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Fulfilling Two Needs With One Deed: The Psychological Effect of Volunteering on Persons with Physical Disabilities

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Volunteering not only benefits nonprofit organizations but also may contribute to volunteers' well-being. This study examines the benefits of volunteering on the psychological well-being of persons with physical disabilities. *Method:* Using a sample of 3,440 individuals drawn from national survey data in South Korea, we applied propensity score matching (PSM), a quasi-experimental design that reduces potential bias in models using multiple regression. *Results:* Our findings revealed the positive effect of volunteering on the psychological well-being of people with physical disabilities. Volunteer participants (treatment group) showed significantly better psychological well-being than non-volunteers (control group). *Conclusion:* Empirical evidence from this study supports the benefits of volunteering for those with physical disabilities, indicating that participating in such prosocial behaviors may play an important role in their psychological well-being.

Keywords: Volunteering, Physical Disabilities, Psychological Well-Being, Propensity Score Matching

Introduction

Volunteers are considered important human resources that support the success of nonprofit organizations' missions (Akingbola, 2013; Akinlade & Shalack, 2017). As an unpaid workforce that receives only nonmonetary compensation, volunteers are even more important for smaller organizations unable to afford paid employees (Cesta et al., 2017; Lee & Brudney, 2015). Persons with disability, referred to as "a deprivation in terms of functioning and/or capability among persons with health conditions and/or impairments" (Mitra, 2018, p. 9), have often been excluded by the dominant discourse in which they are "passive recipients of care, rather than active contributors to society" (Balandin et al., 2006, p. 679). As a result, persons with physical disabilities often encounter challenges in pursuing social opportunities including work, health, religion, sports, transportation, and civic engagement (Cochran, 2020; Condeluci et al., 2008; Munthali et al., 2019; Safta-Zecheria, 2020).

Having a physical disability can reduce accessibility to community participation, leading to more solitary, home-based activities. Empirical evidence suggests that volunteering is beneficial to individuals with disabilities for many reasons. For example, studies show that volunteering yields benefits such as increased self-esteem, feelings of helpfulness, a sense of

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belonging, and a sense of accomplishment (Balandin et al., 2006; Kappelides & Spoor, 2019; Kulik, 2018; Lindsay & Cancelliere, 2018). Studies have also found positive relationships between volunteering and indicators of physical and psychological health, including levels of life satisfaction, actual physical health, and perceived health (Bradshaw et al., 2004; Held & Granholm, 2007; Kulik, 2019; Leiulfsrud et al., 2014; Rak & Spencer, 2016; Trembath et al., 2010; Yanay-Ventura, 2019; Yeum & Baek, 2013).

While these studies have revealed the numerous benefits of volunteering for individuals with disabilities, they have been mostly correlational in design, creating the potential for selection bias. Specifically, previous correlational findings may have resulted from selecting a volunteer group that is likely to be physically and psychologically healthier than non-volunteers. Only a handful of studies have recently applied experimental (Jiang et al., 2020) or quasi-experimental approaches (Wu & Bies, 2020) to eliminate selection bias and detect a causal relationship between volunteering and health benefits. Another limitation of previous studies is that most of them focused on Western countries. Although there has been growing interest in the benefits of volunteering in non-Western contexts (Chiao, 2019; Huang, 2019; Jang et al., 2016; Prysmakova, 2019; Wang et al., 2019), little is known about whether and to what extent volunteers (especially individuals with disabilities) can reap these benefits. For instance, in South Korea, there have long been religious and superstitious beliefs that individuals with disabilities are cursed by God for misconduct in their previous lives, which has fostered negative attitudes towards individuals with disabilities (Jin & Song, 1998; Lee, 2009; Park et al., 2013; Seo & Kim, 2004).

Such stigma reduces opportunities for persons with disabilities to integrate into the community and build social networks, ultimately resulting in lower levels of psychological well-being for this vulnerable group (Rao, 2004; Zascavage & Keefe, 2004). Although South Korea had disability policies that included employment quotas, classifications of disability, and separate education, disability activists claimed that these policies had maintained structural discrimination (Arrington & Moon, 2020). Responding to the disability movement, South Korea enacted the Disability Discrimination Act in 2008 by modeling the Americans with Disability Act (ADA). The Framework Act on Volunteer Activities enacted in 2006 also explicitly stated that all Korean citizens must have equal access to volunteering opportunities regardless of their age, gender, and disabilities. However, empirical evidence from South Korea consistently demonstrates that individuals with disabilities tend to have significantly lower life satisfaction than those without disabilities (Oh, 1998; Park et al., 2013; Seo & Kim, 2004). Therefore, it is necessary to understand how to foster this group's well-being in societies where stigma and superstitious beliefs about disabilities predominate and whether social participation like volunteering positively influences their mental health.

Positive and Negative Effect of Volunteering on Well-Being

Individuals with physical disabilities often face various stressors, such as restrictions on daily activities, limited independence, and coping with differences from their peers, leading to negative consequences for their mental health (Wallander & Varni, 1992). Studies have found that those with physical disabilities have lower life satisfaction than those without disabilities (Smith & Alston, 2009). For instance, Decker and Schulz (1985) interviewed 100 patients with spinal cord injuries and found that they tended to have lower levels of subjective well-being compared to similarly aged individuals without disabilities.

Empirical studies found that volunteering participation might be helpful in improving the physical and psychological health of disabled people (Binder & Freytag, 2013; Borgonovi, 2008) as well as other marginalized or isolated groups, such as older adults (e.g., Jiang et al., 2020; Russell et al., 2019), LGBTQ+ individuals (Gates & Dentato, 2020), and the homeless (Morton & Cunning-Williams, 2009). Studies highlighted that volunteering—defined as "the

act of freely doing something without remuneration that is intended to improve others' quality of life directly or indirectly, with the recipient being outside one's own household" (Cnaan & Park, 2016, p. 24)—may improve the mental health of individuals with disabilities because it makes the volunteers feel that they are physically and mentally capable of playing meaningful roles in the community (Drucker, 2006). Social benefit theory (Li & Ferraro, 2005) can be helpful in understanding the positive effects of volunteering. The theory explains that volunteering experience may influence psychological health by helping volunteers develop supportive social relationships. Through relationships with recipients and other volunteers, they can obtain emotional and instrumental support, improving psychological well-being (Oman et al., 1999).

Moreover, volunteering provides opportunities to serve in socially meaningful roles, improving social integration, emotional and social cognition, autonomy, personal ability, purpose in life, and self-efficacy (McEwen, 1996; Taylor & Pancer, 2007). Consistent with the theory, empirical evidence reveals that a volunteering program can be a useful intervention for enhancing the well-being of individuals with physical and mental disabilities (Li, 2007; Poulin & Holman, 2013; Rietschlin, 1998). For instance, Rimmerman and Araten-Bergman (2009) conducted a study on volunteering activities of retirees with disabilities in Australia. They found that participants reported positive experiences with volunteer work. The authors pointed out that volunteerism was an opportunity for participants to enhance their sense of belonging to the community, self-awareness, and social inclusion. In another study focusing on older adults in the United States, Greenfield and Marks (2004) also found that elderly individuals experiencing loneliness or meaninglessness were likely to experience positive effects on their well-being through volunteering. As such, volunteering has the potential to give people with disabilities the opportunity to be involved in the communities, to gain self-awareness, and build "community, trust and reciprocity" (Bates & Davis, 2004, p. 198).

However, this will only happen when appropriate volunteering tasks are assigned to volunteers. Scholars point out that volunteering experience can also encounter negative consequences (Wilson & Musick, 1997). For instance, volunteers could experience psychological or emotional distress when they work with other people who are rude, abrasive, intrusive, or noisy. They may also feel frustrated or even asked to leave when they are assigned to tasks that they cannot physically handle (Drucker, 2006; Schwartz et al., 2003). Volunteers with disabilities, in particular, could experience a negative impact of volunteering on mental health due to the lack of accommodation or negative attitudes among other people toward disabilities (Bruce, 2006; Hall & Wilton, 2011). Traditionally, disabled people are less likely to participate in the labor market because of lower qualifications in education and skills, and physical barriers, such as inaccessible transport systems and streetscapes (Berthoud, 2006). Voluntary work is not exempt from these obstacles. Nonprofit organizations often found it difficult to hire disabled volunteers due to a lack of accommodation to support them and negative attitudes among community members (Balandin et al., 2006a). In a study of youth with disabilities, Lindsay et al. (2014) found a time gap in volunteer experience between youth with disabilities and those without disabilities, implying that people with disabilities may need more time to develop the skills required to perform the given tasks compared to those without disabilities.

In addition, as volunteers' satisfaction varies based on different aspects of volunteering motivations, volunteering individuals may experience negative consequences if their primary motivations are not fulfilled. For instance, volunteers can be influenced by contextual settings where they are forced to participate in volunteering tasks rather than motivated by goodwill. In her empirical study of volunteerism in Eastern Europe, Prysmakova (2019) pointed out that volunteers from countries with a compulsory volunteering character like Belarus may view volunteering activities as a forced obligation, showing a lower level of motivation and compassion.

The extant studies have made substantial contributions to our understanding of the effects of volunteering on persons with disabilities. However, when it comes to volunteers with physical disabilities, the volunteering effects are still debatable. Without further analysis of the relationship, one may argue that such a relationship is because healthier people are more likely to be able to volunteer. Hence, it is needed to investigate whether volunteering experience positively or negatively affects psychological health or vice versa. Some studies have attempted to detect a causal relationship between volunteering and health by adopting methods such as longitudinal approaches (Morrow-Howell et al., 2003; Piliavin & Siegl, 2007) or examining instrumental variables (Borgonovi, 2008; Thoits & Hewitt, 2001). These approaches may uncover empirical evidence of the causal relationship. However, as Wu and Bies (2020) point out, such methods are not sufficient to confirm the effects of volunteering due to self-selection bias in the data. That is, volunteering groups selected for the studies likely have been healthier than non-volunteers; therefore, the positive outcomes for health-related factors may not be caused by the models' explanatory factors (i.e., volunteering experience). Moreover, conventional instrumental variables also risk violating the orthogonality condition or the exclusion restriction stipulating that the instrumental variable should not be associated with the error term in the explanatory equation (Kawachi et al., 2013).

More recently, studies have adopted advanced methods to address these shortcomings and establish the effect of volunteering on health. For instance, recruiting older adults from elderly service centers in Hong Kong, Jiang et al. (2020) conducted a randomized controlled trial study to examine the impact of social cognitive intervention on participation in volunteering. The authors found that intervention sessions increased volunteering among these older adults. In another study, Wu and Bies (2020) adopted treatment effects models to evaluate the net effect of volunteering on those living in urban China and found that volunteers had higher self-reported health scores compared to non-volunteers. The authors highlight, however, that the positive impact of volunteering on health reported in the literature using standard multiple regression approaches may be overestimated.

These studies provide some evidence of causal relationships between volunteering and health-related variables. However, they have focused either on the motivation stage of volunteering or on populations other than those with disabilities. No study has rigorously tested the causal relationship between volunteering and psychological well-being among individuals with disabilities. The current study attempts to address these gaps by utilizing the propensity score matching (PSM) approach that examines the causal relationship between volunteering and psychological well-being while controlling for key variables identified in the existing disabilities literature.

Other Factors Affecting Psychological Well-Being in Persons With Disabilities

Scholars have explored personal and societal factors that explain the psychological well-being of persons with disabilities. A large body of research has reported a positive relationship between one's economic situation and life satisfaction (Gitmez & Morcöl, 1994; Meadow et al., 1992). In a study on diverse aspects of life satisfaction among individuals with disabilities, Park (2009) found that satisfaction with income is significantly associated with psychological well-being. Another empirical study of individuals with developmental disabilities in South Korea (Kim & Kim, 2015) reported similar results.

Social participation and relations are also known as critical factors that influence life satisfaction for individuals with disabilities. Life satisfaction can be affected by active participation in social roles appropriate for one's life stage and social circumstances (Fengler, 1984; Nosek et al., 1995; Yun & Shin, 2015). Empirical evidence reveals that social networks are positively related to life satisfaction among individuals with disabilities (Yeum & Baek, 2013). Existing literature has shown that diverse forms of social participation, ranging from

sports and recreational activities (Murphy & Carbone, 2008) to social networking with friends (Kim & Kim, 2015) to occupational activities (Viemerö & Krause, 1998), tend to positively affect the psychological well-being of individuals with disabilities.

For those with physical disabilities, physical capability is one of the most critical factors determining levels of psychological well-being. Research has shown daily living activities (e.g., instrumental activities of daily living (IADL) or physical activities of daily living (PADL) to be a key determinant of psychological well-being for individuals with disabilities. In a study focusing on older adults' well-being, Quail et al. (2011) found the participants were likely to experience lower life satisfaction when their daily life performance (IADL/PADL) did not meet their needs. For those with disabilities, the degree to which physical and social performance are limited is likely a major cause of lower life satisfaction (Fuhrer et al., 1992; Nosek et al., 1995). This study focuses on South Korea, where cultural stigma appears to influence disabilities.

Consistent with research performed in other countries (e.g., Greenfield & Marks, 2004; Phillips et al., 2009; Saetermore et al., 2001), studies in South Korea have also reported that physical, psychological, economic, and social factors affect the well-being of individuals with disabilities (Choi, 2004; Kim et al., 2013; Kim & Yoo, 2013; Rah et al., 2002). For instance, using panel survey data, Kim and Yoo (2013) employed a structural equation model to explore the direct and indirect effects of economic factors, emotional factors, and discrimination on the psychological health of individuals with developmental disabilities. The authors found that income, leisure activities, health, and family relations were significantly associated with life satisfaction among individuals with disabilities. Demographic factors such as age, gender, and educational level are also believed to contribute to the variability in South Koreans' psychological well-being (Roh, 2007). Empirical studies have found that, among individuals with disabilities, women tend to have lower levels of life satisfaction compared to men. Additionally, research has shown age and education level to be negatively associated with life satisfaction (Kim & Kim, 2015; Paik & Roh, 2009).

Method

To address our research question, whether volunteering affects psychological well-being among persons with physical disabilities, we employed a quasi-experimental approach using the PSM model.

Sample

To best represent the South Korean population, we used secondary data from the 2015 National Survey of Individuals with Disabilities originally collected by the Korea Institute for Health and Social Affairs (KIHSA). The KIHSA conducted the survey to understand the living conditions, welfare, and needs of individuals with disabilities by employing a stratified random sampling method. First, 200 districts were randomly selected from 1,255 districts across the nation. Professionally trained interviewers attempted to conduct door-to-door interviews with all households in the selected districts (about 45,000 households), and 38,560 households (104,703 individuals) completed the survey. Participants reported information about their disabilities, physical and mental health, social life, and economic environment. Among 6,824 survey participants, we excluded individuals aged under 18 and individuals without physical disabilities (i.e., with mental disabilities). Our final sample was 3,440 individuals aged 18 years or older who had physical disabilities.

Measures

Dependent variable: *Psychological well-being*. Five items assessed psychological well-being: satisfaction with (1) social relationships, (2) housing conditions, (3) health, (4) leisure, and (5) one's life overall. All items used a 4-point response scale ranging from 1 (very satisfied) to 4 (not satisfied at all). For this study, we used reverse coding and calculated the mean of the five items. Internal consistency of the five-item scale was acceptable, with a Cronbach's alpha coefficient of 0.74.

Independent variable: *Volunteering*. We measured volunteering with one binary (yes/no) item: "Did you participate in volunteering activities over the last week?"

Covariates: We measured *functional capacity* using 12 items from the Activities of Daily Living (ADLs) Hierarchy Scale and eight items from the Instrumental Activities of Daily Living (IADLs) Scale. All items used a 5-point response scale ranging from 0 (independent) to 4 (totally dependent). The Cronbach's alpha coefficients were 0.96 for ADLs and 0.93 for IADLs, demonstrating strong evidence of the scales' internal consistency. *Social participation* was measured by asking respondents how often they attended cultural or social events (e.g., movies, sports, travel, shopping, learning activities, and meeting with friends) during the week prior to the survey. Respondents also reported demographic information, including *gender, marital status, education level*, and *household income*, which we included as covariates in this study.

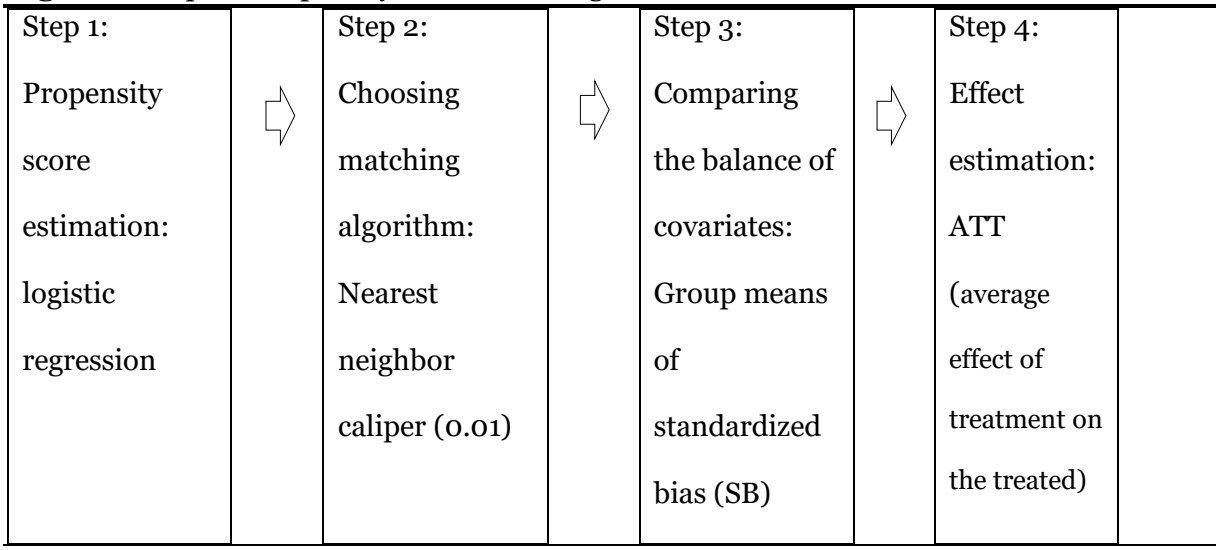
Propensity Score Matching

We attempted to detect the causal effect of volunteering on the psychological well-being of persons with physical disabilities. Randomized Controlled Trials (RCTs) are widely considered the gold standard approach for testing the causal effect of treatments on outcomes. Random assignment ensures that treatment effects will not be confounded with either observed or unobserved baseline factors. Therefore, RCTs can directly measure the effect of a treatment by comparing outcomes between the treatment and control groups. However, RCTs are not always appropriate when a study includes human subjects, as they can pose ethical issues. For example, it is unethical to withhold an effective medical treatment from a control group. Hence, a growing number of social science studies have used observational data to estimate the effects of treatments on outcomes. In observational studies, however, treatment selection is often influenced by other characteristics, which leads to questionable results (Oakes & Kaufman, 2006).

The PSM approach has increasingly gained academic attention as an advanced method that reduces or eliminates selection bias by assembling a sample in which confounding factors are balanced between treatment and control groups. Introduced by Rosenbaum and Rubin (1983), PSM has been applied in various fields to mimic RCT by statistically modeling the assignment process. Compared to traditional statistical approaches, such as least squares regression analyses, PSM is considered a more advanced approach to estimating treatment effects for three reasons: (1) PSM does not assume a pre-specified functional form, such as a linear relationship; (2) PSM is less complicated by using only propensity scores, whereas regression analyses often must adjust for many covariates, resulting in overfitting problems; and (3) PSM is a test of group similarity (i.e., testing the area of common support), whose assumptions are more transparent (Wagner et al., 2015).

As shown in Figure 1, we employed a PSM approach with four steps. First, we estimated propensity scores (PSs) for all observed covariates (i.e., age, gender, education level, marital status, household income, social participation, and functional capability) by conducting a logistic regression analysis. PSs are the probability of a participant receiving treatment on the set of covariates (Benedetto et al., 2018).

Figure 1. Steps of Propensity Score Matching



Second, we formed the treatment (volunteers) and control (non-volunteers) groups. Using the estimated individual PSs, we conducted 5:1 nearest neighbor caliper (0.01) matching procedures with replacement to develop unbiased treatment and control groups. Nearest neighbor matching is determined by finding control individuals with the smallest distance in PSs from the given individual in the treatment group. Caliper matching creates pairs within a pre-specified band, resulting in fewer but more closely matched pairs. Although matching with replacement could cause a sample independence issue due to duplication of the same units for the matched samples, it is considered a better method than matching without replacement to reduce bias (Pan & Bai, 2015). The matching procedure relied on the included covariates (i.e., gender, age, education, marital status, employment, household income, and functional capability). As these covariates were expected to affect whether one would participate in volunteering, we considered these background characteristics aiming to generate unbiased treatment effect estimates (Steiner et al., 2010).

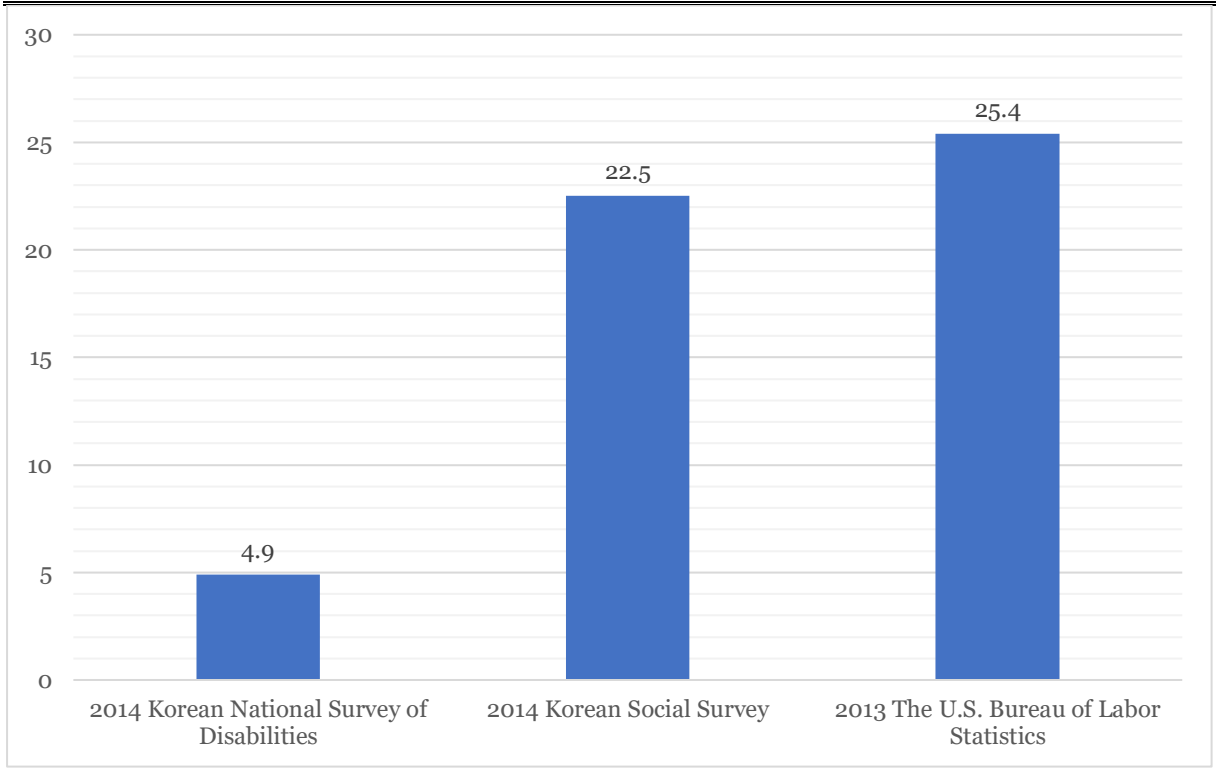
Third, we assessed the matching quality by comparing the balance of covariates before and after the matching procedure. Specifically, we evaluated the extent of balanced differences between treatment and control groups with means of standardized bias (SB). For all covariates, we calculated the SBs with an average covariate value between volunteers and non-volunteers. We then examined whether propensity score matching decreased the SBs. We considered SBs less than 10% to be negligible (Normand et al., 2001).

Lastly, we estimated the treatment effect, namely the impact of volunteering on the psychological well-being of persons with disabilities. Having established unbiased treatment and control groups, we estimated the ATT (average effect of treatment on the treated). To address the uncertainty issue in the matching procedure (Austin & Small, 2014), we conducted 50 iterations of bootstrapping for the final analysis.

Results

Among the 3,440 respondents with physical disabilities, over half were men (54.3%) and approximately two thirds were married (63.7%). The average age of the respondents was 62.41 years (SD=13.6). The average monthly household income was $2,122 (SD=0.39). The majority of respondents had a middle-school education or less (62.62%), followed by high school graduates (23.6%) and then college or higher education graduates (13.78%).

Figure 2. Comparison of Volunteering Participation between Persons with Disabilities and General Public



As shown in Figure 2, slightly less than 5 percent of respondents participated in volunteering activities during the week prior to the survey, which was far below the reported rates of volunteering in both South Korea (22.5%) and the U.S. (25.4%).[1] This result is consistent with previous literature reporting that individuals with disabilities often have less access to volunteer opportunities (Shandra, 2017). The average level of psychological well-being was 2.63 out of 4 (SD=0.72).

Results of Propensity Score Matching

We estimated propensity scores by conducting a multivariate logistic regression with volunteering participation as the outcome. In the model, we included the 10 previously mentioned covariates that we expected to confound the relationship between volunteering and psychological well-being.

Table 1 presents the logistic regression results. One strategy for PSM is to include covariates that best predict treatment selection and outcomes (Steiner et al., 2010). In our regression model, age, education level, social participation, and functional capability (IADL) were statistically significant, demonstrating that the selected covariates were adequate to control for selection bias in the treatment and control groups. We then created propensity scores by compiling the predicted probabilities of participating in volunteering from the logistic regression model.

To create matched pairs, we used 5:1 nearest neighbor matching with 0.01 caliper, which retained 164 of 169 volunteers and significantly reduced observed differences between the volunteering and non-volunteering groups across variables. Table 2 and Figure 3 illustrate standardized differences in all variables before and after the matching procedure, showing a substantial reduction in bias resulting from the matching. After the matching, the SB (standardized bias) was reduced up to 97.2% (from 43.4% to 1.2%).

Table 1. Results of Logistic Regression on Volunteering Participation

	DV: Volunteering Participation		
Variables	Coefficient	Standard Error	Z
Age	0.129	0.049	2.63**
Age squared	−0.001	0.000	−2.57*
Female/male	−0.238	0.180	−1.33
Married/single	0.020	0.187	0.11
High school/middle school	0.843	0.223	3.78***
College or higher/middle school	1.623	0.241	6.74***
Household income	0.000	0.000	0.77
Social participation	0.034	0.011	3.18**
ADL	0.347	0.907	0.38
IADL	0.203	0.505	1.39***
Number of observations		3,437	
Model $\chi 2(10)$		107.22***	
Pseudo R^2		0.0796	

As summarized in Table 3, our findings suggest that volunteering has a positive effect on psychological well-being. Specifically, the estimated average effect of treatment on the treated (ATT)—the effect for those participating in volunteering—was 0.45, and the average treatment effect (ATE)—the effect on all participants (both treatment and control groups)—was 0.34 at the 0.001 confidence level.

Discussion

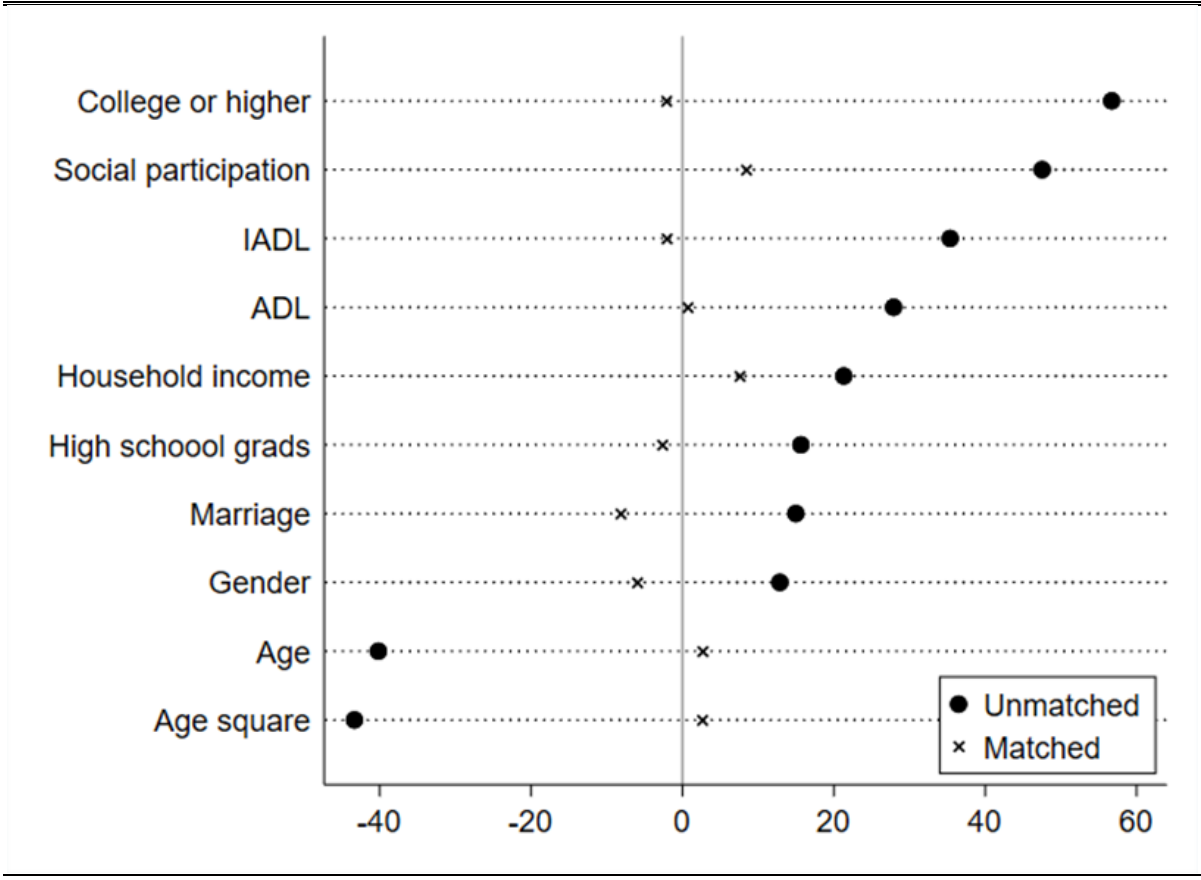
The current study utilized PSM with a representative sample in South Korea to examine the causal effect of volunteering participation on the psychological well-being of volunteers with physical disabilities. By establishing balanced treatment and control groups based on propensity scores, we detected a positive relationship between volunteering participation and psychological well-being while minimizing selection bias. This suggests that inclusive volunteering programs could be beneficial both for the volunteering agencies and volunteers with physical disabilities by improving their sense of life satisfaction. This finding aligns with extant literature reporting a positive correlation between volunteering and psychological health.

This study makes several contributions to the existing literature. First, while prior research has reported mixed findings on the relationship between volunteering and the psychological well-being of volunteers, the results of our study support a positive effect on volunteers with physical disabilities. This suggests that volunteer participation promotes a positive experience that outweighs the negative effect reported in the previous research (Berthoud, 2006; Lindsay et al., 2014; Prysmakova, 2019). Furthermore, while previous literature has offered little discussion of causality, leading to multiple interpretations of this relationship, our findings provide substantial evidence regarding the causal effect of volunteering on the psychological

Table 2. Comparison of Volunteers (n=164) and Non-Volunteers (n=2,194) Before and After Matching

	Before Matching		After Matching		Balance Test	
	Mean		Mean		Reduction	t-test
Variable	Vol	Non	Vol	Non	Bias (%)	P
Age	57.39	62.67	57.39	57.04	93.40	0.80
Gender (female)	0.60	0.54	0.60	0.63	53.50	0.58
Married	0.70	0.63	0.70	0.74	45.40	0.43
High school grads	0.30	0.23	0.30	0.31	82.90	0.81
College or higher	0.36	0.13	0.36	0.37	96.20	0.86
Household income	316.50	235.60	316.50	287.80	64.50	0.33
Social participation	3.98	1.24	3.98	3.50	82.30	0.56

Figure 3. Standardized Bias (%) Across Covariates Before and After the Matching Procedure: Volunteers Versus Non-Volunteers



well-being of individuals with physical disabilities. This study also extends past findings to the South Korean context, where there may be different societal attitude towards persons with disabilities compared to Western countries due to their historical and cultural background.

Our findings also bear theoretical implications to the social benefit theory. As people with disabilities are often viewed as those being helped, helping others may have them experience more enhanced psychological benefits, including social integration (Berkman & Syme, 1979), self-efficacy (Bandura, 1997), meaningfulness (Pargament, 2001), and even physical activeness (Oman et al., 1999). The present study found that volunteerism was associated with psychological benefits among volunteers with physical disabilities, which is consistent with

Table 3. Treatment Effects (ATT) of Volunteering on Psychological Well-Being

Treatment Effects Estimation Estimator: Nearest Neighbor Caliper Matching Outcome Model: Matching			Number of Observations=2,156 Treated=161 Untreated=1,995		
	Treated (Volunteers)	Controls (Non-Volunteers)	Difference	S.E.	T-Statistic
Unmatched	3.01	2.56	0.45	0.042	10.75***
ATT	3.02	2.72	0.30	0.046	6.49***
ATU	2.62	2.96	0.34		
ATE			0.34		

the social benefit theory that explains sets of causal pathways of volunteering to physical and mental health.

Implication for Practice. In South Korea, there have been policy efforts to eliminate discrimination against individual disabilities. For instance, the Framework Act on Volunteer Activities enacted in 2006 states that all Korean citizens must have equal access to volunteering opportunities regardless of their age, gender, and disabilities. However, the results of this study indicate that persons with disabilities in South Korea were significantly less likely to volunteer than those without disabilities. Previous studies posit that many individuals with disabilities have sufficient willingness but limited opportunities to volunteer due to lack of awareness and social stigma (Andrews, 2005; Bruce, 2006; Lindsay, 2016; Miller et al., 2003). That is, social stigma remains pervasive in society concerning what volunteers with physical disabilities can and cannot do, and the level of accommodations necessary for them to perform volunteer tasks. This may negatively affect volunteer opportunities where nonprofit organizations provide less opportunities for those with disabilities due to the misunderstanding or lack of awareness driven by this stigma.

Our findings suggest that, beyond policy efforts, there is still a need for volunteering agencies to provide persons with disabilities with greater access to volunteering opportunities to help improve their life quality while simultaneously achieving organizational missions and responding to community needs. Volunteer administrators are called upon to establish and develop more inclusive volunteer programs.

Implication for Research. This study's limitations suggest several paths for future research. A critical limitation of the PSM approach is its inability to control unobserved confounding variables. Although we included key covariates based on previous literature, we did not incorporate other probable predictors of volunteering and psychological well-being, such as affiliate stigma, social support, and adaptation to disability, due to limitations of secondary data. To minimize this potential distortion, we used a conservative approach by applying bootstrapping with 50 replications.

For the same reason, this study did not examine the long-term effect of volunteering. In our survey data, psychological well-being was measured within a week after respondents' volunteer participation, and thus we still do not know whether the beneficial effects would continue in the long term, for which a rigorous longitudinal approach would be needed. Also, it should be noted that this study is limited by the classification of all kinds of volunteering participation as one group. That is, we did not investigate what kind of volunteering experience has a positive impact on psychological well-being. Misplacement of volunteers in positions that are beneath their abilities can be detrimental to their sense of self-worth and the value of volunteering. Further research is needed to determine what kind of inclusive volunteering programs should be created to provide a positive experience to volunteers who experience disabilities.

Further, we could not include other benefits of volunteering discussed in the previous literature, such as self-efficacy (McEwen, 1996; Taylor & Pancer, 2007), belief in self (Miller et al., 2003), social integration (Binder, 2015), and sense of meaningfulness (Balandin et al., 2006). Future research should continue to probe more deeply into the consequences of volunteering by examining these variables.

Conclusion

Volunteering is one way to enhance psychological health for individuals with disabilities. Our study adds evidence of the independent effect of volunteering on health, particularly among South Koreans. As the ultimate goal of rehabilitation, improving quality of life and our findings suggest that volunteering may do this for volunteers with disabilities, which merits further exploration.

Notes

1. While our data include individuals aged 18 or older, the U.S. data include teenagers aged 16 or older, and the Korean Social Survey only includes individuals aged 20 or older.

Disclosure Statement

The authors declare that there are no conflicts of interest that relate to the research, authorship, or publication of this article.

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