using a stepwise procedure (Hair et al., 1998) until only those that had a statistically significant effect remained. The final model is presented in Table 2. The Hosmer and Lemeshow test was non-significant, indicating the model had good fit (Hair et al., 1998), correctly classifying the volunteer status of 74% of respondents. The analysis was replicated on the holdout sample with the resulting solution containing the same significant predictors, correctly classifying 73% of respondents and the model indicating good fit (Hosmer and Lemeshow, $p = 0.160, > 0.05$), thereby internally validating the test model.

Six variables discriminated between the volunteer and non-volunteer samples. Representing the willingness dimension of volunteerability, the *enhancement* motive, which relates to opportunities to promote personal growth and self-esteem, was a significant discriminator. As indicated by the odds ratio, for every one point increase on the Likert scale (1–5), a person was 1.5 times more likely to volunteer (when holding all other predictors constant). Aligned to the capability dimension, the "yes" response to the *actual skills* question "do you consider that you have the required skills/competencies to volunteer?" was also a significant predictor indicating the importance of respondents self-assessing that they have the necessary skills to volunteer. When holding all other predictors constant and increasing the independent by one, a person was 3.7 times more likely to volunteer if they assessed that they had the necessary skills to do so.

The strongest predictor of volunteering status based on the odds ratios was a "yes" response to "are you a *current member* of an organization or group (e.g. sporting club, professional association, service club environmental group, political party, religious group)?" When holding all other predictors constant, a person was 5.2 times more likely to volunteer if they were affiliated with a formal club or association. Other giving behaviours not aligned to the volunteerability dimensions that were significant included the *helped or supported anyone beyond their immediate family* options of "teaching, coaching or practical advice" and "any other help". Finally, the *child/youth they had*

**Table 2** Logistic regression analysis of volunteer status

| Independent variable | B | se | Wald | df | P | Odds Ratio |
|---|---|---|---|---|---|---|
| Motivation—Enhancement | .430 | .135 | 10.126 | 1 | .001 | 1.538 |
| Q26(1) – Skills/competencies to volunteer (Yes response) | 1.306 | .277 | 22.235 | 1 | .000 | 3.692 |
| Q7_4(1) – Help or support for any teaching, coaching or practice advice in the last 4 weeks (Yes response) | 1.387 | .333 | 17.364 | 1 | .000 | 4.001 |
| Q7_6(1) – Any other help or support provided in the last 4 weeks (Yes response) | .955 | .298 | 10.281 | 1 | .001 | 2.600 |
| Q8(1) – Current member of an organization or group (Yes response) | 1.642 | .208 | 62.106 | 1 | .000 | 5.166 |
| Q10_3(1) – Volunteered on own initiative as a child/youth (Yes response) | .918 | .202 | 20.654 | 1 | .000 | 2.503 |
| Constant | -3.713 | .514 | 52.264 | 1 | .000 | .024 |
| Adjusted Constant | -4.049 | | | | | |
| Model $\chi^2$ = | | 226.29, df = 6, $p < .001$ | | | | |
| Pseudo $R^2$ (Nagelkerke) = | | .402 | | | | |
| N = | | 630 | | | | |
| Classification | | 74.4% correct | | | | |
| Hosmer and Lemeshow Test | | $p = 0.752$ (> .05) | | | | |

*volunteered* option of "volunteered on your own initiative" was also significant.

In stage three, the beta weights of the six variables were entered into the predictive equation and it was applied to the entire non-volunteer sample to calculate a percentage probability of volunteering for each non-volunteer. As an example, for a respondent who rated the composite *enhance* motive mean = 2.20 and responded in the negative (0) to all other variables, the equation would appear as follows, resulting in a 4% probability of volunteering:

$$\frac{\exp\left(-4.049 + 2.20 * 0.43 + 0 * 1.387 + 0 * 1.642 + 0 * 0.955 + 0 * 0.918 + 0 * 1.306\right)}{1 + \exp\left(-4.049 + 2.20 * 0.43 + 0 * 1.387 + 0 * 1.642 + 0 * 0.955 + 0 * 0.918 + 0 * 1.306\right)}$$

For a respondent who rated *enhance* as mean = 3.40, *current membership* as 1, *actual skills* as 1, *child/youth they had volunteered on their own initiative* as 1 and both *helped or supported anyone beyond their immediate family* options as 0, the equation would appear as follows, resulting in a 78% probability of volunteering:

$$\frac{\exp\left(-4.049 + 3.40 * 0.43 + 0 * 1.387 + 1 * 1.642 + 0 * 0.955 + 1 * 0.918 + 1 * 1.306\right)}{1 + \exp\left(-4.049 + 3.40 * 0.43 + 0 * 1.387 + 1 * 1.642 + 0 * 0.955 + 1 * 0.918 + 1 * 1.306\right)}$$

As a result of applying the calculation to each non-volunteer and the decision rule noted above, 17% (n = 118) of the 696 non-volunteers were classified as potentials, scoring greater than 50% on the predictive equation.

The frequency and descriptive analysis detailed in Table 3 profiles in what ways the potential and other non-volunteers (non-volunteers hereafter) are different based on the assessed measures. Data from the volunteer sub-sample is also included in the table as a further point of comparison. The potentials rated all attitudinal measures higher than non-volunteers, with the exceptions of non-volunteers rating the *beliefs against volunteering* and *skills deficit* scales more highly (the latter scale containing items such as "I feel underqualified to volunteer" and "volunteering requires a lot of skills"). Expectedly, the profile of both cohorts on the six predictor variables highlights stark differences. 77% of Potentials were a *current member* of an organization or group compared to only 5% of non-volunteers. 98% of potentials considered they had *actual skills* to volunteer compared to 65% of non-volunteers. This was even higher than current volunteers (93%). Examining the giving behaviours, on some, both cohorts were comparable (*domestic work, home maintenance or gardening*; *unpaid childcare*), however for the *teaching, coaching or practical advice* variable, 24% of potentials had provided some assistance in the last 4 weeks compared to less than 2% of non-volunteers. Both cohorts were comparable in terms of indicating if their *parents or guardians had ever done any voluntary work* (43% Potentials; 39% non-volunteers); however, the potentials had engaged in a greater amount of *child/youth volunteering*.

Table 4 reports the descriptive statistics of the 49 items assessing interventions that might encourage non-volunteers to take up volunteering.

Externally validating discrimination between the two groups in post-hoc testing, the Mann–Whitney U tests revealed significant differences between the potentials and non-volunteers in relation to 16 items. In all cases but one ("It would help reduce my student debt", $Z = -2.16$, $p < 0.05$), as one would reasonably expect, the potentials rated the items more highly than their non-volunteer counterparts, indicating their greater amenability to these interventions to get them volunteering. For the potentials, the top three rated items were if "I could do specific roles that appeal to me" (m = 3.77), "It was close to where I live" (m = 3.75) and tied for third, "It fit my schedule" and "I could stop any time I want without consequences" (m = 3.72). Further validating that the two groups were significantly different, on the intention item "I intend to start volunteering locally in the next 12 months", the Mann–Whitney U test revealed that the potentials rated it significantly more highly than their non-volunteer counterparts ($Z = -2.76$, $p < 0.05$). It should be acknowledged however that the mean rating (2.61) for this item indicated that the intentions of the potentials to volunteer were neutral overall.

**Table 3** Descriptive statistics—volunteers, potentials and non-volunteers

| Total Sample n = 1007 | Volunteers % M (SD) n = 311 | Potentials % M (SD) n = 118 | Non-Volunteers % M (SD) n = 578 |
|---|---|---|---|
| *Willingness* | | | |
| Motives | | | |
| Protective | **2.90** (.79) | 2.98 (.69) | 2.83 (.82) |
| Values | **3.94** (.59) | 3.84 (.53) | 3.58 (.75) |
| Career | **2.77** (.97) | 2.84 (.85) | 2.74 (.91) |
| Social | **3.04** (.71) | 3.03 (.55) | 2.78 (.76) |
| Understanding | **3.66** (.66) | 3.61 (.50) | 3.35 (.77) |
| Enhancement | **3.35** (.71) | 3.38 (.52) | 3.07 (.80) |
| Beliefs against volunteering | 1.83 (.72) | 1.98 (.65) | 2.16 (.75) |
| Attitudes towards helping others | **3.88** (.57) | 3.77 (.53) | 3.61 (.65) |
| Attitudes towards charitable organizations | **3.68** (.62) | 3.60 (.59) | 3.45 (.72) |
| *Capability* | | | |
| Self-efficacy | **3.80** (.58) | 3.79 (.55) | 3.57 (.67) |
| Perceived skills | | | |
| Skills development | 4.04 (.54) | 3.92 (.56) | 3.73 (.62) |
| Skills deficit | 2.61 (.64) | 2.60 (.67) | 2.83 (.63) |
| Inclusive skills | 3.73 (.62) | 3.64 (.69) | 3.43 (.71) |
| Actual skills | **92.9%** | 97.5% | 64.5% |
| *Availability* | | | |
| Hours of free time per week | | | |
| 0–10 h | 45.7% | 55.9% | 63.3% |
| 11 + hours | 54.3% | 44.1% | 36.7% |
| Employment status | | | |
| Employed, self-employed | 61.4% | 63.6% | 58.1% |
| Student, unemployed, not in labour | 38.6% | 36.4% | 41.9% |
| *Demographics* | | | |
| Gender | | | |
| Male | 43.7% | 56.8% | 46.4% |
| Female | 56.3% | 43.2% | 53.6% |
| Age | | | |
| 18–34 | 21.5% | 24.6% | 30.8% |
| 35–54 | 42.1% | 34.7% | 37.4% |
| 55+ | 36.3% | 40.7% | 31.8% |
| *Giving Behaviours* | | | |
| Donated money | 90.7% | 86.4% | 69.4% |
| Donated blood | 11.6% | 12.1% | 6.0% |
| Helped beyond immediate family in last 4 weeks providing: | | | |
| Domestic work, home maintenance or gardening | 26.4% | 12.7% | 12.1% |
| Providing transport or running errands | 30.2% | 21.2% | 13.7% |
| Unpaid childcare | 11.3% | 8.5% | 5.5% |
| eaching, coaching or practical advice | 21.9% | 23.7% | 1.6% |
| Providing emotional support | 40.8% | 38.1% | 23.2% |
| Other help | 21.5% | 15.3% | 5.4% |
| Did not help anyone | 22.5% | 39.0% | 60.6% |
| Current member of organization or group | 56.6% | 77.1% | 5.4% |
| Parents or guardians undertaken voluntary work | 54.7% | 42.7% | 39.4% |
| Child/youth volunteering | | | |

**Table 3** continued

| Total Sample n = 1007 | Volunteers %<br>M (SD)<br>n = 311 | Potentials %<br>M (SD)<br>n = 118 | Non-Volunteers %<br>M (SD)<br>n = 578 |
|---|---|---|---|
| Volunteer with other members of your family | 38.3% | 28.8% | 15.9% |
| Volunteer through your school | 50.8% | 43.2% | 28.0% |
| Volunteer on your own initiative | 52.7% | 34.7% | 19.4% |

The highlighted volunteer data was reported in Haski-Leventhal et al. (2018)

## Discussion

This study addressed the lack of nuanced understanding of the heterogeneity of non-volunteers in the literature (Niebuur et al., 2019), using a nationally representative sample. Our study confirms that in a general population, a distinct sub-cohort of non-volunteers exist, the potentials, with these individuals being the most likely to shift to volunteer status.

This is the first study to adopt a data driven approach to identify these potentials, as the limited studies that have investigated the heterogeneity of non-volunteers to date have done so by asking individuals to self-select as "potential" volunteers (Dury et al., 2015; Lai et al., 2013). As such, in addressing RQ2, our findings provide quantifiable evidence of Dury et al.'s (2015) contention that the potential of people to volunteer is a new way of assessing volunteering capacity. Our study further confirms that in a general population there are three participation groups—volunteers, potentials, that is individuals that currently do not volunteer but have a greater likelihood of doing so, and non-volunteers. As such, we propose changing the dominant dichotomy in the volunteering literature (volunteers, non-volunteers) to a tripartite (volunteers, potentials, non-volunteers) categorisation in recognition that non-volunteers are heterogeneous in terms of their willingness and capability to volunteer.

Permitting multivariate testing of the constructs aligned to the theory of volunteerability (Meijs et al., 2006), binary logistic regression analysis discerned six predictors that discriminated in determining volunteer status. In addressing RQ1, our final model partially supports the volunteerability constructs as predicting volunteering propensity, including the *enhance* motive representing willingness and the *actual skills* question aligned to the capability dimension. The two availability measures (*hours of free time* and *employment status*) were excluded as they were not as strong predictors in combination with the other variables tested. Given we used a smaller number of measures to assess this dimension, this exclusion may reflect a limitation of our study in the measures not fully capturing a person's availability to volunteer. Our study might, however, also support that being a volunteer or a potential is more about the perception of availability than actual availability and that availability is a lesser construct than willingness and/or capability. This finding could illuminate the relationship between employment status and volunteering participation (Sundeen et al., 2007), as willingness may overcome barriers to availability for some volunteers in full-time work. Further research is needed to support this latter supposition, i.e. it may be that the volunteerability dimensions are hierarchical and that willingness and capability are necessary antecedents to the availability dimension in influencing the propensity to volunteer. All other predictor variables aligned to the volunteerability framework (Meijs et al., 2006) were excluded from the final model indicating that they were weaker and did not add predictive power.

The final model supports the link between volunteer status and giving behaviours (Dury et al., 2015). Indeed, the giving behaviour variables were more prevalent in the final model. This indicates that the predictive capability of these behaviours was relatively stronger compared to the volunteerability constructs (Meijs et al., 2006). On reflection, this outcome is perhaps to be expected. This is because as indicators of an individual's likelihood of volunteering, the giving behaviours represent a person's objective participation in a range of activities that have been associated with volunteering (e.g. current member of an association, early childhood and/or youth volunteering) compared to the subjective volunteerability measures. Overall, the six predictors represent a parsimonious model for determining the propensity to volunteer of non-volunteers, namely, by robust definition, those who had not volunteered in the last 5 years.

For volunteer-involving organizations, the implications of our findings are important. Practically, if potentials can be identified in a general population, then recruitment and retention efforts can be tailored to target this cohort. For example, this could be through appeals that promote how volunteering can make one feel important or needed aligned to the *enhance* motive, in combination with consistent messaging that instils potentials with the confidence that they have the skills and competencies necessary to

**Table 4** Descriptive statistics for post-hoc tests on non-volunteers

| I would start volunteering in the next 12 months if | Potentials M (SD) | Non-Volunteers M (SD) | Z |
|---|---|---|---|
| *Willingness* | | | |
| I could do specific roles that appeal to me | 3.77 (.95) | 3.45 (.98) | − 3.63*** |
| I could see the good I was doing | 3.68 (.89) | 3.44 (.95) | − 2.66* |
| It was a well-known organization/cause | 3.44 (.88) | 3.19 (.92) | − 2.77* |
| All my expenses were reimbursed | 3.22 (1.01) | 3.23 (.97) | − .20 |
| It would make me feel really good | 3.41 (.95) | 3.18 (.95) | − 2.34* |
| Someone asked me directly | 3.36 (1.03) | 3.10 (.96) | − 2.99* |
| It would reduce my taxes/council rates | 3.21 (1.23) | 3.13 (1.13) | − .99 |
| There were free background checks provided | 3.11 (1.00) | 3.01 (.99) | − 1.12 |
| There were fewer rules and regulations | 3.06 (.90) | 2.90 (.91) | − 1.50 |
| I got paid for it | 2.97 (1.26) | 2.90 (1.14) | − .64 |
| My friends volunteered | 3.06 (.93) | 2.87 (1.01) | − 1.86 |
| There was more recognition for it from society | 2.91 (.98) | 2.76 (.98) | − 1.36 |
| There was more recognition for it from the organization | 2.96 (.94) | 2.76 (.97) | − 2.07* |
| It would help me get a job | 2.69 (1.17) | 2.72 (1.13) | − .39 |
| It would help reduce my student debt | 2.36 (1.17) | 2.61 (1.19) | − 2.16* |
| I could meet a partner while volunteering | 2.32 (1.11) | 2.42 (1.07) | − 1.08 |
| It was more fashionable/cool | 2.47 (1.04) | 2.35 (.99) | − 1.01 |
| It would impress people | 2.40 (1.10) | 2.34 (.98) | − .40 |
| *Capability* | | | |
| I felt safe and secure | 3.58 (.95) | 3.41 (.97) | − 1.77 |
| Training was provided | 3.51 (.93) | 3.26 (.93) | − 2.70* |
| I knew more about volunteering opportunities near me | 3.36 (.91) | 3.26 (.99) | − .95 |
| Training was not required | 3.33 (.92) | 3.15 (.94) | − 1.74 |
| I could volunteer in my own language | 3.25 (.92) | 3.14 (1.00) | − .89 |
| The volunteer organization would be more accommodating to my needs | 3.18 (.90) | 2.99 (.92) | − 1.88 |
| I could do it with my family | 2.98 (1.09) | 3.02 (1.04) | − .16 |
| I could use/develop my leadership skills | 3.12 (1.04) | 2.94 (1.02) | − 1.74 |
| Background checks were not required | 2.71 (.91) | 2.64 (.95) | − .53 |
| There was an app for it | 2.64 (1.02) | 2.58 (1.08) | − .60 |
| It would get me credit points for study | 2.44 (1.08) | 2.54 (1.09) | − .84 |
| My health was better | 3.05 (1.12) | 3.13 (1.06) | − .65 |
| It would improve my health | 3.36 (.93) | 3.22 (1.00) | − 1.44 |
| *Availability* | | | |
| It was close to where I live | 3.75 (.86) | 3.53 (.97) | − 2.16* |
| I could stop any time I want without consequences | 3.72 (.92) | 3.49 (.97) | − 2.52* |
| I could do it from home | 3.69 (.93) | 3.46 (.99) | − 2.25* |
| It fit my schedule | 3.72 (.92) | 3.45 (.98) | − 2.77* |
| I did not have to commit long term | 3.62 (.92) | 3.41 (.99) | − 1.95 |
| I could do it whenever I want | 3.58 (.94) | 3.41 (.99) | − 1.81 |
| I could do it online | 3.47 (1.15) | 3.42 (.98) | − 1.12 |
| The volunteering role was only for a short, defined period of time | 3.53 (.81) | 3.35 (.90) | − 1.84 |
| Volunteering was more flexible | 3.43 (.83) | 3.28 (.95) | − 1.37 |
| I had set, regular times to volunteer | 3.38 (.93) | 3.01 (.97) | − 3.65*** |
| Transportation was provided | 3.08 (.98) | 3.04 (1.00) | − .19 |
| It were combined with another activity | 3.22 (1.08) | 3.01 (1.01) | − 2.07* |
| I could do it as part of my paid work | 3.02 (1.32) | 3.00 (1.19) | − .34 |
| It was scheduled for me | 3.15 (.96) | 2.96 (.97) | − 2.12* |

**Table 4** continued

| I would start volunteering in the next 12 months if | Potentials M (SD) | Non-Volunteers M (SD) | Z |
|---|---|---|---|
| I could do it while I travel | 3.14 (1.04) | 2.88 (1.11) | − 2.29* |
| My carer responsibilities are reduced | 2.80 (1.05) | 2.67 (.98) | − 1.29 |
| My kids left home | 2.47 (1.08) | 2.57 (1.04) | − .80 |
| There was childcare while I volunteer | 2.40 (1.07) | 2.46 (1.10) | − .47 |
| *Volunteering Intentions* | | | |
| I intend to start volunteering locally in the next 12 months | 2.61 (.92) | 2.33 (1.06) | − 2.76* |

Range 1–5 for all items. Potentials n = 118, Non-Potentials n = 578 for all items

Significance: *p < 0.05, ***p < .001

volunteer. We have developed an online volunteering likelihood calculator (hosted website details to be provided post-review) to assist organizations in identifying potentials based on the logit equation detailed in this paper, which organizations can administer to prospective recruits as part of their suite of recruitment practices. As demonstrated by the example equations in this paper, the calculator likewise derives a percentage likelihood of volunteering score based on responses inputted for the six predictors. This means that volunteerability can be presented on a scale from 0–100%, with non-volunteers at the lower end, volunteers at the upper end, and the potentials towards the mid-point.

The calculator instrument (and its underpinning predictors) needs to be tested on larger, broad-based populations of non-volunteers, an observation Clary et al. (1996) made in respect of early testing of the VFI. The testing could take place on general populations with differing cultural conceptions of volunteering (Salamon et al., 2011) to assess the universality of the predictors. The testing could also be used to assess the propensity for certain subsectors of the increasingly diverse volunteering space (e.g. volunteer tourism, online volunteering, spontaneous volunteering). Additionally, there would be value in testing it with volunteer-involving organizations longitudinally and correlating the data with measures of volunteer retention (e.g. frequency of volunteering and turnover). Such testing would extend the current investigation from identifying the potentials to evidencing, in reality, the efficacy of this cohort as a source of active volunteers. Over time, if the parsimonious set of predictors are replicated, these could also be tested in combination with other variables not confined to the volunteerability framework. These could include situational variables to assess to what extent propensity is influenced by external factors such organisational mission and the professional supervision of volunteers (Kulik, 2007).

Intended as a validation test of the two groups discerned by the binary logistic regression analysis, the findings nevertheless support that the potentials are more amenable to interventions to promote volunteering compared to other non-volunteers. Interestingly, the top ranked interventions identified as appealing to the potentials were aligned to the availability dimension of the volunteerability framework by Haski-Leventhal et al. (2018). These items suggest that the potentials are attracted to tailored volunteering roles, which are flexible, accessible and do not involve obligatory commitments. We postulate that these levers are of heightened attractiveness to the potentials in light of their already greater willingness and capability to volunteer, supporting the potential of a hierarchical arrangement of the volunteerability dimensions (Meijs et al., 2006).

In a pragmatic way, volunteer-involving organizations can personalize their recruitment efforts towards the individual needs of potentials. This continues the trend towards the individualization of volunteering opportunities (Haski-Leventhal et al., 2009), which as our results suggest, may be more time and place independent to maximize availability options. Critically however, based on the current evidence, it may be questioned to what extent the potentials, despite being more amenable to volunteering, are willing to fill gaps in traditional face-to-face volunteering roles that are often more fixed in terms of time commitment, scheduling and location (Kragt & Holtrop, 2019). Given such volunteering underpins a range vital community services, it may be appropriate to move the conversation beyond declining volunteer participation rates to declines in particular forms of volunteering, thus

recognizing that not all forms of volunteering and not all non-volunteers are the same.

## Conclusion

In addressing RQ1 and RQ2, using constructs aligned to the willingness and capability dimensions of Meijs et al.'s (2006) volunteerability framework, we set out to establish and then identify in a representative general population if there was a cohort of individuals that currently do not volunteer but have the potential to do so. In a world first, we confirmed the existence of the potentials as a pool of untapped volunteer labour on the basis of a parsimonious model of volunteer status. The potentials have several attitudes, beliefs and greater social resources that separate them from other non-volunteers including association membership, more charitable attitudes and a greater sense of capability. Unfortunately, this means that in attempting to grow the volunteer pool, volunteer participation may not be as inclusive and accessible for those with differing profiles. This study as such reveals how barriers to volunteering are distinctly different between non-volunteers and potentials, and between potentials and volunteers.

We have also tested the concept of volunteerability and identified that elements of the willingness and capability dimensions are more important in encouraging individuals to volunteer. We have also found that availability to volunteer is much more complex than simple free time and needs further unpacking in future research. In addition to our planned agenda for testing, we invite other researchers to replicate our model to assess the extent to which it could become a replicable measure of volunteering propensity.

## Appendix

See Table 5.

**Table 5** Summary statistics–scale items following EFA and CFA

| Construct/Factor | Item | Mean | Standard Deviation | Skewness | Cronbach's Alpha |
|---|---|---|---|---|---|
| Motives | | | | | |
| Protective | | 2.87 | .80 | −.442 | .860 |
| | No matter how bad I've been feeling, volunteering helps me to forget about it | 3.06 | .96 | −.392 | |
| | By volunteering I feel less lonely | 2.91 | 1.03 | −.280 | |
| | Doing volunteer work relieves me of some of the guilt over being more fortunate than others | 2.72 | 1.00 | −.109 | |
| | Volunteering helps me work through my own personal problems | 2.74 | .99 | −.191 | |
| | Volunteering is a good escape from my own troubles | 2.92 | .99 | −.253 | |
| Values | | 3.72 | .70 | −.820 | .866 |
| | I am concerned about those less fortunate than myself | 3.68 | .88 | −.831 | |
| | I am genuinely concerned about the particular group I am serving | 3.55 | .94 | −.598 | |
| | I feel compassion towards people in need | 3.73 | .84 | −.706 | |
| | I feel it is important to help others | 3.87 | .82 | −.825 | |
| | I can do something for a cause that is important to me | 3.78 | .87 | −.907 | |
| Career | | 2.76 | .92 | −.129 | .911 |
| | I can make new contacts that might help my business or career | 2.76 | 1.08 | −.048 | |
| | Volunteering will help me to proceed in my chosen profession | 2.64 | 1.03 | −.033 | |
| | Volunteering can help me to get my foot in the door | 2.81 | 1.06 | −.100 | |
| | Volunteering allows me to explore different career options | 2.84 | 1.07 | −.102 | |
| | Volunteering experience will look good on my resume | 2.77 | 1.14 | −.007 | |
| Social | | 2.89 | .73 | −.386 | .846 |
| | My friends volunteer | 2.76 | .93 | −.217 | |
| | People I know share an interest in community service | 3.09 | .91 | −.414 | |
| | Volunteering is an important activity to the people I know best | 2.98 | .92 | −.284 | |
| | Others with whom I am close place a high value on community service | 2.97 | .94 | −.257 | |
| | People I'm close to want me to volunteer | 2.64 | .94 | −.059 | |
| Understanding | | 3.48 | .72 | −.850 | .875 |
| | I can learn more about the cause for which I am working | 3.47 | .87 | −.709 | |
| | Volunteering allows me to gain a new perspective on things | 3.52 | .90 | −.663 | |
| | Volunteering lets me learn things through direct, hands on experience | 3.54 | .86 | −.826 | |
| | I can learn how to deal with a variety of people | 3.48 | .91 | −.703 | |
| | I can explore my own strengths | 3.38 | .90 | −.634 | |
| Enhancement | | 3.19 | .76 | −.577 | .850 |
| | Volunteering makes me feel important | 2.89 | 1.01 | −.204 | |
| | Volunteering increases my self-esteem | 3.23 | .97 | −.515 | |
| | Volunteering makes me feel needed | 3.16 | .96 | −.489 | |
| | Volunteering makes me feel better about myself | 3.35 | .93 | −.713 | |
| | Volunteering is a way to make new friends | 3.33 | .91 | −.678 | |
| Beliefs against volunteering | | 2.04 | .75 | .613 | .796 |
| | There are no benefits to be gained from volunteering | 2.12 | .95 | .779 | |
| | Volunteering is a waste of time | 1.91 | .86 | .874 | |
| | Volunteers do not generally help people | 2.09 | .84 | .583 | |
| Attitudes towards helping others | | 3.71 | .63 | −.372 | .818 |

**Table 5** continued

| Construct/Factor | Item | Mean | Standard Deviation | Skewness | Cronbach's Alpha |
|---|---|---|---|---|---|
| | People should be willing to help others less fortunate | 3.83 | .78 | −.564 | |
| | People should be more charitable towards others in society | 3.79 | .78 | −.369 | |
| | People in need should receive support from others | 3.83 | .72 | −.498 | |
| | Helping troubled people with their problems is very important to me | 3.41 | .82 | −.215 | |
| Attitudes towards charitable organizations | | 3.54 | .68 | −.587 | .839 |
| | The money given to charities goes for good causes | 3.46 | .81 | −.573 | |
| | My image of charitable organizations is positive | 3.45 | .85 | −.504 | |
| | Charitable organizations have been quite successful in helping the needy | 3.70 | .76 | −.633 | |
| | Charity organizations perform a useful function for society | 3.93 | .75 | −.597 | |
| Self-efficacy | | 3.67 | .64 | −.609 | .933 |
| | I will be able to achieve most of the goals that I have set for myself | 3.63 | .79 | −.576 | |
| | When facing difficult tasks, I am certain that I will accomplish them | 3.60 | .78 | −.540 | |
| | In general, I think that I can obtain outcomes that are important to me | 3.74 | .71 | −.698 | |
| | I believe I can succeed at most any endeavour to which I set my mind | 3.71 | .80 | −.622 | |
| | I will be able to successfully overcome many challenges | 3.69 | .77 | −.537 | |
| | I am confident that I can perform effectively on many different tasks | 3.78 | .77 | −.787 | |
| | Compared to other people, I can do most tasks very well | 3.50 | .78 | −.282 | |
| | Even when things are tough, I can perform quite well | 3.68 | .79 | −.707 | |
| Perceived skills | | | | | |
| Skills development | | 3.85 | .61 | −.749 | .796 |
| | You can learn a lot from volunteering | 3.92 | .72 | −.573 | |
| | Volunteering skills can be developed/learned | 3.94 | .64 | −.711 | |
| | Volunteering can assist me in gaining new skills | 3.69 | .80 | −.986 | |
| Skills deficit | | 2.73 | .65 | .017 | .727 |
| | Volunteering requires a lot of skills | 2.70 | .86 | .249 | |
| | Volunteering requires specific knowledge | 2.85 | .86 | .124 | |
| | Volunteering requires a lot of resources | 2.93 | .86 | −.022 | |
| | I feel underqualified to volunteer | 2.45 | .93 | .418 | |
| Inclusive skills | | 3.55 | .70 | −.589 | .707 |
| | I have all that is required to be a volunteer | 3.47 | .89 | −.522 | |
| | It is easy to acquire volunteering skills | 3.44 | .77 | −.468 | |
| | Everyone can volunteer | 3.72 | .96 | −.733 | |

Range 1–5 for all items, Total sample n = 1007 for all items

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