

# Religious Involvement and Participation in Volunteering: Types, Domains and Aggregate

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Published online: 6 July 2016

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**Abstract** Prior research on investigating the religion–volunteering relationship has tended to commonly treat religious involvement as single-item measures, e.g., frequency of church attendance, and has defined volunteering as a simple dummy variable (1 = volunteers, 0 = otherwise). The present study attempted to look at the above relationship by measuring religious involvement as a multifaceted and multi-item measure and volunteering as engaging in different types of voluntary activity, and specific domains and overall aggregate of volunteering. The results based on a statewide representative sample from the Survey of Texas Adults 2004 showed that religious involvement was generally and significantly related to higher volunteering across voluntary types, domains, and aggregate count of volunteering, but varied in magnitude contingent on the types and domains being examined. In addition, the religious effects were held even adjusting for a variety of pertinent socio-demographic and denominational characteristics, in which these background characteristics are more dynamic in relation to volunteering than we knew. Implications of the findings related to social services and policy making are discussed.

**Résumé** À ce jour, les recherches portant sur la relation entre la religion et le bénévolat traitaient généralement l'implication religieuse comme mesure à article unique, p. ex. la présence à l'église, et définissaient le bénévolat en tant que variable nominale (1 = bénévoles, 0 = autrement). La présente étude tente d'aborder la relation mentionnée précédemment en évaluant l'implication religieuse comme une mesure à facette et à article multiples et le bénévolat sous forme d'engagement dans divers types d'activités connexes, dans des domaines précis et sous tous ses aspects globaux. Les résultats, basés sur un échantillon représentatif de l'État tiré du Survey of Texas Adults 2004 (sondage des adultes du Texas), démontrent que l'implication

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religieuse était en général grandement associée à un bénévolat plus important pour tous les types, domaines et aspects groupés du bénévolat, mais qu'elle variait en magnitude selon les types et les domaines étudiés. En outre, les incidences religieuses semblaient s'ajuster à une gamme de caractéristiques sociodémographiques et confessionnelles pertinentes, où ces caractéristiques fondamentales sont plus dynamiques comparativement au bénévolat que nous connaissions. Les implications des résultats dans le contexte des services sociaux et de l'élaboration des politiques font l'objet d'une discussion.

**Zusammenfassung** Frühere Studien zur Untersuchung der Beziehung zwischen Religion und ehrenamtlicher Tätigkeit neigten dazu, das religiöse Engagement gewöhnlich in Single-Item-Messungen zu erfassen, z. B. die Häufigkeit von Kirchenbesuchen, und die ehrenamtliche Tätigkeit als eine einfache Dummy-Variable zu definieren (1 = ehrenamtlich tätige Personen, 0 = Sonstige). In der vorliegenden Studie untersuchte man die oben genannte Beziehung, indem man das religiöse Engagement mittels einer vielfältigen Multi-Item-Messung und die ehrenamtliche Tätigkeit als Beteiligung an verschiedenen Arten ehrenamtlicher Aktivitäten bewertete, und betrachtete spezifische Bereiche sowie die Gesamtheit der ehrenamtlichen Tätigkeiten. Die Ergebnisse beruhend auf einer staatsweiten repräsentativen Stichprobe aus der 2004 durchgeführten Befragung von Erwachsenen in Texas zeigten, dass eine generelle und bedeutende Verbindung zwischen dem religiösen Engagement und einer vermehrten ehrenamtlichen Tätigkeit in allen Arten ehrenamtlicher Aktivitäten, ehrenamtlichen Bereichen und der Gesamtzahl der ehrenamtlichen Tätigkeiten besteht, wobei jedoch das Ausmaß in Abhängigkeit von den untersuchten Arten und Bereichen unterschiedlich ausfiel. Darüber hinaus wurden die religiösen Effekte aufrechterhalten und passten sich sogar an eine Vielzahl entsprechender sozio-demographischer und konfessioneller Merkmale an, wobei diese Hintergrundmerkmale in Verbindung mit der ehrenamtlichen Tätigkeit dynamischer sind als uns bekannt war. Es werden die Implikationen dieser Ergebnisse in Bezug auf soziale Dienstleistungen und politische Entscheidungen diskutiert.

**Resumen** Investigaciones previas sobre la relación religión-voluntariado han tendido a tratar normalmente la implicación religiosa como mediciones de un solo elemento, p.ej.: la frecuencia de la asistencia a la iglesia, y a definir el voluntariado como una simple variable simulada (1 = voluntarios, 0 = lo contrario). El presente estudio trató de analizar la relación anterior midiendo la implicación religiosa como una medición de múltiples elementos y múltiples facetas y el voluntariado como la implicación en diferentes tipos de actividad voluntaria, y campos específicos y el agregado global del voluntariado. Los resultados basados en una muestra representativa de todo el Estado de la Encuesta de Adultos de Texas de 2004 mostró que la implicación religiosa estaba relacionada generalmente y de manera significativa con un mayor nivel de voluntariado en todos los tipos de voluntarios, campos y recuento agregado del voluntariado, pero variaba en magnitud dependiendo de los tipos y campos que se examinaron. Asimismo, se mantuvieron los efectos religiosos incluso ajustándose para una variedad de características sociodemográficas y

denominacionales pertinentes, en las que estas características de fondo son más dinámicas en relación con el voluntariado de lo que sabíamos. Se tratan las implicaciones de los hallazgos relacionados con los servicios sociales y la formulación de políticas.

**Keywords** Religious involvement · Voluntary activities · Volunteering participation · Network explanation · Value orientation · Normative theory of civic engagement

## Introduction

Penner (2002) defines volunteering as “a long-term, planned, and discretionary prosocial behavior that benefits strangers and occurs within an organizational context” (p. 448). This definition connotes that volunteering is unpaid labor serving those in need, with whom one does not have any interests of relationship. Volunteer work is crucial for the provision and maintenance of social services in nonprofit organizations and some governmental agencies (Becker and Dhingra 2001; Jackson et al. 1995). In 2014, the volunteer rate in the United States was 25.3 percent, indicating that 62.8 million US citizens contributed to volunteer work in that year (U.S. Department of Labor 2015). Without volunteer labor, the running of many social services and programs would be impossible or adversely affected. Hence, it is important for researchers, service practitioners, and policy makers to understand motivators for people to engage in this civic action.

Religious involvement is one notable contributor to volunteering. Almost all world religions promote some form of philanthropic and other-helping behavior, e.g., volunteerism (Saroglou et al. 2005; Batson et al. 1993). Nevertheless, the relationship between religion and volunteering has long been inconclusive, and mixed research results are often found (Galen 2012; Vermeer and Scheepers 2011). In fact, the inconclusive relationship between religion and volunteering may be due to the use of a single religious item to measure the multifaceted and multi-item nature of religiosity (Mason et al. 2012; Salsman and Carlson 2005; Yeung and Chan 2014), e.g., frequency of church attendance, and treating volunteering as a simple dummy outcome variable instead of considering the diversity of volunteering (Prouteau and Sardinha 2015; Van Tienen et al. 2011), e.g., 1 = volunteers, 0 = otherwise. In addition, conclusions have been drawn from data of a convenient sample rather than a representative population (Cnaan et al. 1993; Johnson et al. 2013; Ozorak 2003). Against this background, the present study attempts to investigate the relationship between religious involvement and volunteering by measuring religious involvement as a multifaceted and multi-item construct, and treating volunteering as participation in different types of voluntary activity, specific domains of volunteering, and overall aggregate of volunteering in a statewide representative sample of adults.

## Literature Review

In principle, religious institutions are closely linked to volunteerism because of its prosocial value and other-regarding orientation (Unruh and Sider 2005), close ties with secular voluntary organizations (Ammerman 2005), and strength in mobilizing adherents (Iannaccone 1994). In fact, Wilson and Musick (1997) proposed that volunteer work is based on three premises: (1) productive activity, (2) collective action, and (3) ethically guided behavior. These characteristics are consistent with the principles of many world religions (Becker and Dhingra 2001; Ruiter and De Graaf 2006). Although much research has supported religious involvement as predictive of higher volunteering (Vermeer and Scheepers 2011; Wang and Handy 2014), some other empirical investigations did not find such a relationship (Galen 2012; Wilson and Janoski 1995). For example, Prouteau and Sardinha (2015) stated that “there are no consistent results with respect to the correlation between religion and volunteering. Such a situation does not allow us to conclude that there is no relationship between the former and the latter, but it makes us inclined to think that the relationship is complex...” (p. 247).

What accounts for this uncertain relationship between religion and volunteering may be that many past pertinent research studies defined religiosity as a single-item or a one-dimensional measure (Forbes and Zampelli 2014; Johnston 2013; Wilson and Janoski 1995), e.g., frequency of church attendance and/or salience of religion, and treated volunteering as a single dummy outcome by a dichotomous question, e.g., “(a)re you currently involved in volunteering?” (Vermeer and Scheepers 2011, p. 947). These studies may not only have ignored the multifaceted and multi-item nature of religiosity proposed by recent religious scholars (Mason et al. 2012; Salsman and Carlson 2005; Yeung and Chan 2014), but also overlooked the active role of volunteers who may concomitantly seek various related voluntary activities to cohere with their religious beliefs, personal proclivity values, and tied network, thus leaving the diversity of volunteering unnoticed (Prouteau and Sardinha 2015; Van Tienen et al. 2011). Furthermore, some previous research findings for the religion–volunteering relationship relied heavily on convenience samples, which may incur selection bias, difficulty of generalizability, and external validity (Cnaan et al. 1993; Johnson et al. 2013; Ozorak 2003). All these research concerns are considered responsible for the uncertain relationship between religion and volunteering. In the following section, I attempt to construct the theoretical relationship between religious involvement, which is measured as a multifaceted and multi-item construct, and volunteering, which is treated as participation in different types of voluntary activity, specific domains, and aggregate count of volunteering. The corresponding hypotheses are set in the section Study Aims and Hypotheses. Finally, results of the present study and pertinent discussion based on the data from the Survey of Texas Adults 2004, which contain a statewide population-based sample of general adults living Texas in the United States, are provided.

## Theoretical Framework of Religion and Volunteering

Over the past two or three decades, scholars have proposed various theoretical perspectives to explain the relationship between religious involvement and volunteering, among which the network explanation theory and value orientation thesis have received substantial attention (Mencken and Fitz 2013; Van Tienen et al. 2011). Scholars of the network explanation theory argue that religious involvement may augment believers' formal and informal social embeddedness and network, which in turn enhances their chances of being asked or "forced" to volunteer. However, the proposition of this school is inclined to denigrate the importance of religious socialization in motivating believers' volunteering behaviors and negate the influence of religious prosocial values and other-regarding tenets in facilitating voluntary actions. Therefore, they insisted that "it is religion's community, not conviction, aspect that is most influential" to volunteering (Lim and MacGregor 2012, p. 747).

Scholars of the value orientation perspective reckon that prosocial values and tenets inherent in religious teachings and beliefs, e.g., the Golden Rule, facilitate believers acting out volunteering and other prosocial behaviors as a response (Son and Wilson 2012). They generally admit that "religious message (e.g., compassion, sacrifice, loving one's neighbor) instills in adherents an obligation to help those in need" (Mencken and Fitz 2013, p. 492). This school considers that, if volunteering is mainly supported by a networking explanation, volunteering is just a type of "productive labor," except it is unpaid. They hence proposed that "(p)eople volunteer not only because they can, or because they have wider social networks, or because they have an 'interest' in the output of the unpaid labor ... but also because they think it is the right thing to do" (Son and Wilson 2012, p. 475).

In fact, the network explanation perspective explicitly stresses the public or collective dimension of religiosity, whereas the value orientation thesis corresponds to the personal and private aspect. Nevertheless, empirical findings do not favor either side, and mixed results have been often observed (Johnston 2013; Ruiters and De Graaf 2006; Vermeer and Scheepers 2011). In a study by Forbes and Zampelli (2014), they initially observed a significant positive relationship between attendance at religious services and volunteering. However, their more intricate Double-Hurdle Model later showed that the importance participants give to religion, a religious measure usually employed by scholars of value orientation, assumed a significant effect and worked together with church attendance to significantly predict higher volunteering engagement. In a longitudinal study, Johnston (2013) confirmed that both religious importance and attendance at religious services were significantly and positively related to volunteering. However, Johnston found, in a later analysis, that the effect of religious importance was mediated by church attendance. Attempting to test both the network explanation and value orientation perspectives in relation to volunteering, Vermeer and Scheepers (2011) simultaneously incorporated collective religiosity, a manifestation of network explanation (church attendance and activity in a religious community), and religious socialization, an embodiment of religious value orientation (having acquired religious values and importance from parents' religious socialization during adolescence) in their panel study. The results

indicated that both collective religiosity and religious socialization were significantly predictive of volunteering participation.

The above-mentioned results indicate that both public and private facets of religiosity have been important for predicting volunteering and should not be examined separately. This tallies with the suggestion of recent religious scholars that religious involvement is a multifaceted and multi-item concept, meaning that various religious dimensions or indicators are mutually related and reinforced (Idler et al. 2003; Salsman and Carlson 2005; Yeung and Chan 2014). For example, in Son and Wilson's longitudinal study (2012), they used both public and private religiosity to predict volunteering, in which the correlation of these two religious measures was  $r = .57$ ,  $p < .001$ . Another study by Aghababaei et al. (2014) employed intrinsic and extrinsic dimensions of religiosity to predict prosociality. A substantial high correlation between the two religious measures was also observed,  $r = .75$ ,  $p < .001$ . Hence, it is suggested in this study to use a multifaceted and multi-item approach to measure religiosity in relation to volunteering (Salsman and Carlson 2005; Yeung and Chan 2014; Yeung et al. 2009).

Instead of the tilting explications according to the network explanation perspective or the value orientation thesis, the normative theory of civic engagement can elucidate the association between religion and volunteering more comprehensively (Campbell 2006; Dekker 2004; Son and Wilson 2012). The main thesis of this theory is that people who act out civic actions and responsibilities (ranging from voting to volunteering) are not driven solely by personal values and interest or by the social forces and interpersonal networks the individual belongs to, but rather a combination of both the values and socialization environment in the formulation of a collective norm propels people to engage in volunteering (Dekker 2004; Eckstein 2001; Son and Wilson 2012). More specifically, people who volunteer are generally motivated by prosocial values and rules internalized and cultivated in a collective socialization environment, e.g., religious setting, which then develops into a norm of civic and philanthropic culture (Dekker 2004; Son and Wilson 2012). As a result, within this prosocial normative culture, people may feel that it is their duty to volunteer, and they expect others in the environment to do likewise. In addition, they may feel guilty if they do not actualize the normative values of philanthropic and other-regarding behaviors that have been socialized by their collective norm. They may also fear social sanctions derived from the collective environment if they deviate from the norm that tacitly confers social approval of civic engagement and philanthropic actions (Eckstein 2001; Reed and Selbee 2003; Son and Wilson 2012).

Informed by the normative theory of civic engagement and putting its thesis in the religious context, volunteering is a kind of normative action for religious people to respond both to their religious beliefs and values (private religiosity) and to the collective environment of religious communities and networks (public religiosity) that cultivate a norm of volunteerism. Therefore, when examining the religion–volunteering relationship, researchers should simultaneously consider the multifaceted and multi-item nature of religiosity (Aghababaei et al. 2014; McDougle et al. 2014). For this reason, Aghababaei et al. (2014) stated that “(a)ttempts to define religion as a single linear dimension are likely too simple and can be misleading” (p. 8). This tallies with what Son and Wilson (2012) mentioned: few

people would practice a side (of religiosity) in the absence of others. Therefore, the present study uses multiple indicators from different religious dimensions to form a multifaceted and multi-item religious construct and investigate the relation to volunteering.

Another research concern of the religion–volunteering relationship is to oversimplify volunteering by defining it as a dichotomous outcome (1 = volunteers and 0 = otherwise), which ignores the diverse nature of volunteering. Forbes and Zampelli's study (2014) used only a single question (a dummy variable) to measure participation: 1 = if the respondent volunteered in the past year and 0 = otherwise. Vermeer and Scheepers (2011) also used one item, “(a)re you currently involved in volunteering?”, to indicate whether the participants had taken part in volunteering (1 = yes, 0 = no). In addition, although some scholars classify volunteering participation into two board types, religious volunteering and nonreligious volunteering, this defining approach does not sufficiently consider the diversity of volunteering. For example, Wang and Handy (2014) classified religious volunteering with the statement “if the respondent is a voluntary member of, or volunteered for, at least one group that was directly associated with their place of worship” (p. 1569), and nonreligious volunteering participation by assigning a value of 1 to the participants if they were a member in any of the eight “voluntary” organizations or groups.<sup>1</sup>

These coarsely defined approaches to volunteering tell us little about the religion–volunteering relationship by diverse types of voluntary activity and domains of volunteering. According to the normative theory of civic engagement, religious people are expected to participate in various religious and nonreligious voluntary activities concomitantly, as a response to the collective norm of their religious communities. Nevertheless, I expect that religious involvement would have stronger effects on participation in certain types of voluntary activity and specific domains of volunteering than others. The reason is that the normative beliefs and tenets of religion value some voluntary types or volunteering domains more than they do others, because by taking part in these more valued voluntary activities and volunteering domains believers would think they are directly responding to their religious beliefs and teachings.

In fact, recent literature reports that volunteers concurrently engage in several related types of voluntary activity in alignment with their religious beliefs and personal proclivity (Prouteau and Sardinha 2015; Van Tienen et al. 2011), which may form specific domains of volunteering. A recent study by Wang and Handy (2014) found that active religious individuals were more likely to participate in certain forms of voluntary activity, e.g., religious tasks, youth development, and serving disadvantaged social groups, rather than in arts and cultural work. Apparently, a paucity of research has attempted to examine the influence of religious involvement on participation in specific domains of volunteering that are

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<sup>1</sup> The authors' classification of secular volunteering participation is trickier, because the eight so-called “voluntary organizations or groups” are not voluntary: recreational groups, organizations active in political issues, youth-oriented groups, and organizations providing cultural services to the public. Membership in these groups does not necessarily mean the participants were volunteers; they could be service recipients only.

formed by certain similar types of related voluntary activity. This domain-defining approach of volunteering is essential and useful for researchers to determine the dynamic picture of the relationship between religious involvement and volunteering. This reveals the possibility that religious people prefer to participate in certain domains of volunteering over other domains. Finally, if religious individuals are more likely to volunteer, regardless of the nature of voluntary type and volunteering domain, it is expected that people of greater religious involvement are related to more aggregate participation in diverse voluntary activities. This is resonant with the normative theory of civic engagement that the religious prosocial values and beliefs as well as the collective altruistic environment and network would motivate believers to volunteer for those in need (Dekker 2004; Son and Wilson 2012). Taken together, these research concerns are the focus of the present study, in which the analyses were drawn from a statewide representative sample of the Survey of Texas Adults 2004.

### Study Aims and Hypotheses

In order to address the aforementioned research concerns, the present study first examines the relationship between religious involvement and participation in 12 types of voluntary activity: volunteering in health, education, churches/synagogues/other religious settings, human services, environment or animal welfare, public or societal benefit, recreation, arts or cultural services, work-related organizations, political organizations or campaigns, youth development or mentoring, and other voluntary work. This approach is consistent with the normative theory of civic engagement that religious people lend their support to various other-regarding behaviors, especially from religious volunteering to that of secular volunteering (Musick and Wilson 2008).

Second, and more importantly, the present study investigates whether religious involvement is more strongly related to participation in certain domains of volunteering than in others. Specifically, religious people may favor or have a higher priority for some types of voluntary activity than for others, in order to cohere and align with their religious beliefs and values, as well as collective prosocial norm (Cnaan et al. 1993; Van Tienen et al. 2011). In Christianity, and in other world religions, utmost importance is placed on humanitarian concerns and human significance. For instance, the Bible says “you are my disciples, if you have love one for another” (John 13:35). This theological stance, congruous with the normative theory of civic engagement, is expected to propel believers to better appreciate voluntary types with direct implications of human values and humanitarian concerns, e.g., volunteering in health, churches/synagogues/religious settings, human services, youth development or mentoring. In this study, taking part in these voluntary activities is referred to as participation in the humanitarian-concerned domain of volunteering.

Moreover, most religions seek some forms of social justice and righteousness, e.g., “blessed are they that keep judgment, and he that doeth righteousness at all times” (Psalm 106:3), which is thought to influence believers’ propensity for some types of voluntary activity with implications for social and political uprightness and benefits. Examples are volunteering in education, environment or animal welfare, public or societal benefit, and political organizations or campaigns. According to the



normative theory of civic engagement, the collective norm of religion first supports voluntary activities with humanitarian concerns and human significance and may advocate voluntary activities with implications for social and political righteousness and benefits second (Becker and Dhingra 2001; De Gruchy 1995; Driskell et al. 2008). Therefore, I expect that religious involvement would have the strongest effect on participation in the humanitarian-concerned domain of volunteering, and the second strongest effect on participation in voluntary activities with implications of social justice and political righteousness that is referred to as participation in the socio-political domain of volunteering in this study.

In addition, some types of voluntary activity may neither directly have humanitarian concerns and human significance nor have any social and political implications. These are expected to be less a priority by religious people, like volunteering in recreation, arts or cultural services, work-related organizations, and other voluntary work. Although religious people may show some support for these voluntary activities, due to the collective prosocial and philanthropic norm cultivated and held in their religious circles, these voluntary types are less relevant to their core religious beliefs and tenets (Ammerman 2005; De Gruchy 1995). Hence, it is plausible to expect that religious involvement would be least strongly related to participation in these voluntary activities, referred to as participation in the cultural and work-related domain of volunteering.

Last, if religious involvement is positively related to higher volunteering regardless of voluntary types and domains (Becker and Dhingra 2001; Park and Smith 2000; Van Tienen et al. 2011), it is worth examining the relationship between one's own religious involvement and aggregate participation in various types of voluntary activity concurrently. This approach is justified because more religious individuals generally hold higher volunteerism, which would in turn result in higher participation in diverse types of voluntary activity simultaneously. In this study, I consider engaging in diverse types of voluntary activity concurrently as participation in overall aggregate of volunteering. In fact, the literature has indicated the importance of personal moral principles in combination with collective social networks to propel and sustain volunteerism (Clary et al. 1998; Carpenter and Myers 2010; Jones 2006). This view is consistent with the collective prosocial norm of the normative theory of civic engagement that religious people may offer a helping hand to whoever is in need irrespective the forms of helping. Hence, a religious volunteer would be willing to help in a variety of volunteering situations whenever and wherever needed. In sum, I would like to make the following hypotheses:

**H1** Religious involvement is positively related to participation in different types of voluntary activity.

**H2** Religious involvement is positively related to participation in specific domains of volunteering formed by certain similar types of voluntary activity. The strongest religious effect is expected for the humanitarian-concerned domain of volunteering. The second strongest religious effect is expected for the socio-political domain of volunteering, and the least strong religious effect for the cultural and work-related domain of volunteering.

**H3** Religious involvement is positively related to participation in the overall aggregate of volunteering, counted as the sum of participation in different types of voluntary activity concomitantly.

## Research Method

### Sample and Data

The present study employed data from the Survey of Texas Adults, which contains a statewide representative sample of 1504 community-dwelling adults aged 18 and over in Texas (Musick 2004). The survey was conducted in 2004 and focuses on seven major sections of Texas life: (1) civic engagement and attitudes, (2) volunteering, (3) personality dispositions and attitudes, (4) physical and mental health status, (5) health behaviors, (6) religious activities and beliefs, and (7) general demographic information. The sampling procedure was conducted using a modified random-digit dialing design. A household-level cooperation rate of 37 % and a respondent-level cooperation rate of 89 % were obtained in the data collection process. The survey was mainly conducted in English. A translation of survey instruments into Spanish and administration by a Spanish-speaking interviewer were applied when needed. Each computer-assisted telephone interview lasted about 30–35 min. Due to the overrepresentation of women, older adults, non-Hispanic Whites, and highly educated respondents in the original sample, the data were weighted to match the characteristics of the sample to 2000 Texas population census estimates.

In this study, I mainly employed data from sections of volunteering (2), religious activities and beliefs (6), and general demographic information (7). The Survey of Texas Adults 2004 provides fruitful information on people's religious beliefs and practices as well as participation in various types of voluntary activity over the past 12 months. Detailed socio-demographic data available in the survey can help adjust for confounding from the relevant background characteristics. The socio-demographic variables included in the present study are gender, age, race/ethnicity, education, citizenship, marital status, number of children at home, family income, working status, and religious denomination. Family income has the missing values of 34.9 %, so expectation maximization imputation (EM) was used to replace the missing values rather than using mean substitution that had been applied in previous relevant studies with the same data set (Hale et al. 2010; Hill et al. 2007). Mean substitution will bias the mean distribution and restrict variance. EM, however, may set off these problems by using a two-step iterative process that involves regression analysis and maximum-likelihood procedures to allow all available pertinent variables as predictors for imputing missing data (Allison 2002). To control the missing effect, a dummy was added for respondents' missing income (1 = missing, 0 = otherwise).

## Measures

### *Dependent Variables*

Participation in different types of voluntary activity was measured by asking participants if they had engaged in the 12 types of voluntary activity mentioned above. The activities are volunteering in health, education, churches/synagogues/religious settings, human services, environment or animal welfare, public or societal benefit, recreation, arts or cultural services, work-related organizations, political organizations or campaigns, youth development or mentoring, and other voluntary work. The participants were asked whether they had participated in each of these 12 voluntary types with an introductory statement, “Please tell me whether you have done any volunteer work in each the following areas over the past 12 months.” A dichotomous response was obtained for participation in each of the voluntary activities: 1 = yes and 0 = no.

Participation in specific domains of volunteering was measured by grouping a subset of similar types of voluntary activity. In this study, three volunteering domains were constructed and examined. The humanitarian-concerned domain of volunteering refers to participation in the voluntary activities of health services, churches/synagogues/religious settings, human services, and youth development or mentoring, which have direct implications for valuing human significance and humanitarian concerns between the helpers and those being helped. The socio-political domain of volunteering includes participation in the voluntary activities of education, environment or animal welfare, public or societal benefit, and political organizations or campaigns. These activities are thought to have implications for enhancing social and political uprightness and benefits. The cultural and work-related domain of volunteering refers to engagement in the activities of recreation, arts or cultural services, work-related organizations, and other voluntary work. Each of these specific domains of volunteering was constructed by summing up the number of voluntary activities within a specific domain of volunteering that the participant had taken part in, in which the count score can range from 0 to 4.

Participation in overall aggregate of volunteering was measured by summing up the 12 types of voluntary activity that the participant had engaged in concomitantly, which corresponds to the collective prosocial and other-regarding norm held by religious communities. This is valid because many congregations encourage their believers to act as “the light” in the secular world to help those in need or to serve society as a whole as much as they can (De Gruchy 1995). The response to this measure ranges from 0 to 12.

### *Independent Variables*

Religious involvement was measured by seven religious indicators: (1) “how often do you attend religious services?” (2) “how often do you take part in the activities and organizations of a church or place of worship other than attending services?” (3) “how often do you pray?” (4) “how often do you read the Bible or other religious scripture?” (5) “how often do you watch religious programs on TV, listen

to religious programs on the radio, or listen to religious tapes or CDs?” (6) “how often do you read religious material other than the Bible or other religious scriptures?” and (7) “how religious would you say you are?” Of these seven items, attendance at religious services and participation in religious activities are public religiosity; praying, reading the Bible or religious materials, and watching religious programs are private religiosity; and self-rated religiousness is considered subjective religiosity (Hill and Pargament 2003; Yeung et al. 2009). Correlation coefficients between the seven religious items range from  $r = .362$  to  $.658$ ,  $p < .001$ . Use of maximum likelihood factor extraction with oblique rotation to perform exploratory factor analysis obtained a one-factor solution, in which the factor loadings were within  $.539$  to  $.793$ , indicating an adequate level. The eigenvalue is 3.89, explaining 54.84 % of the total variance. In addition, both a high Kaiser–Meyer–Olkin value,  $KMO = .879$ , and significant Bartlett’s test,  $\chi^2 = 4189.085$ ,  $p < .001$ , suggest sampling and correlation adequacy for the factoring. Therefore, the seven religious items were standardized and averaged to form a multi-item construct of religious involvement.

### *Control Variables*

Socio-demographic variables incorporated in this study are gender, age, race/ethnicity, education, citizenship, marital status, number of children at home, annual family income, and working status. These background characteristics were found influential on volunteering (Johnston 2013; Ruiter and De Graaf 2006; Wang and Handy 2014). The reason is that volunteering is not an isolated philanthropic action and could be swayed by one’s social and human capitals (Becker and Dhingra 2001; Carpenter and Myers 2010; Clary et al. 1998). Gender was a dummy variable (0 = male, 1 = female); age was a continuous variable. Three dummy variables were constructed for race/ethnicity, in which African-American (Black), Hispanic/Mexican-American, and other races or ethnicities were the contrast groups. Non-Hispanic White served as the reference category. Education was coded 1 = none, 2 = high school, 3 = GED, 4 = associates degree, 5 = bachelor’s degree, 6 = graduate degree, and 7 = doctorate. For citizenship, 1 = US citizen and 0 = otherwise. Marital status was a dummy variable (1 = currently married, 0 = otherwise), and number of children was coded 0–4 or more children. Annual family income was a categorical variable (1 = \$0 to \$14,999, 2 = \$15,000 to \$34,999, 3 = \$35,000 to \$49,999, 4 = 50,000 to \$64,999, 5 = \$65,000 to \$84,999, and 6 = \$85,000 or more), based on the classification used in prior research with the same survey data (Hale et al. 2010; Hill et al. 2009). To preclude the confounding of missing values in family income, a dummy variable was created to indicate whether the participant had missing information on income (1 = missing, 0 = otherwise).

Religious denominations were also adjusted for in the present study. Past research did not have a consistent conclusion regarding the influence of denominational differences on volunteering (Bekkers and Schuyt 2008; Mencken and Fitz 2013; Wuthnow 1991). Some claimed that denominational differences might affect volunteering engagement differentially (Bekkers and Schuyt 2008; Driskell et al. 2008; Musick and Wilson 2008; Vermeer and Scheepers 2011). Other

scholars, however, did not find such a significant denominational effect (Forbes and Zampelli 2014; Hoge et al. 1998; Mencken and Fitz 2013). Due to the theoretical significance of denominational differences and its inconclusiveness, the present study employed four dummy variables to compare the influence of Protestant, Catholic, other Christian, and non-Christian religions, e.g., Jewish, with that of nonaffiliates (1 = Protestant, Catholic, Other Christian, or Non-Christian Religions; 0 = Non-Affiliates) on volunteering.

### Analytical Techniques

In the analysis of this study, both logistic and Poisson regression models were employed. Logistic regression is appropriate for the dependent variable that is dichotomous, which corresponds to our outcome of participation in the 12 types of voluntary activity. Logistic regression does not assume a linear relationship and homoscedasticity between the predictors and outcome (DeMaris 1992; Menard 2010), so it is suitable for investigating whether the participant had taken part in any of the 12 voluntary activities because of religiosity. Unlike OLS linear regression, logistic regression reports both beta coefficient and odds ratio (OR), in which OR is predicted by the logit of the outcome generated from the pertinent beta coefficient (Menard 2010). Due to our interest in examining how religious involvement increases (or decreases) the participant's likelihood of participating in any of the 12 voluntary activities, OR with 95 % confidence interval is reported only while accounting for the confounding induced by pertinent socio-demographic and denominational covariates mentioned above.

To test hypotheses 2 and 3, in which the outcomes are count variable, Poisson regression was used. A count variable requires the numeric responses as positive integers that must be zero or greater (Fahrmeir et al. 2013), corresponding to the count outcomes of participation in the specific domains of volunteering (from 0 to 4) and overall aggregate of volunteering (from 0 to 12) in the present study. Apparently, the assumptions of normality and linear function in OLS linear regression are not suitable for count data because a Poisson distribution is discrete and the Poisson mean is always  $\geq 0$ . Therefore, a Poisson model has to exhibit the log outcome rate as a linear function of a set of its predictors (Cameron and Trivedi 2013; Fahrmeir et al. 2013),  $\log_e(Y) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \dots + \beta_kX_k$ . Poisson regression generates both beta coefficient and exponentiated beta value ( $\text{Exp}[b]$ ), in which the former reveals the magnitude of religious involvement in relation to participation in specific domains and overall aggregate of volunteering, and the latter expresses the percentage of participation in these two count outcomes as a unit increase in religious involvement. Therefore, both are reported in this study.

### Results

Table 1 presents the socio-demographic and denominational characteristics of the participants. Female participants made up 61.5 % of the total sample ( $n = 925$ ). The average age of the participants was 45.69, and the majority were non-Hispanic

**Table 1** Demographics of the participants of the survey of Texas adults, 2004

	Mean (%)	SD	Range
Gender			
Female	.615	–	0, 1
Male	.385	–	0, 1
Age	45.69	16.282	18–94
Race/ethnicity			
White	.649	–	0, 1
Black	.07	–	0, 1
Hispanic	.223	–	0, 1
Other <sup>a</sup>	.058	–	0, 1
Education	3.401	1.660	1–7
Citizenship			
Yes	.918	–	0, 1
No	.082	–	0, 1
Marital status			
Married	.584	–	0, 1
Otherwise	.416	–	0, 1
Number of children <sup>b</sup>	.94	–	0–10
Family income	\$62,195.575	\$53,656.022	\$0–700,000
Income missing			
No	.65	–	0, 1
Yes	.35	–	0, 1
Employment			
Employed	.566	–	0, 1
Otherwise	.434	–	0, 1
Affiliations			
Protestant	.427	–	0, 1
Catholic	.258	–	0, 1
Other christian	.064	–	0, 1
Other religions	.128	–	0, 1
No affiliation	.092	–	0, 1

<sup>a</sup> Other races were grouped by Asian, Native American, and other ethnicities due to few participants in these ethnic groups, e.g., Asian = 14, Native American = 17

<sup>b</sup> Number of children ranges from 0 to 10; however, 98.9 % of the respondents had four children or less. Therefore, the variable was recoded to 0–4 children and 5 = 5 children or more in the subsequent analyses

Whites (64.9 %,  $n = 1002$ ), followed by Mexican-Americans (22.3 %,  $n = 341$ ), African-Americans (7 %,  $n = 105$ ), and other ethnicities (5.8 %,  $n = 56$ ). The mean of education was 3.4 years, denoting the average education attainment was general education diploma or associate degree. Most of the participants were US citizens (91.8 %,  $n = 1380$ ), and more than half were currently married (58.4 %) and employed (56.6 %). Generally, participants had one child at home and an

annual family income of about US\$62,195. Protestants and Catholics were 42.7 % ( $n = 688$ ) and 25.8 % ( $n = 388$ ), respectively. Believers of other types of Christianity and religion were 6.4 % ( $n = 96$ ) and 12.8 % ( $n = 193$ ). Nonaffiliates made up 9.2 % ( $n = 139$ ).

Table 2 shows the results of logistic regression models for the effects of religious involvement on participation in the 12 types of voluntary activity. Of these activities, religious involvement was significantly and positively predictive of participation in 9 types. For these 9 types, the most robust religious effect was on volunteering in churches/synagogues or other religious settings, in that a unit increase in religious involvement occasioned the odds of volunteering in religious settings by 6.4 times. In addition, religious involvement had significant effects on increase of the odds of volunteering in political organizations and campaigns by 59 % and youth development by 53 %. Moreover, a unit increase in religious involvement resulted in increased participation in the voluntary types of education, recreation, and health services by more than 40 %. Also, being more religious was significantly related to the higher odds of volunteering in public or societal benefit and work-related services by 37 % and 39 %, respectively. Lastly, a unit increase in religious involvement also significantly occasioned higher likelihood of volunteering in human services by 30 %. These significant religious effects were held even adjusting for diverse socio-demographic characteristics and denominational differences.

For socio-demographic variables, although previous research indicated that females volunteered more than their male counterparts did, findings of the present study showed that the gender effect varied with the types of voluntary activity. Being female meant a higher likelihood of volunteering in health and education, but less likelihood of participating in public and societal benefit, recreation, and political organizations and campaigns. Age was consistently predictive of lower participation in different types of voluntary activity generally. For race/ethnicity, no consistent effect was observed, and little evidence was observed that being other than White meant lower odds of volunteering in health, religious settings, and public or societal benefit. Furthermore, comparable with the effects of religious involvement, education was also consistently predictive of a higher likelihood of volunteering in all types of voluntary activity, except for environment or animal welfare and other voluntary work.

In addition, being a US citizen generally had higher odds of participation in different types of voluntary activity. This finding is consistent with the study of Wang and Handy (2014), in which they found that citizens in Canada engaged more in voluntary services than did their immigrant counterparts, as a result of their higher social trust and sense of belonging. Unlike previous research findings that showed that being married and having children at home meant participating more in voluntary activities, the present study showed that married persons volunteered less in health and political organizations or campaigns, but had a higher likelihood of volunteering in other voluntary work. Having more children at home was found to mean higher odds of volunteering in education, recreation, and youth development, but a lower likelihood of volunteering in environment or animal welfare and arts or culture. In addition, higher family income and being employed showed a higher likelihood of volunteering in religious organizations, recreation, work-related

**Table 2** Logistic regressions of religious involvement on participation in different types of voluntary activity

Predictors	Outcome					
	Health OR (95 % CI)	Education/tutoring OR (95 % CI)	Churches/synagogues OR (95 % CI)	Human services OR (95 % CI)	Environment or animal welfare OR (95 % CI)	Public or societal benefit OR (95 % CI)
Religious involvement	1.477** (1.28–1.71)	1.466** (1.28–1.68)	6.401** (5.23–7.84)	1.303** (1.13–1.5)	.940 (.81–1.09)	1.379** (1.18–1.62)
Female	1.265+ (.96–1.66)	1.445** (1.12–1.86)	.944 (.71–1.25)	.962 (.75–1.24)	.987 (.76–1.29)	.637** (.48–.85)
Age	.841* (.72–.98)	.586 (.51–.68)	.790** (.67–.93)	.813** (.70–.94)	.798** (.69–.93)	.832* (.70–.99)
Race/ethnicity						
Black	.472** (.28–.81)	.882 (.55–1.41)	.431** (.26–.73)	.687 (.42–1.13)	.420** (.22–.79)	1.322 (.80–2.2)
Hispanic	.661* (.44–.99)	.906 (.63–1.3)	.763 (.51–1.15)	.990 (.68–1.44)	.585* (.39–.89)	1.229 (.80–1.89)
Other	.819 (.42–1.61)	.794 (.42–1.5)	.799 (.40–1.61)	.617 (.30–1.26)	.476+ (.21–1.08)	1.127 (.56–2.27)
Education	1.394** (1.22–1.6)	1.987** (1.74–2.27)	1.287** (1.12–1.49)	1.317** (1.16–1.5)	1.113 (.97–1.28)	1.614** (1.39–1.88)
Citizenship	2.385* (1.18–4.82)	3.114** (1.76–5.52)	1.587 (.9–2.78)	2.989** (1.56–5.72)	1.861 (.97–3.59)	3.545** (1.48–8.5)
Marital status	.707* (.54–0.93)	.971 (.75–1.27)	1.002 (.75–1.34)	.989 (.76–1.3)	1.010 (.76–1.34)	.803 (.59–1.10)
Number of children	.983 (.85–1.13)	1.316** (1.15–1.5)	1.063 (.92–1.23)	1.009 (.88–1.16)	.798** (.69–.92)	.900 (0.77–1.05)



Table 2 continued

Predictors	Outcome						
	Health OR (95 % CI)	Education/tutoring OR (95 % CI)	Churches/synagogues OR (95 % CI)	Human services OR (95 % CI)	Environment or animal welfare OR (95 % CI)	Public or societal benefit OR (95 % CI)	
Family Income	.924 (.81–1.06)	1.018 (.90–1.16)	1.219** (1.06–1.41)	.979 (.86–1.12)	1.101 (.96–1.26)	1.087 (0.93–1.27)	
Income missing	.974 (.74–1.28)	.883 (.68–1.14)	.961 (.72–1.28)	.924 (.71–1.21)	.861 (.65–1.14)	.835 (.61–1.14)	
Employed	1.016 (.77–1.34)	1.028 (.80–1.33)	1.338* (1–1.8)	1.182 (.91–1.54)	.966 (.73–1.28)	1.144 (.84–1.56)	
Affiliation							
Protestant	.653 (.39–1.09)	.735 (.46–1.18)	2.014+ (.98–4.14)	1.025 (.62–1.7)	1.121 (.68–1.85)	.608+ (.36–1.04)	
Catholic	.715 (.42–1.22)	.885 (.54–1.44)	1.588 (.76–3.32)	1.030 (.61–1.73)	1.233 (.73–2.09)	.529* (.30–.93)	
Other christian	.612 (.31–1.22)	.778 (.42–1.45)	1.471 (.62–3.48)	1.223 (.64–2.33)	1.134 (.58–2.23)	.640 (.31–1.31)	
Other religion	.596+ (.33–1.07)	.774 (.45–1.32)	1.469 (.67–3.22)	.795 (.45–1.42)	1.054 (.59–1.88)	.638 (.35–1.17)	
-2 log likelihood	1496.756	1650.751	1365.285	1607.908	1481.263	1294.447	
Model $\chi^2$	91.014**	289.998**	704.314**	72.521**	54.484**	112.160**	

**Table 2** continued

Predictors		Outcome					
	Recreation OR (95 % CI)	Arts or culture OR (95 % CI)	Work-related OR (95 % CI)	Political campaigns OR (95 % CI)	Youth mentoring OR (95 % CI)	Other volunteer OR (95 % CI)	
Religious involvement	1.443** (1.23–1.69)	1.127 (.94–1.35)	1.398** (1.2–1.64)	1.599** (1.3–1.97)	1.534** (1.33–1.78)	1.082 (.87–1.35)	
Female	.508** (.38–.67)	1.244 (.89–1.75)	1.075 (.81–1.42)	.701 <sup>+</sup> (.48–1.02)	1.192 (.91–1.56)	.851 (.57–1.28)	
Age	.666** (.56–.79)	.879 (.72–1.07)	.777** (.65–.93)	1.077 (.87–1.34)	.653** (.56–.77)	1.073 (.85–1.36)	
Race/ethnicity							
Black	.835 (.49–1.43)	.588 (.28–1.23)	1.604 <sup>+</sup> (.98–2.64)	1.142 (.58–2.24)	1.444 (.91–2.29)	.942 (.41–2.16)	
Hispanic	1.092 (.73–1.64)	1.027 (.62–1.71)	.996 (.66–1.51)	1.389 (.80–2.4)	.874 (.58–1.31)	.737 (.39–1.41)	
Other	.555 (.24–1.3)	.870 (.38–2.0)	.934 (.44–1.98)	.902 (.34–2.37)	1.120 (.58–2.17)	.414 (.10–1.74)	
Education	1.455** (1.26–1.69)	1.676** (1.41–2.0)	1.605** (1.39–1.86)	1.630** (1.34–1.99)	1.555** (1.35–1.79)	1.033 (.84–1.27)	
Citizenship	1.670 <sup>+</sup> (.93–2.99)	3.101* (1.09–8.86)	2.542** (1.24–5.19)	1.984 (.75–5.23)	3.682** (1.7–7.97)	1.425 (.53–3.85)	
Marital status	.957 (.70–1.3)	1.112 (0.78–1.59)	.925 (.68–1.26)	.671* (.45–1.01)	1.019 (.77–1.36)	1.502 <sup>+</sup> (.96–2.36)	
Number of children	1.587** (1.36–1.85)	.808* (.68–.97)	.990 (.85–1.15)	.956 (.78–1.18)	1.128 <sup>+</sup> (.98–1.3)	.911 (.73–1.14)	

Table 2 continued

Predictors	Outcome						
	Recreation OR (95 % CI)	Arts or culture OR (95 % CI)	Work-related OR (95 % CI)	Political campaigns OR (95 % CI)	Youth mentoring OR (95 % CI)	Other volunteer OR (95 % CI)	
Family income	1.222** (1.05–1.42)	.973 (.82–1.16)	1.276** (1.1–1.48)	1.160 (.95–1.42)	1.152* (1.0–1.32)	1.273* (1.03–1.58)	
Income missing	.965 (.71–1.30)	1.013 (.71–1.44)	.622** (.46–.85)	.943 (.63–1.41)	.964 (.73–1.27)	.696 (.45–1.08)	
Employed	1.422* (1.05–1.92)	1.331 (.93–1.91)	3.451** (2.49–4.79)	.864 (.58–1.29)	1.390* (1.05–1.84)	.838 (.55–1.29)	
Affiliation							
Protestant	.920 (.54–1.57)	.640 (.35–1.17)	1.131 (.64–1.99)	.499 <sup>+</sup> (.24–1.04)	1.040 (.62–1.76)	.799 (.37–1.73)	
Catholic	.794 (.46–1.38)	.575 <sup>+</sup> (.30–1.09)	1.404 (.79–2.51)	.655 (.31–1.38)	.733 (.42–1.28)	.968 (.43–2.16)	
Other christian	.527 <sup>+</sup> (.25–1.11)	.721 (.32–1.63)	.697 (.32–1.53)	.456 (.16–1.27)	.760 (.38–1.52)	1.208 (.45–3.23)	
Other religion	.540 <sup>+</sup> (.29–1.02)	.762 (.39–1.51)	.923 (.49–1.75)	.499 (.22–1.15)	1.062 (.59–1.91)	.697 (.28–1.74)	
-2 log likelihood	1339.739	1039.503	1336.614	856.985	1478.662	787.560	
Model $\chi^2$	206.666**	70.250**	241.003**	65.209**	203.996**	24.733**	

<sup>+</sup>  $p < .1$ ; \* $p < .05$ ; \*\* $p < .01$

services, and youth development. Lastly, little evidence was observed for a denominational effect on participation in different types of voluntary activity, except that being Catholic meant a lower likelihood of volunteering in the public or societal benefit domain.

Poisson regression models with robust estimators were used to test the effects of religious involvement on participation in specific domains of volunteering. For easier interpretation of the results, all predictors were first converted to z-scores with a mean of 0 and standard deviation of 1 before analysis. Table 3 shows that religious involvement had significant positive effects on participation in all three domains of volunteering. The most robust effect of religious involvement was found for volunteering in the humanitarian-concerned domain ( $b = .409, p < .001$ ), the next strongest was participation in the cultural and work-related domain ( $b = .184, p < .001$ ), and the least strong religious effect was found for participation in the socio-political domain ( $b = .168, p < .001$ ). Specifically, a unit increase in religious involvement resulted in a 50.5 % increase in the expected number of participation in voluntary activities within the humanitarian-concerned domain ( $\exp[.409] - 1$ ). In addition, a unit increase in religious involvement occasioned a 18.3 % and 20.2 % increase in the expected number of participation in voluntary activities within the socio-political domain and cultural and work-related domain, respectively. For the religious effect on participation in the overall aggregate of volunteering, the Poisson model shows that more religious people had higher participation in the overall aggregate of volunteering, the total count of the 12 voluntary activities concomitantly,  $b = .278, p < .001$ , indicating that there was a 32.1 % increase in the expected number of participation in different voluntary activities across types and domains when a unit increased in religious involvement. The above results were significantly maintained even adjusting for a variety of socio-demographic characteristics and denominational differences among the participants.

Moreover, results of the Poisson models regarding the socio-demographic and denominational effects showed that participants' age, education, citizenship, and employment status had a more consistent relationship with participation in the three specific domains and overall aggregate of volunteering. For instance, people generally participated less in different domains and overall aggregate of volunteering as they aged;  $bs = -140$  to  $-195, ps < .01$ . However, higher education attainment was commonly related to higher participation in volunteering regardless of domains or overall aggregate;  $bs = 179$  to  $.313, ps < .05$  and  $.01$ . Moreover, being a US citizen had robust significant effects on higher participation in domain-specific and overall-aggregated volunteering;  $bs = .579$  to  $.642, ps < .01$ . Being employed was also significantly and positively related to all domain-specific and overall-aggregated volunteering, except for participation in the socio-political domain. Nevertheless, a varying and inconsistent pattern of effects was observed among the socio-demographic variables of gender, race/ethnicity, marital status, and family income. Gender did not have a significant effect on participation in domain-specific and overall-aggregated volunteering, except that being female was marginally significantly related to lower participation in the cultural and work-related domain of volunteering;  $b = -.114, p < .1$ . Compared with Whites, African-Americans, Hispanics, and other races did not show any significant effect

**Table 3** Poisson regressions of religious involvement on participation in different domains and aggregate count of volunteering

Predictors	Outcome							
	Humanitarian-concerned		Socio-political		Cultural and work-related		Aggregate count	
	<i>b</i> (SE)	95 % CI	<i>b</i> (SE)	95 % CI	<i>b</i> (SE)	95 % CI	<i>b</i> (SE)	95 % CI
Religious involvement	.409** (.024)	.360–.457	.168** (.033)	.103–.233	.184** (.036)	.114–.255	.278** (.023)	.232–.325
Female	.060 (.049)	–.036–.156	–.030 (.061)	–.152–.091	–.114 <sup>+</sup> (.066)	–.244–.017	–.013 (.046)	–.103–.077
Age	–.140** (.028)	–.195–.085	–.195** (.039)	–.271–.118	–.168** (.040)	–.248–.088	–.162** (.027)	–.216–.107
Race/ethnicity								
Black	–.187* (.089)	–.363–.011	–.094 (.116)	–.322–.135	–.005 (.126)	–.254–.243	–.116 (.090)	–.293–.061
Hispanic	–.133 <sup>+</sup> (.078)	–.286–.021	–.057 (.090)	–.234–.120	–.005 (.104)	–.210–.201	–.079 (.071)	–.219–.060
Others	–.103 (.139)	–.377–.171	–.168 (.156)	–.475–.139	–.246 (.208)	–.653–.162	–.156 (.130)	–.411–.100
Education	.179** (.025)	.130–.228	.313** (.031)	.251–.374	.288** (.036)	.217–.359	.247** (.023)	.200–.293
Citizenship	.591** (.141)	.313–.869	.765** (.192)	.387–1.142	.579** (.176)	.233–.924	.642 (.120)	.406–.877
Marital status	–.055 (.049)	–.152–.042	–.083 (.065)	–.212–.046	.032 (.072)	–.111–.175	–.043 (.047)	–.136–.050
Number of children	.020 (.025)	–.029–.070	.000 (.033)	–.066–.065	.056 (.035)	–.014–.125	.022 (.024)	–.026–.070
Family income	.029 (.025)	–.021–.080	.047 (.031)	–.016–.109	.122** (.037)	.048–.196	.056* (.024)	.008–.104
Income missing	–.032 (.050)	–.131–.067	–.089 (.067)	–.221–.043	–.152* (.073)	–.296–.007	–.078 (.048)	–.173–.016
Employed	.114* (.052)	.011–.217	.005 (.067)	–.128–.138	.409** (.079)	.254–.565	.146** (.050)	.046–.245
Affiliation								
Protestant	.050 (.128)	–.189–.289	–.195 (.112)	–.416–.025	–.095 (.134)	–.358–.169	–.091 (.094)	–.275–.093
Catholic	–.011 (.128)	–.263–.241	–.133 (.117)	–.363–.097	–.071 (.141)	–.348–.207	–.094 (.100)	–.291–.103
Other christian	–.008 (.145)	–.293–.277	–.177 (.146)	–.465–.110	–.258 (.183)	–.617–.101	–.149 (.121)	–.387–.090
Other religion	–.043 (.135)	–.308–.223	–.183 (.129)	–.438–.071	–.242 (.159)	–.554–.071	–.166 (.109)	–.380–.048

**Table 3** continued

Predictors	Outcome							
	Humanitarian-concerned		Socio-political		Cultural and work-related		Aggregate count	
	<i>b</i> (SE)	95 % CI	<i>b</i> (SE)	95 % CI	<i>b</i> (SE)	95 % CI	<i>b</i> (SE)	95 % CI
Likelihood ratio $\chi^2$	440.845**		241.338**		277.132**		817.655**	
Deviance	1645.216		1704.833		1501.964		319.314	

+  $p < .1$ ; \* $p < .05$ ; \*\* $p < .01$

on participation in domain-specific or overall-aggregated volunteering, except that African-Americans had less participation in the humanitarian-concerned domain of volunteering;  $b = -.187$ ,  $p < .05$ . In addition, neither marital status nor number of children at home was predictive of participation in any specific domains or overall aggregate of volunteering. Family income was only significantly related to higher participation in the cultural and work-related domain and overall aggregate of volunteering. Denominational differences did not have any effect on participation in domain-specific and overall-aggregated volunteering across the Poisson regression models.

To test whether there are significantly different effects of religious involvement on participation in the three specific domains of volunteering, a regression coefficients comparison test was used. Although it is feasible to treat the difference between the two coefficients as the numerator for comparison in the population (e.g.,  $b_1 - b_2$ ) and the estimated standard error of the difference ( $\sigma_{b_1-b_2}$ ) as the denominator when doing this type of test, it has been contentious for researchers in using which statistical formulas to conduct the test. In this study, I employed the testing formula provided by Clogg et al. (1995),<sup>2</sup> through which unbiased rejection of the null hypothesis for avoidance of methodological fallacy has been approved. The results showed that religious involvement did have a stronger effect on participation in the humanitarian-concerned domain of volunteering than that of the socio-political domain ( $Z = 3.382$ ,  $p < .01$ ) and the cultural and work-related domain ( $Z = 3.073$ ,  $p < .01$ ). However, religious involvement did not show a significant difference in volunteering in the latter two domains ( $Z = .344$ , ns).

## Discussion

By employing a statewide representative sample of adults in Texas, the current study confirmed that religious involvement, treated as a multifaceted and multi-item construct, did have positive effects on volunteering participation across the types of

<sup>2</sup> The formula provided in Clogg et al. (1995) is  $Z = \frac{b_1 - b_2}{\sqrt{SEb_{1^2} + SEb_{2^2}}}$ , in which  $b_1$  and  $b_2$  are regression betas and  $SEb_{1^2}$  and  $SEb_{2^2}$  are the coefficient variances.

voluntary activity, specific domains, or overall aggregate of volunteering under examination. The obtained results for the religion–volunteering relationship were significantly held even adjusting for a diversity of socio-demographic and denominational variables that are considered to confound the relationship. In addition, unlike previous findings showing that denominational differences influence volunteering, the present study found only a slight denominational effect on volunteering. Moreover and notably, some socio-demographic effects that had been reported to have a concerted influence on volunteering are observed to be more dynamic and varied in relation to volunteering participation. Race/ethnicity, marital status, and number of children are observed in the present study.

When treating volunteering as participating in different types of voluntary activity, religious involvement was found to have significant positive effects on participation in 9 of the 12 voluntary activities. The strongest religious effect was on volunteering in churches or other religious settings. This result is plausible because religious people generally treat their religious communities as “home” (Ammerman 2005; Wuthnow 1991). Hence, in their religious cognition, they would regard serving other members voluntarily and contributing to the well-being of their coreligionists as both their responsibility and obligation (Bekkers and Schuyt 2008; Cnaan et al. 1993; Ozorak 2003). Moreover, the remaining 8 voluntary types that religious involvement had a significant effect on belong to secular voluntary activities. The association between religious involvement and participation in these secular voluntary activities can be apprehended by the feeder system perspective that participation in religious volunteering would engender a spillover effect to enhance believers’ nonreligious volunteering engagement (Musick and Wilson 2008). Nevertheless, prior research studies seldom examined this feeder system hypothesis prospectively, nor did the present one do so. Johnston’s (2013) recent longitudinal study found that participation in religious volunteering significantly mediated the effect of church attendance on engaging in secular volunteering. Therefore, exploring the mediation of religious volunteering in the relationship between religious involvement and secular volunteering is noteworthy for future philanthropic behavior research.

In line with the feeder system perspective, another noteworthy research concern is examining the types of secular voluntary activity that religious involvement spills more effects into than others. In the results of logistic regression models, the odds of participation in different types of voluntary activity did vary by the effects of religious involvement. These varying religious effects denote that religious people’s engagement in different types of nonreligious voluntary activity may be an interactive result concurrently swayed by other secular factors, e.g., personality, social network, education, and lifestyle. This corresponds to the proposition suggested by Clary et al. (1998) that volunteerism involves the integration of human, social, and cultural capitals in combination with one’s disposition. They reckoned that volunteering is related to (1) expression of altruistic/humanitarian concerns, (2) application of possessed knowledge and skills, (3) networking with friends, (4) preparation of related skills for career development, (5) coping with one’s guilt and personal problems, and (6) achievement of personal growth and self-esteem. Therefore, for further understanding of religious effects on nonreligious

volunteering participation, pertinent “secular factors” with respect to social and cultural resources as well as personal assets should be examined conjointly with religious involvement in relation to volunteerism.

For participation in domain-specific volunteering, results of Poisson models revealed that more religious people unanimously had higher volunteering engagement across the three volunteering domains. Of these, the highest religious effect was found for volunteering in the humanitarian-concerned domain. However, indistinguishable religious effects were observed for participation in the socio-political and cultural and work-related domains. The findings explicate that volunteering behaviors of religious people in serving the “secular world” are prioritized: they may value certain forms of altruism, e.g., voluntary activities with implications of human significance and humanitarian concerns. This favoritism of domain-specific volunteering may reveal that religious people think of “actualizing” their religious values and teachings when the nature of certain voluntary activities manifestly coheres with their belief system (Musick and Wilson 2008). In fact, it is common in many religious belief systems, especially Christianity, that tending the sick, caring for elderly and physically weak people, helping the helpless, and accommodating the homeless are the main principles of universal truth (De Gruchy 1995). Accordingly, it is plausible for religious people to prioritize voluntary activities within the humanitarian-concerned domain because these activities are regarded as more in line with their religious values and tenets. Nevertheless, the present study only roughly classified different types of voluntary activity into three specific volunteering domains, which may not be intricate and inclusive enough to reflect the “grouping effect” of religious favoritism on volunteering. Thus, a more sophisticated and systematic classification is needed in future studies to enhance our understanding of the selectivity of volunteerism among religious people.

Although religious involvement had significant positive effects on participation in the socio-political and cultural and work-related domains of volunteering, an indistinguishable magnitude of these effects on the two domains was obtained. This may reflect a double-barreled approach of religious people towards participation in voluntary activities within the socio-political domain. A possible explanation of this double-barreled approach is that religious teachings and tenets uphold some forms of social and political justice and benefits, e.g., human rights. Other forms of social and political inequalities are implicit in some scriptures, e.g., difference of social classes. Therefore, the possible difference of participation in the socio-political domain and cultural and work-related domain of volunteering would be offset by the double-barreled attitude of religious people in interpreting what is “social and political uprightness and benefits” from their religious views. A good example in the Bible is giving tacit consent to slavery, in which slaves should be unconditionally submissive and obedient to their owners. This religious double-barreled approach towards issues of social and political justice and benefits may easily bias religious people to value some social and political topics more than others. For this reason, it is not odd to see some types of voluntary activity within the socio-political domain to be less valued by believers, e.g., environment or animal welfare, whereas others are more espoused, e.g., political campaigns (Ammerman 2005; Hoge et al.



1998). This double-barreled and biased attitude of religious people towards different social and political issues is supposed to obscure the expected difference in the relationship of religious involvement and the two domains of volunteering.

In addition, the present study has incorporated a variety of pertinent socio-demographic and denominational variables as covariates. Generally, the study showed that effects of socio-demographic characteristics and denominational differences on volunteering varied dynamically according to the types of voluntary activity under investigation. Mencken and Fitz's (2013) study reported that "(o)ur findings also show that religious tradition did not systematically affect the nature of volunteering. Our results did not show strong variation in volunteering by traditional demographic measures, such as socioeconomic status, age, gender, and race" (p. 505). Nevertheless, they called for further research to determine socio-demographic and denominational effects on volunteering, because they admitted that "[they] do not have data on the nature of the volunteering activity in which respondents participated" (Mencken and Fitz 2013, p. 505). In response, the research focus of the current study was to treat volunteering as participation in different types of voluntary activity. The results show that demographic and denominational effects on participation in different voluntary activities were in fact more varied and dynamic than had been previously understood.

First of all, being female meant higher participation in some types of voluntary activity, e.g., health and education, but less in other types, e.g., public or societal benefit and recreation. These dynamic gender effects have not yet been charted. In fact, some past research reported that women volunteered more than did their male counterparts (Manning 2010; Taniguchi and Thomas 2011; Wilson and Musick 1997), but other investigations did not find a gender difference (Van Tienen et al. 2011; Vermeer and Scheepers 2011; Wang and Handy 2014). However, what is common in these studies is that they considered volunteering as a simple dummy outcome (1 = volunteers, 0 = otherwise). Second, and likewise, a dynamic picture of the relationship between race/ethnicity and volunteering was noted, in which African-Americans, Hispanics, or other ethnicities were found to have lower participation in certain types of voluntary activity, e.g., health and environment or animal welfare, but no racial difference in all other voluntary types. These findings on racial effects in the present study correspond to those of Stoll (2001), but contradict the evidence of Forbes and Zampelli (2014). Nevertheless, noteworthy in the present study is that African-Americans, Hispanics, and other ethnicities compared to non-Hispanic Whites selectively volunteered less in some types of voluntary activity but not others.

Moreover, unlike previous research findings showing that married people or those with children at home meant volunteering more (Sundeen 1990; Becker and Dhingra 2001; Brown and Ferris 2007; Wilson and Musick 1997), results of the present study indicate a more dynamic and interesting picture that being married volunteered less in health and political campaigns, but there was no difference in other types. Having children at home was found to occasion higher participation in the voluntary types of education, recreation, and youth development, but lower engagement in environment or animal welfare and in arts and culture. However, when respective voluntary types were grouped into specific domains of volunteering

or aggregate count of volunteering, marital status and number of children no longer showed an effect. Nevertheless, a more consistent pattern was found among the socio-demographic factors of age, education, citizenship, family income, and employment status. Older people generally had lower participation in volunteering across different types of voluntary activity, specific domains, and aggregate count of volunteering. Individuals with higher education, citizens, employed people, and those with a higher family income did have higher participation in different voluntary types, domain-specific and overall-aggregated volunteering. These results are congruent with some prior research findings (Forbes and Zampelli 2014; Rotolo et al. 2010; Wilson and Musick 1997). The difference is that the present study looked into the relationship between religious involvement and volunteering in more detailed classifications.

No strong evidence was obtained for a denominational difference in volunteering. The only statistically significant finding is that, compared to nonaffiliates, Catholics had lower participation in the voluntary type of public or societal benefit ( $OR = .529, p < .01$ ). Other denominational effects at a marginally significant level include that Protestants volunteered more in churches or other religious settings, but less in public or societal benefit and political organizations or campaigns; Catholics volunteered less in arts and culture; and believers in other types of Christianity and in other religions had lower participation in the voluntary type of recreation. In fact, past research findings regarding denominational influence in volunteering participation are inconclusive: some reported higher volunteering of Protestants and Catholics (Musick and Wilson 2008; Taniguchi and Thomas 2011), but others found less volunteering engagement of Catholics and Protestants than for believers of other religions and nonaffiliates (Forbes and Zampelli 2014; Beyerlein and Hipp 2005; Wilson and Janoski 1995), or revealed no denominational effect (Forbes and Zampelli 2014; Van Tienen et al. 2011). Generally, the present study noted weak evidence of a denominational difference in relation to volunteering across voluntary types, specific domains, and overall aggregate of volunteering.

## Conclusion

To sum up, results of the present study can contribute to helping people in nongovernmental organizations and policy makers in social welfare settings on how to plan strategies and allocate resources in the process of recruiting, deploying, and retaining volunteers. Pertinent parties in social services should respond to the preferences and priorities of religious volunteers to match them with appropriate voluntary services and activities that align with their religious beliefs and values. This matching is crucial to maintaining religious volunteers' commitment to volunteerism, which in turn is important for sustainable provision of voluntary services and enhancement of quality. Volunteerism is reciprocation between human development and prosocial actions, through which both the service recipients and the volunteers can have a chance to optimize their growth and quality of life in a way that is beneficial to both. Therefore, such a reciprocal way of volunteering can

not only provide support and care to people in need, but also help volunteers to actualize their religious values and teachings adequately.

Although the present study has investigated religious effects on participation in different types of voluntary activity, specific domains, and overall aggregate of volunteering, some weaknesses and areas for improvement are noted. The most pertinent is cross-sectional design, which may make the causal relationship between religion and volunteering impossible. Second, possible mediators and moderators that are considered to influence the religion–volunteering relationship, e.g., life meaning and social network, have not been explored in this study. Hence, our understanding of the mechanisms through which religion may engender its effects on volunteering is compromised. Lastly, the present study has not examined how religious involvement influences frequency of volunteering engagement, e.g., hours of taking part in volunteering in a given period, although it lays ground for the dynamic picture of religious effects on diversity of volunteering.

### Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

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