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OLDER VOLUNTEERING

A Combination of Objective and Subjective Approaches

Master's thesis in International Social Welfare and Health Policy

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Oslo, 2020

SUMMARY

Formal volunteering has become the forefront of discussion on productive aging activity. A growing interest in studying the determinants of volunteering often distinguished between two approaches: (1) objective approaches, examining the association between resources and volunteering, and (2) subjective approaches, investigating the association between psychological factors, such as motivations and volunteering. However, a limited number of studies attempt to examine the association between formal volunteering intensity (inactive and active volunteering) with a combination of subjective and objective factors. The purpose of this Master thesis is to address this limitation by empirically examining the association between resources, motivations, and the intensity of formal volunteering.

This study used a sub-sample of older volunteers derived from the nationally representative data of the Norwegian Life Course, Ageing, and Generation Study (NorLAG) third round (2017). The data included 2,222 volunteers aged 50 and older living in Norway. Guided by a combined conceptual framework of resource perspective by Wilson & Musick (1997) and functional approach by Clary & Snyder (1992, 1999) of volunteering, this study used binominal logistic regression to examine whether resources and motivations are associated with the intensity of volunteering.

This study finds that education, cultural capital, and the motivation for utilizing competencies are significantly positively associated with the intensity of volunteering. Although the results only partially support the resource perspective and functional approach theories, it corroborates an integrated theory of objective and subjective approaches. The findings from this Master thesis extend the current knowledge about older volunteering, especially with a holistic view of objective and subjective approaches (i.e., the resource perspective and the functional approach). Voluntary organizations could consider both resource and motivation factors to strategically guide older volunteer recruitment, placement, and retention activities. On the one hand, voluntary organizations should assign volunteers practical voluntary tasks to motivate them to engage more in voluntary work. On the other hand, the older adults who have less intensity of volunteering should not be ignored in voluntary organizations' recruitment policy. The individual preferences for morality and religion positively relate to the intensity of volunteering. It may suggest that the voluntary program related to the benevolence values, religious congregations, and faith-based can be more attractive to older volunteers.

ACKNOWLEDGMENT

This study is based on The Life course, Aging, and Generations (the NorLAG). The NorLAG data collections have been financed by The Research Council of Norway, four ministries, The Norwegian Directorate of Health, The Norwegian State Housing Bank, Statistics Norway, and NOVA, OsloMet. NorLAG data are part of the ACCESS Life Course infrastructure funded by the National Financing Initiative for Research Infrastructure at the Research Council of Norway (grant no. 195403 and no. 269920). I would like to acknowledge NSD for giving me the approval to access this data.

I would like to express my deepest and sincerest gratitude to research professor Marja Aartsen for her patient guidance and encouragement. I would not complete my master thesis without her immense support.

I would like to express my appreciation to all lecturers and examiners who give me enthusiasm, strengthen my skills and knowledge for international social welfare and health policy.

I further extend my gratitude to Oslo Metropolitan University, Faculty of Social Sciences, for allowing me to become a student of Master Programme International Social Welfare and Health Policy and to meet new people from all over the world. I also appreciate the assistance of the administrative staff during my study.

I am also grateful to the “JBP” group for collaboration in all group work and examination preparation. A special thank goes to my dear friend Ivan for encouraging me all the time.

I am forever indebted to my husband, Anh, to give me generous support and encourage me to explore new directions in my life. The last word goes for my little daughter Hannah, thank you for giving me extra strength and motivation to complete this thesis.

Oslo November 2020

Le, Huong Giang

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LIST OF ACRONYMS

NESH	The National Committee for Research Ethics in the Social Sciences and the Humanities
NorLAG	The Norwegian study on Life Course, Aging, and Generations
NSD	Norsk Senter for Forskningsdata (Norwegian Centre for Research Data)
OR	Odds ratios
SPSS	Statistical Package for the Social Sciences
EU	European Union
VFI	Volunteer Functions Inventory
VIF	Variance inflation factor
WHO	World Health Organization

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PART 1

INTRODUCTORY CHAPTER

1. Introduction

This part presents the research background and problem (Section 1.1), the Norwegian context of formal voluntary work (Section 1.2), research objectives, questions and scope (Section 1.3), academic and practical contribution (Section 1.4), and dissemination plan (Section 1.5).

1.1. Research background and research problem

The challenging and solution of population aging

Population aging is one of the greatest triumphs of health science and public policy, but it is also challenging for social welfare and healthcare system. According to WHO, the number of people aged sixty and over is increasing faster than the younger age group (WHO, 2002). Norway has the same trend as other European countries, where the population aged 65 and over is projected to increase from 30% to around 60% of the population aged 20-64 by 2050 (OECD, 2014). Population aging puts rising pressure on the governments to deal with higher social disbursement. The 2018 Ageing report of the European Commission shows that the total expenditure of aging that spends on pensions, unemployment benefits, healthcare services, and education is supposed to surge from 1.7% to 26.7% of GDP of the EU between 2016 and 2070 (European Commission, 2018).

The increasing proportion and the cost for older adults require governments, international organizations, and civil society to endorse the policy of “active aging”. In Norway, the increasing population aging with additional healthy life-years is also one central driver for social care and healthcare system reforms and the promote the active aging policy (The Norwegian Ministry of Labour and Social Affairs, 2016). Older adults are encouraged to keep their autonomy and initiative role to “*intergenerational solidarity*” (WHO, 2002, p.12). In particular, doing formal volunteering can help older adults improve their social participation in later life.

Formal volunteering and its benefit

Formal volunteering can be defined as “*unpaid work for an organization*” by the contribution of time without any coercion or remuneration (Musick & Wilson, 2008, p. 13; Smith, 1994, p. 244). However, some people can argue that voluntarily working with poorly paid jobs can also be considered volunteers or *quasi-volunteers* (Wilson, 2000). With a broader approach, formal volunteering can be understood as helping others apart from their family and close acquaintance. Because formal volunteering has a collective-oriented nature, it represents social ties and social solidarity (Hustinx & Lammertyn, 2003; Musick & Wilson, 2008).

Older volunteering plays a vital role in aging societies, which has resulted in increasing demands for social services and reductions of public funding. Currently, older adults have a higher and healthier life expectancy than before, which facilitates them to keep busy and active in everyday life. However, being active is not the same as playing an active role in society because older adults may be busy with their own life without caring and helping others in the community (Bass, 1995). In the meantime, older adults are expected to become an abundant and attractive resource for volunteering, especially when voluntary sectors take a more essential role in delivering social services (Caro & Bass, 1995; Tang & Morrow-Howell, 2008). By engaging in formal voluntary work, older adults could develop social connections, reduce loneliness (van Den Berg, Kemperman, de Kleijn, & Borgers, 2016), and enhance their well-being in later life (Morrow-Howell, Hinterlong, Rozario, & Tang, 2003). Consequently, older adults can decrease their dependence on healthcare services, for example, reduce the nights in hospitals (Kim & Konrath, 2016).

The research problem

Despite the evidence on the benefits of volunteering, older adults are not likely to become active in voluntary work. Although various studies on older volunteering exist, there are still some knowledge gaps. Firstly, major studies focused on the association between volunteering and either objective factors, such as individuals' resources, or subjective factors, such as motivations. Few studies examined the association between formal volunteering intensity (inactive and active volunteering) with a combination of objective and subjective factors. Secondly, the major number of previous studies based on American people, few studies are conducted in Scandinavian countries.

Therefore, based on the national data of the Life course, Aging, and Generations study (NorLAG) with data collected from older Norwegians aged 50 years and over, this study aims to examine simultaneously objective factors and subjective factors guided by a combined conceptual framework of resource perspective by Wilson and Musick (1997) and functional approach by Clary and Snyder (1992, 1999).

1.2. The Norwegian context of formal voluntary work

Norway shares the same social context with other Scandinavian countries. The changes of economics, political, and socio-demographic in recent years posed two-sided effects to older volunteering by encouraging older volunteering due to the expansion of public education and the attention from policymakers toward older volunteering, and at the same time, discouraging older volunteering due to the development of dual-breadwinner in families (Henriksen,

Strømsnes, & Svedberg, 2019). Furthermore, Norway also has its own characteristics that both support and prevent older adults from volunteering. On the one hand, the volunteering culture called *dugnad* (communal voluntary work) ties Norwegian to the ethical obligation with society (Lorentzen, 2011). On the other hand, the philanthropic tradition is not very common in Norway. The high degree of social equality makes people have little difference in socio-economic and cultural status (Sivesind, 2015).

A comparative study of 12 European countries combined two datasets, the Survey of Health, Ageing and Retirement (SHARE) and the NorLAG, showed that Norway is a leading country in voluntary work engagement (Hansen, Slagsvold, Aartsen, & Deindl, 2018). However, Norway still has a large number of stable non-volunteering and a high rate of quitting volunteering. The study of the Center for Research on Civil Society and Voluntary Sector showed that around between 40 and 47% of people aged 50 and older did not participate in voluntary work (Folkestad & Langhelle, 2016). Norwegian people tend to shift from long-term volunteers to short-term volunteers with more flexible time and less commitment to voluntary organizations (Wollebæk & Sivesind, 2010). This trend of voluntary work can cause fluctuation in the intensity of voluntary work in Norway.

1.3. Research Objectives, Questions, and Scope

This study aims to examine whether individuals' resources and motivations are associated with the intensity of volunteering (active and inactive volunteering) among older adults in Norway. The results will suggest voluntary organizations about older volunteers' recruitment, placement, and retention strategy. To do so, this thesis will examine (1) whether resource factors, including human capital, social capital, and cultural capital, have a significant association with the intensity of voluntary work, (2) whether different motivations are associated with the intensity of voluntary work. Three Research Questions are derived from the research objectives:

Research Question 1: *Are the resources that volunteers have at their disposal related to the voluntary work intensity?*

Research Question 2: *Are the different motivations that volunteers have to do voluntary work related to voluntary work intensity, in addition to their resources?*

Research Question 3: *How can this study's results be used to advise voluntary organizations to increase the intensity of voluntary work?*

This study is designed to be suitable for a master thesis in terms of time and resources. Although volunteering consists of formal volunteering (doing voluntary work in an

organization/association) and informal volunteering (helping family, neighbors, friends), this study focuses only on *formal volunteering*. This study does not investigate the causal effect due to the lack of longitudinal data regarding the research design.

1.4. Academic and practical contribution

This study is meaningful in both the research context and social context. Regarding the research context, many previous studies have documented the positive association of volunteering with either individuals' resources or motivations. Still, a limited number of studies focused on examining the association of volunteering intensity with both individuals' resources and motivations. This master thesis contributes to the current body of knowledge about older volunteering by proposing a combined conceptual framework of objective factors and subjective factors and evaluating the framework using a large dataset of a Norwegian population.

Regarding social context, this study is performed to find relevant and critical contributing factors to volunteering commitment among older adults. Therefore, this study's results may help voluntary organizations deal with their challenges in recruitment, placement, and retention of older volunteers. Our findings can also contribute to the contemporary discussion on older volunteering in Norway in an international context and shed light on the factors related to the engagement of older volunteers in Norway.

1.5. Dissemination Plan

The article manuscript including in this master thesis (Part 2), is finalized to submit to the journal *Nonprofit and Voluntary Sector Quarterly*. The article is written and formatted according to the journal submission guidelines (see Appendix 1, pp. 30-31). This journal is a recognized peer-reviewed academic journal (level 1 in The Norwegian Register for Scientific Journals, Series and Publishers system) focusing on the areas of voluntary work, non-profit organizations, and civic engagement. If the reviewers of my master thesis will suggest ways to improve the work, I will conduct the last round of improvements in the manuscript before submitting it to the journal.

2. Literature review

At the end of the previous century, older volunteering has been the concern of many researchers, but few included theoretical models on determinants of volunteer participation (Smith, 1994). After the 1990s, the situation changed when sociologists and psychologists

generated various theoretical and conceptual models to explain volunteering. They have been interested in explaining volunteering with two main issues: who volunteer and why people volunteer (Hustinx, Cnaan, & Handy, 2010). Previous researchers have frequently examined either of two clusters of factors: (1) objective factors, including individuals' resources, such as human capital, social capital, and cultural capital (Choi, 2003; Dury et al., 2015; Tang, 2005; Warburton & Crosier, 2001), (2) subjective factors, including motivational factors toward volunteering (Clary et al., 1998; Meier & Stutzer, 2008; Warburton, Terry, Roseman, & Sharpiro, 2001). A resource perspective by Wilson and Musick (1997) and a functional approach by Clary and Snyder (1992, 1999) are two prevalent theories, representing an objective view and a subjective view correspondingly.

According to **the resource perspective** by Wilson and Musick (1997), people with a higher stock of human capital, social capital, and cultural capital will be more likely to engage in voluntary work because they have more qualifications and opportunities to volunteer than those without (Wilson & Musick, 1997). Previous studies have employed various indicators to examine the association between resources and volunteering. Concerning human capital, major studies indicated that education (Cramm & Nieboer, 2015; Dury et al., 2015; Lee & Brudney, 2012) and health (Choi, 2003; Dury et al., 2015; Warburton, Le Brocque, & Rosenman, 1998) are significantly related to older volunteering. The association of income, another human capital factor, and volunteering were reported both significantly (Choi, 2003; Tang, Morrow-Howell, & Choi, 2010) and insignificantly (Tang, 2008). Concerning social capital, a wide range of factors was reported to be associated with volunteering engagement, such as marital status (Mesch, Rooney, Steinberg, & Denton, 2006), living with a spouse or partner, frequent contact with friends (Dury et al., 2015), presence of children (Lee & Brudney, 2012). Helping others and religious values were often employed to examine the association between cultural capital and volunteering involvement, but results are inconsistent. Some studies reported that religious (Forbes & Zampelli, 2012; Lee & Brudney, 2012) and altruism value (Dury et al., 2015) increases the likelihood of volunteering engagement. However, some studies showed no association between volunteering and religiosity (Manning, 2010) and the sense of benevolence (Shen, Delston, & Wang, 2017). Despite inconsistent results of the association between each capital indicator and volunteering, prior work showed a consistent result that people who have a high stock of human capital, social capital, and cultural capital are more likely to engage in voluntary work than those who have not.

Regarding **the functional approach** by Clary and Snyder (1992, 1999), existing literature pointed out that older volunteers are motivated by various reasons, including both

other-interest (altruism) and self-interest (Peters-Davis, Burant, & Braunschweig, 2001; Warburton & Dyer, 2004; Warburton et al., 2001). The motivation factors that are reportedly associated with volunteering engagement include helping values (Burr, Choi, Mutchler, & Caro, 2005; Petriwskyj & Warburton, 2007), social motivation (Okun & Schultz, 2003; Warburton & Dyer, 2004), contribution and learn or develop skills (Warburton & Dyer, 2004), enhancement motivation (Okun, Barr, & Herzog, 1998). Although many studies reported the relation between motivation or resource-based factors and volunteering, the combination of both these perspectives to examine the determinants of older volunteering is not yet explored. Resource perspective might be useful when providing visible factors relating to volunteering but fail to understand volunteering engagement's underlying reasons. Therefore, combining these two theoretical perspectives will create a synergistic effect to understand the drivers of volunteering intensity.

Regarding the **study sample**, major studies were conducted with data collected from citizens living in the USA (Burr et al., 2005; Choi, 2003; Clary et al., 1998; Tang, 2005; Wilson & Musick, 1997). Other popular resources come from Australia (Warburton et al., 2001), the Netherlands (Cramm & Nieboer, 2015), and Belgium (Dury et al., 2015). In Norway, studies on voluntary work have also been of interest to many researchers. The studies consistently showed that Norway's voluntary work type is mostly sporadic volunteering with less commitment to the voluntary organization (Hansen & Slagsvold, 2020). The Norwegian studies also revealed that volunteering in Norway relates to both the objective factors such as time, health, social network, and the subjective factors, such as the interest in voluntary work (Folkestad & Langhelle, 2016; Wollebæk, Sætrang & Fladmoe, 2015). However, there is still a comparatively limited amount of study on Norwegian samples in an international arena, which leads to a shortcoming of knowledge about older volunteering in Norway.

This study will address those limitations by combining the resource perspective and functional approach to examining the association of resource and motivational factors with the intensity of volunteering. Besides, the present study is expected to reinforce the previous findings of older volunteering, yet with the Norwegian dataset.

3. Theoretical framework

Volunteering research is an active area of social participation. An overview of the theoretical perspectives on volunteering is described in Figure 1. Theoretical perspectives of volunteering can be classified into micro, macro, and life course perspectives (Aartsen & Hansen, 2020). This thesis focuses on the micro-level perspective that examines voluntary

work characteristics and motivations (Principi et al., 2014). This study is guided by a combined conceptual framework of two prevalent theories represented the micro-level approach of volunteering: (1) resource perspective by Wilson and Musick (1997), and (2) functional approach of volunteering by Clary and Snyder (1992, 1999). These two theories have distinctive approaches. While the resource perspective examines the relation between objective factors (resource factors) and volunteering intensity, the functional approach examines the relation between subjective factors (motivations) and volunteering intensity.

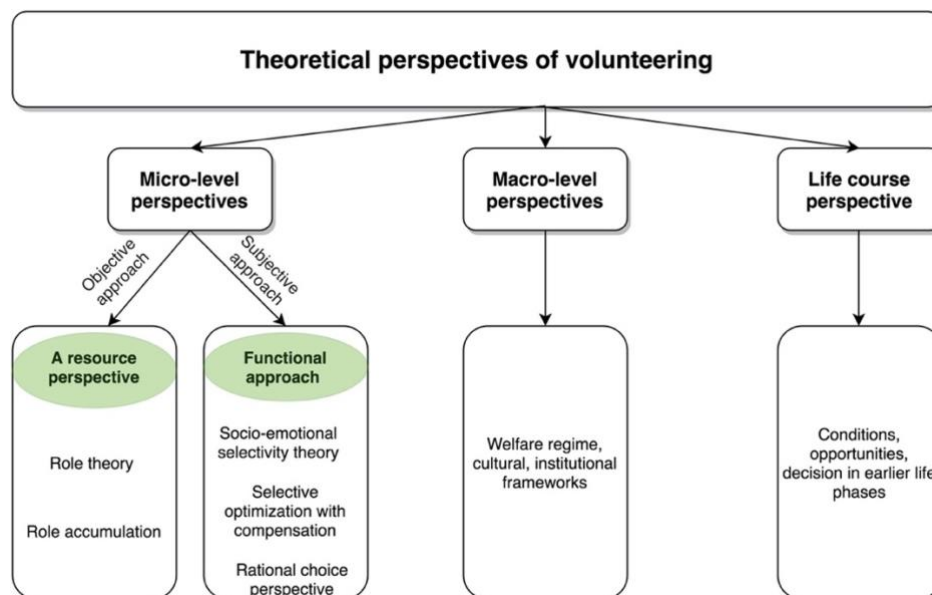


Figure 1: *The overview of the theoretical perspectives on volunteering*
(Based on Aartsen & Hansen, 2020)

The resource perspective

Wilson and Musick (1997) developed a resource theory of volunteering based on a cluster of factors attributing to individual property, including (1) human capital, (2) social capital, and (3) cultural capital. Volunteering is considered as three aspects: (1) a productivity work that needs *human resources*, which make people have the qualification to do volunteering, (2) a collective action that needs *social resources* including social connections and social networks that bring information, labor pool and trust facilitating volunteering, and (3) an ethically guided work that need *cultural capital* reflected in the culture of benevolence and religious (Wilson & Musick, 1997). Musick and Wilson also pointed out that “*volunteering is more attractive to the resource-rich than the resource-poor*” because volunteering requires commitment, effort, and scarify from volunteers (Musick & Wilson, 2008, p. 113). Although resource factors are explicit that can be measured objectively, this theory fails to explain why people are motivated to commit voluntary work that can be addressed in the functional approach.

The functional approach

The functional approach proposed by Clary and Snyder (1992, 1999), which is based on the psychological premise, focuses on the motivational factors affecting volunteering. The functional approach identifies that the individual motives, needs, goals affect the likelihood of volunteering (Clary, Snyder, & Ridge, 1992). Two important points that can be asserted from the functional approach are: (1) motivations toward volunteering are complex and multifaceted, and (2) the same act of volunteering may derive from different motivations. The functional approach underscored the preference, needs, and goals as reasons for older volunteering. If voluntary work satisfies the individuals' preferences, needs, and goals, people are more likely to engage in this work.

A combined conceptual framework of volunteering

Volunteering is a complex phenomenon and spans a broad spectrum of disciplines; therefore, an integrated theoretical strategy may be useful for the conceptualization of volunteering (Hustinx et al., 2010). A combined conceptual framework of resource perspective (Wilson & Musick, 1997) and functional approach (Clary and Snyder, 1992, 1999) aims at finding whether resource factors and motivational factors are associated with the intensity of volunteering. It can further specify a cluster of factors related to volunteer commitment. Guided by the resource perspective and functional approach, the assumption is that people are more likely to do voluntary work if they possess sufficient resources and motivations. In other words, both objective factors and subjective factors are essential contributing factors for volunteering. Regarding objective factors, the resource-rich people find it more comfortable and less challenging to do volunteering than resource-poor people because they have more *capability and condition* to access and engage in voluntary work. Besides, the subjective factors, such as psychological preferences, needs, and goals, should be satisfied to facilitate the *enthusiasm* for volunteering engagement.

4. Research methodology

This part presents the research process of the master thesis (section 4.1), the description of data (section 4.2), the statistical analyses (section 4.3), the measures (section 4.4), the limitation of data and method (section 4.5), and ethical issues (section 4.6).

4.1. Research process

Figure 2 describes the research process of this master thesis. The master thesis preparation started in May 2019 with two submissions of research proposals, a short research

proposal to Faculty, and a detailed research proposal to the supervisor. The research proposals' outcome was an initial determination of the research objectives and research scope, literature review, research questions and hypotheses, and research design. The data process officially started in January 2020, which relied on the publishing time of NorLAG3. The operationalization of constructs was conducted before requesting data to determine which variables would be ordered. The data access and data analysis were done in three phases due to the adjustments during the research. The wrap-up writing for the article and the introductory part of the thesis is finished in October 2020.

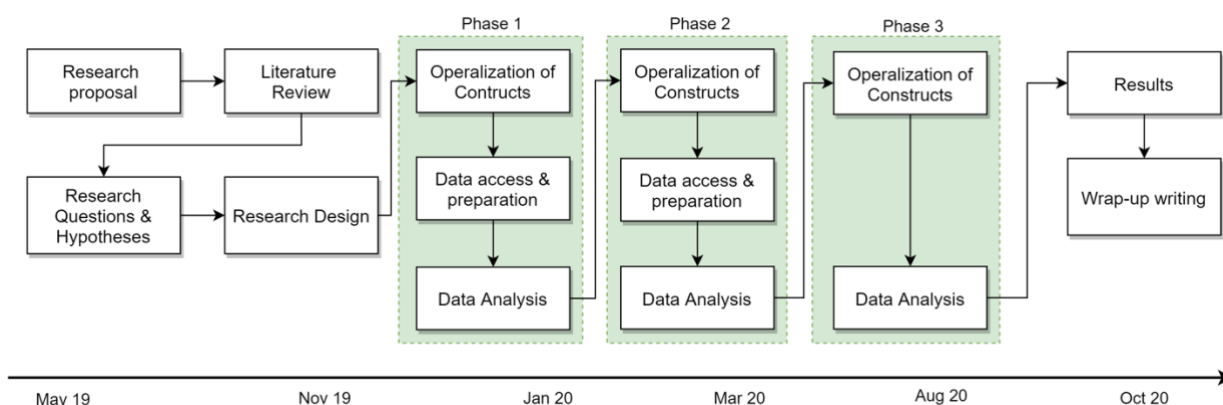


Figure 2: *Research process of the master thesis*

4.2. Data

This study used a sub-sample of older volunteers derived from The Norwegian study on the Life course, Aging, and Generations third round (NorLAG3), collected in 2017. NorLAG data is a national representative data with a large number of participants, and multidisciplinary variables, which was developed and managed by Statistic Norway (Statistisk sentralbyrå) and Welfare Research Institute (Velferdsforskningsinstituttet NOVA).

NorLAG3 consists of registered data and survey data of people aged 50 and older who participated at least in the first round or the second round. Registered data contains demographic information of respondents that were connected with data from the National Register and data obtained from Statistics Norway with the consent of participants. The participants were contacted for a telephone interview (6,099 people) followed by a self-filling form for which they can choose between an online (web-based) and a postal questionnaire. The self-filling questionnaire was responded to by 4,461 people of those who were sent the questionnaire. Interview data and questionnaire data contained a subset of questions used in the first round and the second round and additional questions in the third round. The NorLAG3 comprises information about the effort and motivations to volunteering among older adults that

were not present at previous rounds. In this study, we use a sub-sample of NorLAG3, which included only respondents who are volunteers in the last 12 months.

The variables were accessed with approval of NSD following the steps: (1) select variables and order the data from the website of NorLAG, (2) the order is processed by NSD, (3) NSD sends the letter “Access to data from Statistic Norway” containing the permission to use data, pledge of secrecy for persons with access to survey data from NSD, and supervisor’s declaration, and (4) transfer data. The NorLAG3 data sent by NSD consisted of three datasets *fixed*, *accumulated*, and *panel data*, including the ordered variables. The selected variables for this study were distributed in three datasets. Hence, the data was prepared with the merging data files, selected variables from the merging data file, removing invalid data points, and modification of variables. Selected variables were sorted from the merging data file. The number of observations in selected variable data was 11,028 because it included respondents who participated in previous rounds but not participated in the third round. The processed data was done after removing those missing data points with $N=6,099$, including both non-volunteers and volunteers. In the last step, those who did not do voluntary work in the last 12 months (non-volunteers) were removed from the dataset because this study investigates formal voluntary work among volunteers. The final dataset has the number of observations as 2,222 volunteers.

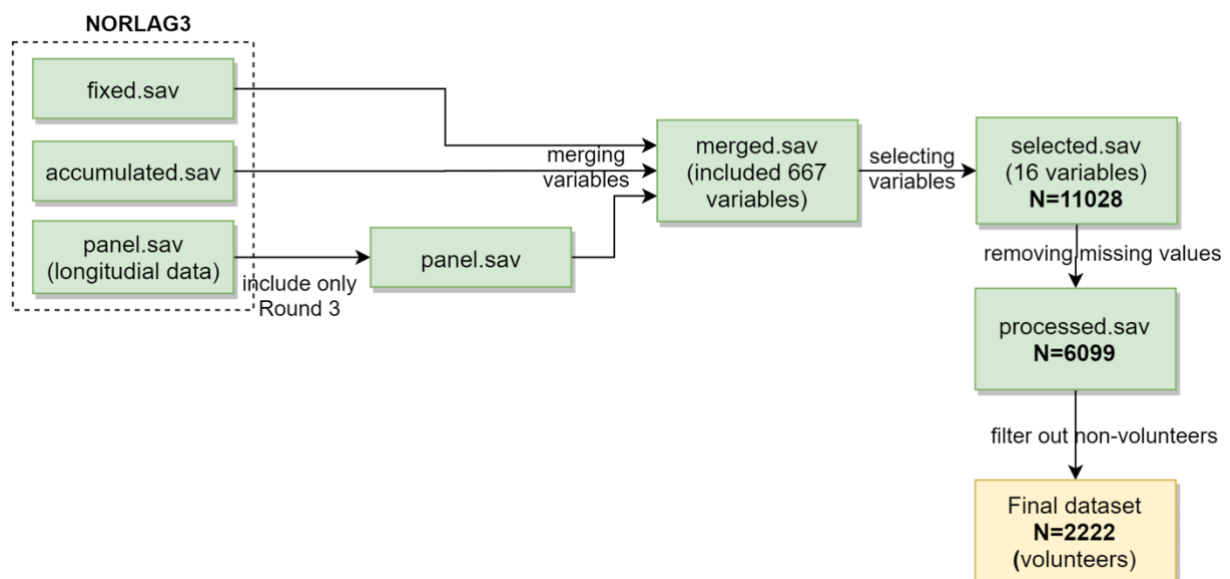


Figure 3: *The preparation of the dataset for the master thesis*

4.3. Statistical analyses

This study is a cross-sectional analysis to examining the association between resources, motivations, and volunteering intensity among older adults. Data analysis was conducted using SPSS version 27.

Firstly, a descriptive analysis was conducted to describe the main characteristics (number of valid observations, missing values, percentage, the measure of central tendency, and range of variables) of the sample. This process provides an insight of data that helps us to determine which adjustments and modifications of variables should be further conducted.

Secondly, an inferential analysis was conducted to make inferences about the sample and then generalize them to a larger population. Binomial logistic regression models were selected instead of multiple linear regression models because the dependent variable was a dichotomous scale. Due to the assumption of intercorrelation between independent variables in binomial logistic regression, a multicollinearity test was conducted to improve the reliability of results. Afterward, two binary logistic models were used to examine the association between dependent and independent variables. The first one focused on the association between resource factors, including human capital, social capital, cultural capital, and volunteering intensity (active and inactive volunteering). The second one included resource and motivational factors in determining whether they are associated with volunteering intensity or not. Both models were controlled by age and gender. The results were reported as with a probability value (p-value) to determine which factors are statistically significant, odds ratios (OR) to measure the association between independent variables and the dependent variable.

4.4. Measures

This study examines the association of dependent variable “the intensity of voluntary work” (active volunteers and inactive volunteers) with eight resources independent variables: (1) education, (2) income, (3) subjective health status, (4) cohabiting status, (5) presence of children, (6) friend network, (7) benevolent attitude, (8) religious attitude, and five motivation factors: (1) duty, (2) interesting, (3) socializing, (4) contribution, (5) competence. The dependent variable “the intensity of voluntary work” measures whether respondents actively did voluntary work or not by the question “how much time, in total, you spend on volunteering for organizations in one usual week: (1) No time, (2) less than 1 hour, (3) 1-2 hours, (4) 3-4 hours, (5) 5-6 hours, (6) 7-10 hours, (7) more than 10 hours”. Volunteers who do voluntary work at least one hour per week are classified as active volunteers. Those who volunteer less than one hour per week are classified as inactive volunteers. Independent variables were also

modified by some techniques, such as weighting, respecifications, and scale transformation, to improve data quality and analytic strength. Two demographic variables, age and gender, were included in the study as control variables to enhance the models' strength of explanation. A detailed description of the variables is presented in Appendix 2 (pp. 32-33).

4.5. Limitation of data and method

Regarding the limitation of using existing data, the operationalizations are not freely derived from the constructs because it depends on the available variables in NorLAG3. Besides, the dataset lacked some indicators that I would like to employ to capture some constructs. For example, the indicators for volunteering motivations have been fixed with five indicators that were only available in NorLAG3. If there is an opportunity for improvement, I would like to collect the indicators that resemble the VFI model proposed by Clary and Snyder (1992, 1999).

This study used cross-sectional analysis because the information about older volunteering has been collected recently in the third round (2017). Since NorLAG lacked longitudinal data on motivations for volunteering, this study cannot measure the cause-effect relationship of variables. Therefore, we can only make inferences of the associations between resources, motivations, and volunteering, but not determine the cause and effects among these factors. Because this cross-sectional study was collected at one point in time (2017), the durability of results can be affected because results could be changed due to the change of social factors, economic factors, environmental factors, and so on. Furthermore, because the data was collected in Norway, the results may have the most implication in Norway and countries sharing the same characteristics, such as Scandinavian countries. Regarding the method, several variable modifications can raise a concern about the loss of information and threats to validity in processing data.

4.6. Ethical issues

This thesis followed the primary ethical considerations in a sociology study, including guidance from the Norwegian Data Protection Authority and The National Committee for Research Ethics in the Social Sciences and the Humanities (NESH). Firstly, regarding the ethical concern "*respect to individuals*", my thesis respects the principle of human dignity, privacy, confidentiality, limited re-use, storage of data, responsibility for avoiding harm, respect for the third party, respect for the values and motives of others according to the guidance from NESH (NESH, 2016). I have assessed data NorLAG3 with the permission of

NSD after signing in a pledge of secrecy (The Pledge of Secrecy can be found in Appendix 3, p. 34). Secondly, my thesis respects the ethical concern of “*the research community*” guided by NESH, including the principle of good citation practice and non-plagiarism. Thirdly, my thesis respects the ethical concern of the “*presentation and use of results*” and “*dissemination of research*” (NESH, 2016). My study was not fabricated, presented, or interpreted in a misleading or biased manner. The results were not over-reported and under-reported. This article-based thesis has been made available to submit to a peer-review journal *Nonprofit and Voluntary Sector Quarterly*, to enable to be critically examined by other researchers and contribute to collective knowledge and practice. Thus, the article followed the Nonprofit and Voluntary Sector Quarterly Code of Ethics (see Appendix 4, p. 35).

5. Findings

Table 3 (Article part, p. 66) showed the results for the association between volunteering and human capital, social capital, cultural capital. The result showed that only human capital and cultural capital relate to the intensity of voluntary work. More specifically, volunteers who have university/college education, benevolence, and religious attitude are more likely to be active than those without. However, people with higher health resources are less likely to engage in voluntary work than those in bad health conditions. There is no difference between active volunteers and inactive volunteers concerning social capital. Therefore, the result did not totally support the assumption that resource-rich volunteers engage more in voluntary work than resource-poor volunteers.

The result from Table 4 (Article part, p. 67) showed that human capital and cultural capital have a consistent association with a voluntary work commitment. The motivations did not affect the relation between resource and the intensity of voluntary work. Only motivation “competence” has a significant association with volunteering intensity. The motivation “interesting” lost its significant association with volunteering intensity when control variables were added. Because only the control variable “age” has a significant association with dependent variables, it may suggest that the association between the “interesting” motivation and volunteering intensity may be partly mediated by “age”.

In conclusion, compared to the inactive volunteers, the active volunteers are likely to have university/college education, higher cultural resource (including benevolence and religious attitude), but poor health condition. Active volunteers in our sample are likely to be motivated by using their competence (knowledge and skills) in voluntary work.

6. Discussion

The present study investigates the association between the individuals' resources, motivations, and the voluntary work engagement based on combining two prevalent theories *resource perspective* by Wilson and Musick (1997) and *functional approach* by Clary and Snyder (1992, 1999). This study partly reinforces the resource perspective and the functional approach. Senior active volunteers in our sample are likely to have university/college education and high cultural capital but poor health conditions. Their engagement in voluntary work does not base on the various motivations, but only on the needs to use their competence.

Regarding individuals' resources (including human capital, social capital, and cultural capital), only human capital and cultural capital have significant associations with volunteering intensity. Although previous studies in Norway showed that social network is essential for voluntary work engagement (Wollebæk, Sætrang & Fladmoe, 2015), this factor seems not to be important to active volunteers in our sample. It may suggest that social networks may be important to recruit new volunteers, but it may not be that important for the intensity of volunteering. Only about half of resource factors have significant positive associations with volunteering intensity, indicating that this study only partly supports the idea that the higher resource, the higher intensity of voluntary work. While "education" and "cultural capital" have positive associations with volunteering intensity, resource "subjective health status" has a negative association with volunteering intensity. This result contrasts with some of the previous studies about good health resource increases the chance of volunteering engagement (Choi, 2003; Caro & Bass, 1997). However, our result is somewhat in line with Dury's study, which showed that better mental health is associated with a smaller likelihood of volunteering involvement (Dury et al., 2015). Our investigation may suggest that the recent Norwegian policy on active aging may be effective that enhance the opportunities for senior people in poor health conditions to engage in volunteering activities.

Regarding the relation between motivations and volunteering, the results indicate that only motivation "competence" has a strong positive association with volunteering. It may suggest that older adults with the need to use their knowledge and skills in voluntary work will have a higher likelihood of being active in voluntary work than those without. More specifically, older adults in our sample do voluntary work due to their needs rather than due to the interest of others.

With a combination of objective and subjective approaches, this work provided a deeper understanding of the reasons for voluntary work intensity among older adults. Furthermore, the findings suggest effective strategies in volunteering recruitment, placement, and retention for

voluntary organizations, which play a vital role in the context that the policies and practices of voluntary organizations are more influential than the national and regional policy of volunteering (Principi, Lindley, Perek-Bialas, & Turek, 2012). Research question 3 is answered based on the results of research questions 1 and 2. Voluntary organizations should use both objective and subjective factors to recruit volunteers and design practical voluntary tasks for volunteers. Some particular strategies could be considered as: (1) Voluntary organizations should place volunteers in suitable tasks to use their competence in volunteering; (2) On the one hand, voluntary organizations should design a suitable voluntary task for poor health volunteers so that they have stable engagement with volunteering; on the other hand, the older adults in good health condition should not be ignored in voluntary organizations' recruitment policy; (3) Voluntary program related to the benevolence values, religious congregations, and faith-based can be more attractive to older volunteers.

7. Conclusion

The most significant finding of this study is that education, cultural capital, and motivation to use competence in voluntary work are essential factors in our understanding of senior volunteering. This study suggests that a combination of objective and subjective approaches (i.e., the resource perspective and the functional approach) further enhances our understanding of volunteering by older people. Our results suggest that more studies are needed to examine the reasons underlying voluntary work intensity with longitudinal data such that it is possible to determine the causal relationship between resource, motivations, and volunteering. Besides, the different motivations across voluntary activities and the barriers that hinder older adults from volunteering were not examined in this study, suggesting that further studies should elaborate on this direction.

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APPENDICES

APPENDIX 1

NONPROFIT AND VOLUNTARY SECTOR QUARTERLY MANUSCRIPT

SUBMISSION GUIDELINES

General Guidelines

Nonprofit and Voluntary Sector Quarterly is an international, interdisciplinary journal that publishes full length manuscripts, research notes, and book reviews that report on the subject areas of voluntary action, civil society, citizen participation, philanthropy, and nonprofit organizations. Submissions must be in English. *NVSQ* will not consider manuscripts that have been published or are under consideration elsewhere.

All correspondence regarding manuscript submissions, as well as comments on editorial policy, suggestions for future symposium issues, and proposals for Special Issues, should be directed to nvsq@sp2.upenn.edu

Guidelines

Title Page: Include all authors' names, affiliations, addresses, phone numbers, fax numbers, e-mail addresses and discipline and a short (2-3 sentence) biography of each author.

Main Document: Remove ALL identifying information and include abstract, main text of article, appendices, endnotes, references, and tables and figures.

Formatting Instructions:

- Manuscripts should be **no more than 8,000 words including the main text, references, endnotes and any appendices**. Any deviation from this requirement will result in manuscripts being sent back to the authors with a request to shorten the word length.
- Double-space and left-justify everything with a ragged right-hand margin (no full justification.)
- Use 12 point, Times New Roman font for all documents.
- Follow the APA style (most current edition) for citations, reference list, and headings.

- Include an abstract that is 150 words or less.
- Include 4 or 5 keywords.
- **ANY** direct quote requires a page reference or a reference to the name of the person and the date of the interview.
- Insert “indicators” for where tables/figures are to be placed; example - [Table 1 Here]).
- Begin each section on a separate page and in this sequence: abstract, main text, appendices, endnotes, references, each table, each figure.
- Use endnotes only for substantive comments bearing on content. Mark endnotes consecutively beginning with numeral 1. Do not use footnotes. Do not use automatic formatting. (Type endnotes manually rather than using the Insert menu of your word processing program). All in-text citations are included in the reference list; all references have in-text citations.
- Figures should be camera-ready; they should appear exactly as they should in the journal, except for sizing.
- You are responsible for making sure that the uploaded manuscript consists of the complete text of the manuscript MINUS any identifying information in the title page, acknowledgments, and/or any running headers to allow blinded review. **Please note: If you have used the “track changes” feature at any point during the composition of your submission, make sure to accept all of the changes before saving the final version that you will upload.** This is also true for the submission of revised manuscripts. If you do not do this, reviewers may be able to see your name and comments, compromising the blind review system. If this happens, we will have to start over with new reviewers, significantly delaying the review process.

Code of Ethics

Authors submitting their manuscripts to *NVSQ* for publication consideration must follow the *NVSQ* [Code of Ethics](#).

APPENDIX 2

THE DESCRIPTION OF VARIABLES MODIFICATION

Type of variables	Source of data	Original variables		Variable modification	New variables
		Variables short name	Label and scale		
Dependent variable	Online/postal questionnaire	The intensity of voluntary work <i>ac139</i>	How much time, in total, you spend on volunteering for organizations in one usual week: (1) No time, (2) less than 1 hour, (3) 1-2 hours, (4) 3-4 hours, (5) 5-6 hours, (6) 7-10 hours, (7) more than 10 hours.	Recode categories (1) + (2) = (0) (non-active volunteers) (3) + (4) + (5) + (6) + (7) = (1) (active volunteers)	How much time, in total, you spend on volunteering for organizations in one usual week: (0) less than 1 hour, (1) at least one hour.
Independent variables	Telephone interview	Motivations <i>ac203, ac204, ac205, ac206, ac207</i>	How important the following motivations for you to do voluntary work: <i>ac203</i> to meet other people <i>ac204</i> to contribute something useful <i>ac205</i> I think it is fun and interesting <i>ac206</i> I can use my competence <i>ac207</i> I feel that I have a duty to do so with the options: (1) very important, (2) pretty important, (3) neither important nor unimportant, (4) a little important, and (5) very little important.	Recode categories (3) + (4) + (5) = (0) not important (1) + (2) = (1) important	How important the following motivations for you to do voluntary work: <i>ac203</i> to meet other people <i>ac204</i> to contribute something useful <i>ac205</i> I think it is fun and interesting <i>ac206</i> I can use my competence <i>ac207</i> I feel that I have a duty to do so with the options: (0) not important, (1) important
	Register data	Education <i>ed_ioedu</i>	The highest level of education: (1) primary education and no education, (2) high school, basic education, (3) high school, supplementary higher education, (4) university and college education, lower level, (5) university and college education, higher level and doctorate.	Recode categories (1) = Primary education and no education (2) + (3) = High school (4) + (5) = university and college	The highest level of education: (1) primary education and no education, (2) high school, (3) university and college.
	Register data	Income <i>in_wies</i>	The total income after tax: -250,000 NOK to 4,460,000 NOK (in one year)	Recode all values lower than 10,000 NOK (including the negative values) as missing values	The total income after tax: 10,000 NOK to 4,460,000 NOK (in one year)
Telephone interview	Subjective health status <i>hc001</i>	General health status: (1) excellent, (2) very good, (3) good, (4) pretty good, and (5) bad	Recode categories: (1) = (5) (2) = (4) (3) = (3) (4) = (2) (5) = (1)	General health status: (1) bad, (2) pretty good, (3) good, (4) very good, and (5) excellent	

Telephone interview	Cohabiting status <i>pa001c</i>	Living with spouse/cohabitant or not: (0) not living with spouse/cohabitant, and (1) living with spouse/cohabitant.	x	x	
Telephone interview	Presence of children <i>ch002</i>	The number of your children: 0-9	x	x	
Telephone interview	Friend network <i>fn175, fn176</i>	<i>fn175</i> : Have good friends in living place: (0) No, (1) Yes <i>fn176</i> : Have good friends in other places (0) No, (1) Yes	1. Compute by taking arithmetic sum variable <i>fn175</i> and variable <i>fn176</i> into a new variable with categories (0) Do not have good friends, (1) have friend either in living place or other place, (2) have friend in both living place and other place 2. Recode categories of new variable: (0) do not have good friends (1) + (2) have good friends	Do you have good friends: (0) no, (1) yes	
Online/postal questionnaire	Benevolent attitude <i>va_308</i>	Do you think you help and care for other people (1) not like me at all, (2) not like me, (3) only a little like me, (4) slightly like me, (5) like me, and (6) very much like me	Recode categories (1) + (2) + (3) = no (4) + (5) + (6) = yes	Do you think you help and care for other people (0) no (1) yes	
Telephone interview	Religious attitude <i>va157</i>	Do you consider yourself as religious: (1) no, (2) yes, little, (3) yes, pretty much, (4) yes, very	Recode categories (1) = no (2) + (3) + (4) = yes	Do you consider yourself as religious: (0) no, (1) yes.	
Control variables	Register data	Age (group) <i>io_ioalder10</i>	Age of respondents- 10-agegroup (1) 50-59 (2) 60-69 (3) 70-79 (4) 80	Recode categories (1) 50-59 (2) 60-69 (3) + (4) = 70+	Age of respondents- 10-agegroup (1) 50-59 (2) 60-69 (3) 70+
	Register data	Gender <i>io_iokjonn</i>	(1) Man (2) Woman	x	x

x: not modified

APPENDIX 3

PLEDGE OF SECRECY

Pledge of Secrecy

for persons with access to survey data from NSD

Name: Huong Giang Le
 Institution: OsloMet – Storbyuniversitetet
 Survey: Den norske studien av livsløp, aldring og generasjon - NorLAG 2002-2017

I hereby commit to:

- 1) **use the data as described in your request only.** If I need the data for another project, I must seek permission to do so.
- 2) **never distribute the data to third party.** Any person assisting me in the project will also have to sign a Pledge of Secrecy form.
- 3) **confirm by mail to NSD** that data is deleted when analyses are finished, at the latest 06-02-2022.
- 4) **refer to producer and distributor of the data** by including the following in a foreword or footnote in eventual publications:

“(NorLAG datainnsamlinger har blitt gjennomført med støtte av Norges forskningsråd, fire departementer (HOD, AID, BLD, KMD), Helsedirektoratet, Husbanken, Statistiske sentralbyrå og NOVA. NorLAG data inngår i ACCESS Life Course infrastruktur, finansiert gjennom Nasjonal satsing på forskningsinfrastruktur ved Norges forskningsråd (prosjekter: 195403 og 269920).”
- 5) **send NSD a digital copy of resulting reports/publications** that are based on the data. Publications will be cited on our website and, if desired, made available online.

I am known to the fact that neglect to this Pledge of Secrecy, deliberately or heedlessly, or participating to such neglect, will be prosecuted by fines or prison for one year or longer – or both – according to the Norwegian Act on protection of privacy no. 48, paragraph 38 no.2.

Place **Oslo**

Date **16.02/2020**

Signature



Access has been given authorization number 5118 and applies to the following project:

Doing voluntary work in Norway: Motivations and barriers

APPENDIX 4

NONPROFIT AND VOLUNTARY SECTOR QUARTERLY CODE OF ETHICS

Code of Ethics

Authors submitting their manuscripts to *NVSQ* for publication consideration must follow the following code of ethics.

The manuscript:

- Should not have been previously published in whole (including book chapters) or in part (this includes paragraphs of text, tables, diagrams and other exhibits).
- Should not be accepted for publication elsewhere.
- Should not be under review for publication elsewhere and not submitted to another publication during the *NVSQ* review process.
- Should provide new theoretical and/or empirical results (that have not been published previously).

Previously rejected manuscripts: In general, the journal does not accept manuscripts previously rejected by *NVSQ* for publication consideration. If the manuscript, or an earlier version of it, was previously rejected by *NSVQ*, this fact as well as the explanation for resubmission must be clearly communicated by the corresponding author in the cover letter to the Editor(s) at the time of submission.

Previously used data sets: Authors whose manuscripts make use of data that are reported in another manuscript must inform the Editor of this at the time of submission in the cover letter and acknowledge it in the manuscript.

Exception to the “previous publication” rule: The only exception to this rule is where the manuscript, as work in progress, has been published in conference proceedings. The corresponding author must clearly communicate this in the cover letter to the Editor with details on where the paper was presented and the title of the conference proceedings publication.

Respecting the double-blind review process: *NVSQ* uses a double-blind review process, whereby authors do not know reviewers and vice versa. This confidentiality needs to be respected and **authors should not reveal themselves to reviewers in any way in the manuscript. For example, do not include any self-revealing information, and do not post the submitted manuscript (including working papers and prior drafts) on websites that are easily discovered by potential reviewers.**

Human Subjects: Manuscripts involving human subjects (surveys, simulations, experiments, interviews) should comply with the relevant Human Subject Ethical requirements.

PART 2

ARTICLE PART¹

¹ This part is the main document of the article manuscript, which has been followed the formatting instruction from submission guidelines of Nonprofit and Voluntary Sector Quarterly (see Appendix 1, pp. 30-31), including APA style for citations, reference list, and headings. Double-space, left-justification, and the beginning main sections (abstract, main text, appendices, references, each table, each figure) on a separate page were intentionally followed these formatting guidelines.

Older Volunteering: A Combination of Objective and Subjective Approaches

Abstract

Although volunteering may contribute to successful aging, older adults have not made a considerable effort to commit voluntary work. A growing interest in volunteering has occurred over the years, but limited studies focus on both objective and subjective approaches to measure volunteering intensity among older adults. This cross-sectional study combined the conceptual framework of objective and subjective approaches, which are represented by two prevalent theories, *the resource perspective* by Wilson and Musick (1997) and *the functional approach* by Clary and Snyder (1992, 1999), to evaluate which factors are associated with formal volunteering intensity and are potential of interest for intervention strategies to improve volunteer engagement. The study is based on a sub-sample of older volunteers derived from the Norwegian study on Life Course, Ageing, and Generation Study (NorLAG). The sample consists of 2,222 volunteers aged 50 and older. Binary logistic regression analyses indicated that only three over eight resource factors, including education, benevolent and religious attitude, and one motivation “competence,” positively associate with volunteering intensity. This suggests that both objective and subjective factors could be used as guided indicators for the recruitment, placement, and retention of volunteers.

Keywords: formal volunteering, older volunteers, resource perspective, functional approach

Introduction

Background

Formal volunteering, an activity to help others in a collective style and an organizational environment without receiving any payment or other forms of remuneration (Hustinx & Lammertyn, 2003; Musick & Wilson, 2008), is a crucial productive activity that plays a vital role in the context of successful aging. Formal volunteering in organizations helps older people improve their physical and mental health, which protects against premature mortality (Harris & Thoresen, 2005; Lum & Lightfoot, 2005; Musick, Herzog, & House, 1999). Moreover, older adults can experience a higher quality of life as several studies show that volunteering produces a greater sense of self-worth, personal growth, well-being, and life satisfaction (Hansen, Slagsvold, Aartsen, & Deindl, 2018; Morrow-Howell, Hinterlong, Rozario, & Tang, 2003). Formal volunteering is beneficial not only for older adults' health and well-being but also for societies from their ongoing contribution to society even if they no longer participate in the paid labor market (Walker & Maltby, 2012). When older adults experience healthy aging, governments could cut down the burden of national budgets for social welfare and health systems.

The encouragement of formal volunteering has been endorsed as one of the most important responses to population aging challenges in Europe (Foster & Walker, 2015). Still, the intensity of formal volunteering varies across countries. The study based on SHARE and NorLAG data showed that the rate of formal volunteering is much higher in the north-west (20-30%) than in the south-east of Europe (<10%) (Hansen, Slagsvold, Aartsen, & Deindl, 2018). This study also reported that only a minority of older people are stable active volunteers, while many other people keep being inactive or quitting voluntary work. It is thus necessary for voluntary associations to understand the underlying reasons for the intensity of volunteering.

Active and inactive volunteers

The intensity of voluntary work engagement varies widely across volunteers, probably depending on the available resources (Wilson & Musick, 1997) and the motivations (Clary & Snyder, 1992, 1999) towards volunteering. There is a considerable variation in time investment and commitment to the voluntary associations among volunteers. Some volunteers provide voluntary work actively on a daily basis, whereas others are only involved in voluntary work on an ad-hoc basis. Inactive volunteers can be either those who contribute much less than others in voluntary work or participate in the intermittent work that required little demand on time, arrangement, and loyalty (Musick & Wilson, 2008). The question is how we can explain the considerable variation of intensity of voluntary work among volunteers. This study aims at shedding light on potential explanations for the variation in the intensity among older people who do voluntary work. Based on Wilson and Musick's resource theory and Clary and Snyder's functional theory, we assume that variations in resources and motivations are an essential explanation for the variation with which people are doing voluntary work.

The Norwegian case

Norway has a high rate of senior volunteers, but only a part of them remains active in voluntary associations (Hansen et al., 2018; Wollebæk & Selle, 2003). A recent study based on 2017 NorLAG data showed that 70% of people aged between 56 and 74 had done voluntary work during the past year. However, only about half of them are active volunteers (engaged at least one hour per week), and inactive volunteers are not likely to become more active because they lack interest and other resources such as health and life situation (Hansen & Slagsvold, 2020). It seems that both subjective factors (motivations) and objective factors (resources) play crucial roles in formal volunteering involvement. Our study also comes from the 2017 NorLAG data. Yet, we use a sample of older volunteers aged 50 to 95 in Norway to

examine the relation between the intensity of formal volunteering (active and inactive volunteering) with the resource and motivation factors.

Previous studies

Investigating determinants of formal volunteering has been of interest to previous researchers in sociology for many decades (Smith, 1994), yet studying formal volunteering in the light of “*positive outcomes and determinants of successful aging*” has begun at the end of the previous century (Aartsen & Hansen, 2020, p. 248). In studies on determinants of volunteering, two approaches can be distinguished: (1) an objective approach which observes “*people’s objective attributes or their social position*”, including explicit factors reflected in various socioeconomic and individuals’ resources (Musick & Wilson, 2008, p. 37), and (2) a subjective approach, including implicit factors, such as attitude and motivational factors (Einolf & Chambré, 2011). Various researchers have documented the association between resource factors (Choi, 2003; Cramm & Nieboer, 2015; Dury et al., 2015; Lee & Brudney, 2012; Musick & Wilson, 2008; Smith, 2004; Tang, 2005; Tang, 2008; Warburton & Crosier, 2001; Wilson & Musick, 1997), and motivational factors (Bowen, Andersen, & Urban, 2000; Clary et al., 1998; Clary & Snyder, 1991; Finkelstien, 2009; Meier & Stutzer, 2008; Warburton, Terry, Roseman, & Sharpiro, 2001) with older volunteering. The studies showed the consistent results that people with higher resources and motivations have a higher intensity of voluntary work.

Despite the progress in our understanding of factors related to volunteering, there are still several knowledge gaps. Firstly, few previous studies focus on investigating the potential factors related to active and inactive volunteering. Secondly, little is known about the association between volunteering intensity with a combination of resource factors and motivational factors, which may reveal new insights into voluntary work drivers. Thirdly, most studies on voluntary work have been conducted in the United States of America. Few

studies utilized Norwegian data to examine the resources and motivational factors regarding senior volunteering. Therefore, this study's primary aims are (1) to examine the association between the intensity of voluntary work with resources and motivational factors, and (2) to investigate the case of Norwegian volunteers. Our theoretical background lies in a combination of two prevailing theories (1) *the resource perspective* by Wilson and Musick (1997), and (2) *the functional approach* by Clary and Snyder (1992, 1999).

Research questions

Research question 1: Are the resources that volunteers have at their disposal related to the voluntary work intensity?

Research question 2: Are the different motivations that volunteers have to do voluntary work related to voluntary work intensity, in addition to resources?

Research question 3: How can this study's results be used to advise voluntary organizations to increase the intensity of volunteers?

Towards a combined conceptual framework of older adults' volunteering

This study combines the theory of resource perspective (Wilson & Musick, 1997) with the functional approach (Clary & Snyder, 1992, 1999) to measure the relation between the intensity of volunteering with objective and subjective factors (Figure 4, p. 63).

A resource perspective of volunteering (Wilson and Musick, 1997)

The resource perspective of volunteering derived from Wilson and Musick distinguishes three aspects of voluntary work: “a productive activity” that requires human capital, “a collective action” that requires social capital, and “an ethically guided work” that requires cultural capital (Wilson & Musick, 1997, p. 694). The more of each capital, the higher the likelihood that people will volunteer. Human capital, such as education, health, and income, represents resources attached to individuals that make people more qualified for

voluntary work and more attractive to voluntary organizations (Forbes & Zampelli, 2012; Wilson & Musick, 1997). Social capital refers to the interpersonal relationships illustrated by how many social connections people have, what kind of social connections, and how they are organized (Wilson & Musick, 1997). The intensity of voluntary work may become higher when people have a substantial stock of social capital since they know more people who can link them and encourage them to engage in voluntary work. Cultural capital gives people the right information to the voluntary work that fits their attitudes and preferences, such as the culture of benevolence. Although the resource perspective of volunteering is meaningful in predicting resource-based factors associated with volunteering, it does not include an individual psychological perspective, such as desires and motivations, which are also known as prerequisites for enhancing volunteering. In this study, we address this limitation by combining the resource perspective with a motivation-based approach for a more holistic understanding of voluntary work drivers, as explained in the next section.

A functional approach of volunteering (Clary and Snyder, 1992, 1999)

The functional approach of volunteering is a motivation-based approach, which was adopted to apprehend the various motivations to volunteering (Clary & Snyder, 1999; Clary, Snyder, & Ridge, 1992). According to this approach, volunteering is explained by the satisfaction of the needs and goals, which could be different among people even though they do the same voluntary activities (Clary & Snyder, 1999; Finkelstien, 2009). People do not randomly choose the task and the intensity of voluntary work, yet base on the different motivations to do voluntary work (Houle, Sagarin, & Kaplan, 2005). To illustrate the functional approach of volunteering, Clary and Snyder introduced six functions served by volunteering: to contribute important values to society, to learn and to exercise skills, to gain career-related experience, to strengthen social relationships, to reduce negative feelings, and to resolve personal problems, and psychological growth (called Volunteer Functions

Inventory) (Clary & Snyder, 1999; Clary et al., 1992). In general, the functional approach of volunteering is a psychological theory concerned with the various beliefs and reasons underlying volunteering behavior.

A combined conceptual framework of volunteering

Guided by *the resource perspective* by Wilson and Musick (1997) and *the functional approach* by Clary and Snyder (1992, 1999), this study will examine individuals' resources and motivations as drivers of volunteering among older Norwegian volunteers (Figure 4). Our new conceptual framework is a combination of objective and subjective approaches that may create a synergistic effect to facilitate volunteering. The objective factors will give people the capability to volunteer, and the subjective factors will stimulate the enthusiasm toward volunteering.

On the one hand, because volunteering is productive work, it will prefer resource-rich people over resource-poor people (Musick & Wilson, 2008). People who have a *higher stock of human capital, social capital and cultural capital* will be more likely to volunteer. On the other hand, because people have their psychological preferences, needs, and goals, they will be more likely to engage in voluntary work if it can satisfy their *multifaceted motivational concerns* (Clary, Snyder, & Ridge, 1992). Older adults decide the intensity of performance by their different intention and beliefs toward the volunteering activities (action), which captured the motivational factors (Ajzen, 1991; Clary et al., 1992). The intention and beliefs of volunteering are initially shaped by personal preference, such as a positive attitude, toward volunteering. However, only the preference is not enough for people to engage in formal voluntary work. If older adults believe that voluntary work can fulfill their various needs and goals, they are more likely to enhance volunteering intensity. Thus, the preference, needs, and goals play essential roles in facilitating the enthusiasm of volunteering and improving the intensity of volunteering.

[Figure 4 Here]

Methods

Data source

This study uses data from the third round (2017) of The Norwegian study on Life Course, Ageing, and Generation (NorLAG). NorLAG is a multidisciplinary and longitudinal study that includes data on key areas in the second half of life, such as well-being, quality of life, health and care, work and retirement, family relations (Slagsvold et al., 2012). The NorLAG datasets are developed by NOVA-Norwegian Social Research. NorLAG data are collected by Statistic Norway (Statistisk sentralbyrå) in three rounds; the first round was collected in 2002/2003, the second round was collected in 2007/2008, and the third round was collected in 2017 (NorLAG3). NorLAG3 consists of registered data, data from telephone interviews, and data from online/postal questionnaires. Registered data contains respondents' demographic information, such as gender, age, municipality of residence, marital status, occupation, place of work, and so on. In the registered data, the information is used to identify people in the household and family and then connect information about respondents to further survey questions. The two questionnaires for NorLAG3 contained a subset of questions used in the first round and the second round and also asked about older adults' volunteering efforts. The registered data and questionnaires data were collected with the consent of participants.

NorLAG3 approached 9,230 people who participated in at least one of the previous rounds, of which 6,099 people could be interviewed by telephone, representing 68 percent of the gross sample. The self-completed online/postal survey was filled in by 4,461 persons and represented 73 percent of those who received the form. Reasons for non-response were no answer, wrong age, invalid answer in the previous round, died, and went abroad (Torsteinsen

& Holmøy, 2019). In this study, we use a subgroup of NorLAG3, who answered that they volunteer in the last 12 months (2222 volunteers).

Measures

Dependent variable

The dependent variable is based on the question of how much time, in total, they spend on volunteering for organizations in one usual week: (1) No time, (2) less than 1 hour, (3) 1-2 hours, (4) 3-4 hours, (5) 5-6 hours, (6) 7-10 hours, (7) more than 10 hours. In this study, active volunteers are defined as doing unpaid work for organizations/associations for at least one hour per week. Therefore, the dependent variable was dichotomized such that those who did the voluntary job at least one hour per week were coded as “active volunteers” (code 1), and those who did voluntary work less than one hour per week were coded as “inactive volunteers” (code 0).

Independent variables

Information about “education”, “income”, “gender”, and “age” were derived from registered data. Information about “subjective health status”, “presence of children”, “friend network”, “religious attitude”, and the “motivations” for doing volunteering were collected from the telephone interview. Information about “benevolent attitude” came from the self-filling questionnaire. Information about “cohabiting status” was from both telephone interviews and registered data.

Human capital. Three indicators, “education”, “income”, and “subjective health status,” were included to capture human capital (Tang, 2005; Wilson & Musick, 1997). “Education” and “income” are two socioeconomic status factors, regarded as the proof of qualification and sufficient resources, facilitating people to become more benevolent. “Education” is categorized into three groups: (1) primary education and no education, (2) high school, and (3) university and college education. “Income” indicates the total income

after tax of respondents, ranging from -250,000 NOK to 4,460,000 NOK (in one year). We recoded all values lower than 10,000 NOK, including the negative values as missing as these are most likely not an adequate reflection of the actual income. Good “subjective health status” is an individual attribute that makes people have enough physical competencies to assist those in need of help (Wilson & Musick, 1997). The respondents were asked to self-evaluate their general health, with the following options: (1) bad, (2) pretty good, (3) good, (4) very good, (5) excellent.

Social capital. Social capital is measured with three indicators “cohabiting status”, “presence of children”, and “friend network”. While “cohabiting status” and “presence of children” reflect the social roles, “friend network” reflects the social integration. We assume that cohabited people, people with more children, and people with a large friend network are likely to be active volunteers rather than inactive volunteers because they have more social relations than those without. “Cohabiting status” is a dichotomous variable with categories (0) not living with spouse/cohabitant, and (1) living with spouse/cohabitant. “Presence of children” reflects the total number of children respondents have. “Friend network” is measured by two items: (1) Apart from your own family, do you have good friends where you live, (2) Do you have good friends in other places. The scale was constructed by taking the arithmetic sum of two items and dichotomized into two groups: (0) Do not have good friends, (1) Having good friends.

Cultural capital. Cultural capital is linked to ethical values leading people to do volunteer. Therefore, the two indicators, “benevolent attitude” and “religious attitude”, are used to measure cultural capital. A benevolent attitude is a sense of morality, reflecting the protection and promotion of others’ interests (Shen, Delston, & Wang, 2017). “Benevolent attitude” was measured by the index helping and caring for others. The respondents were asked to self-rate their characteristic of helping and caring for others into one of six

categories: (1) not like me at all, (2) not like me, (3) only a little like me, (4) slightly like me, (5) like me, and (6) very much like me. This variable was recoded into a dichotomous scale, in which categories (1), (2), and (3) were recoded as “no benevolent attitude”, categories (4), (5), and (6) were recoded as “benevolent attitude”. While a benevolent attitude relates to personal altruistic values, a religious perspective helps us understand the cultural ethos where adopts a benevolent attitude (Tang, 2005). Because religions impart the value of altruism and prosocial behaviors to people, it is assumed that people with a benevolent attitude and religious-oriented are more likely to become active volunteers. For the “religious attitude”, the respondents were asked to self-rate their religious attitude by answering the question, “do you consider yourself religious”. They classified themselves into one of four categories: (1) no, (2) yes, little, (3) yes, pretty much, (4) yes, very. The variable was recoded into a dichotomous variable with category (1) recoded into “not religious”, and categories (2), (3), and (4) into “religious”.

Motivations. Based on the functional approach, five variables were measured by asking respondents to answer how important the following motivations for them to do voluntary work: (1) I feel that I have a duty to do so (*duty*), (2) I think it is fun and interesting (*interesting*), (3) To meet other people (*socializing*); (4) To contribute something useful (*contribution*); (5) I can use my competence (*competence*). The respondents indicated the importance of each motivation according to the Likert scale 5 points: (1) very important, (2) pretty important, (3) neither important nor unimportant, (4) a little important, and (5) very little important. These variables were recoded into a dichotomous scale. In which the options (1) and (2) were recoded into “important”, options (3), (4), (5) were recoded into “not important”. These five variables resemble three factors in the VFI model by Clary and Snyder (1992, 1999), which are *social (strengthen social relationship)*, *contribution (contributing important values to society)*, and *understanding (learn and exercise skills/competence)*. We

also added two factors, “interesting” and “duty”, to identify older adults' preference toward volunteering.

Control variables

In this study, the two demographic factors, age, and gender are treated as control factors, as age and gender may be both related to the independent variables and the dependent variable. Older adults tend to do voluntary work less than the younger do even though they may have more free time after retirement (Dury et al., 2015; Smith & Gay, 2005), and the middle-age people are the most likely to do formal volunteering (Cutler & Hendricks, 2000). Moreover, older people may have fewer resources for voluntary work. In the sample, the age of respondents was distributed from 50 to 95 years old. They were classified into groups: (1) 50-59, (2) 60-69, (3) 70-79, and (4) 80. Due to the small number of respondents aged from 80 (9.4%), the variable was recoded into three age groups: (1) 50-59, (2) 60-69, and (3) 70+.

Gender is also relevant to the dependent and independent variables in several ways. Some studies indicated that women volunteer more than men (Butrica, Johnson, & Zedlewski, 2009; Manning, 2010), but some showed the contrary result (Cutler & Hendricks, 2000; Erlinghagen & Hank, 2006). The difference between older men and older women in the intensity of volunteering may be explained by their available resources and motivations (Wilson, 2000). In this study, the *gender* of the respondents was classified: (1) men and (2) women.

Analytical strategy

Data analysis was carried out using SPSS version 27. A descriptive statistic (number of valid observations, missing values, percentage, mean, range) was used to illustrate the variables' main characteristics. This study utilized inferential statistics to test the hypotheses and then answered the research questions.

Binary logistic regression was applied to examine the association between dependent

and independent variables to answer research questions because our dependent variable is dichotomous. To answer the first research question, we examine the association between the dichotomous variable volunteering intensity and resource factors, including indicators “education”, “income”, “subjective health status”, “cohabiting status”, “presence of children”, “friend network”, “benevolent attitude”, and “religious attitude”. To answer the second research question, we examine the association between volunteering intensity with resources and five motivation indicators “interesting”, “duty”, “socializing”, “contribution” and “competence”. We examined the multicollinearity diagnostic before conducting binary logistic regression. Although some suggest that the value of VIF should not exceed 10 (Alin, 2010; Hair, Black, Babin, & Anderson, 2014), lower thresholds are preferred, and we chose the threshold VFI value no higher than 5 to improve the reliability of the results. The third research question was answered in the discussion part.

Results

Before reporting the results of the research questions, the multicollinearity test and descriptive analysis were conducted. As shown in Table 1 (p. 64), the VIF values of independent variables are less than 5, indicating no multicollinearity among the independent variables.

[Table 1 Here]

Table 2 (p. 65) provides descriptive statistics with a brief overview of the sample characteristics. The dependent variable “intensity of formal volunteering” and the independent variable “benevolent attitude” has a large number of missing values (around 28%) because they were collected by a self-filling questionnaire, which had the proportion of respondents around 73% of the gross sample. The rest of the independent variables have a small number of missing values (less than 2%).

In the study sample of volunteers, 59.2% of respondents are active volunteers, and

40.8% are inactive volunteers in organizations. The majority of respondents' educational levels were high school (46.5%) and college or university level (42.4%). The average net income was 426,859 NOK in one year. Most of the respondents reported good health (20.2% excellent, 28.8% very good, 27.8% good, and 18.8% pretty good), only 4.3% reported bad health. About three-quarters of the respondents lived with a spouse/cohabitant, and the average number of children in the sample was two. Almost all of the respondents reported that they had good friends (99.2%); only 2.8% said they did not have good friends. About 94% of respondents self-evaluated themselves as having a benevolent attitude (characteristic of helping and caring for others). The number of people with a religious-oriented attitude is smaller than those with a non-religious attitude (47.9% and 52.1%, respectively). In terms of the motivations to volunteer, the major number of volunteers reported that the motivations “interesting”, “socializing”, “competence”, and “contribution” are important (89.9%, 81.2%, 78.4%, and 96.5%, respectively). However, only around nearly one-third of volunteers (30.8%) reported that “duty” is an essential motivation to volunteer.

The control variables indicated that most of the volunteers aged between 50 to 69, only over one-fifth of volunteers were 70 and older (38.2% aged 50-59, 35.1% aged 60-69, and 20.7% aged 70+). There was a slightly higher percentage of men than women (56% men and 44% women) in the sample.

[Table 2 Here]

In the next step, using stepwise logistic regression models, we examine the association between the resource, motivations, and the intensity of formal volunteering to answer research questions.

Research question 1: Are the resources that volunteers have at their disposal related to voluntary work intensity?

[Table 3 Here]

Table 3 (p. 66) presents the results of the stepwise binomial logistic regression analyses for the intensity of formal voluntary work regressed on human capital, social capital, cultural capital, gender, and age. Model 1 only included human capital, social capital was added in Model 2, cultural capital was added in Model 3, and Model 4 represented all factors and control factors.

Of the three types of human capital, only “education” and “subjective health status” are associated with voluntary work intensity in four models. The category “university and college” education is significantly positively related to the intensity of formal voluntary work, indicating that respondents with university and college education are more likely to become active volunteers than people with primary education and no education. All the categories of subjective health status except category “good” health had negative associations with the dependent variable ($p < 0.05$, $OR < 1$), indicating that volunteers who have “pretty good”, “very good”, and “excellent” health condition are less likely to engage to voluntary work than those in “bad” health condition. Income was not significantly associated with volunteering ($p > 0.05$ in four models), indicating that this indicator does not relate to volunteering intensity. All indicators of social capital were not significantly associated with the intensity of formal voluntary work. In terms of cultural capital, both “benevolent attitude” ($p < 0.01$, $OR > 1$) and “religious attitude” ($p < 0.05$, $OR > 1$) showed their statistical significance and positive associations with the intensity of volunteering. The volunteers who self-evaluate themselves as benevolent and religious persons have more likelihood of being active volunteers than those without benevolent and religious attitudes. When we added control variables (gender and age) in model 4, the association between the dependent variable and independent variables did not change, which means that control variables did not significantly mediate the relation between resource and intensity of voluntary work. Among control variables, only age has a significant association with the intensity of voluntary work,

which showed that people aged 60 and older have a higher likelihood of being active in voluntary work than those aged 50-59.

In conclusion, cultural capital is consistently positively associated with the intensity of volunteering, indicating that the more cultural capital, the higher the likelihood that older adults become active volunteers. Human capital consistently relates to the intensity of voluntary work. Active volunteers are likely to have a university and college education rather than primary and no education. However, among older volunteers, those who have higher health resources (in pretty good, very good, and excellent health condition) are less likely to engage in voluntary work than those in bad health condition. There is no difference between active volunteers and inactive volunteers with regard to social capital.

Research question 2: Are the different motivations that volunteers have to do voluntary work related to voluntary work intensity, in addition to resources?

[Table 4 Here]

To answer research question 2, we started with the model including human, social, and cultural capital. The motivations for voluntary work were added in model 2, and the third model represented all the factors and control factors.

Model 3 (Table 4, p. 67) showed us that the motive “competence”, the human capital, and cultural capital makes it more likely that people are active volunteers rather than inactive volunteers. Regarding the resource factors, human capital and cultural capital were the most important factors for the intensity of voluntary work. It can be observed from the changes in p-values of the category “excellent health” and “benevolent attitude” between model 2 and model 3 that the significant association between capital and intensity of volunteering became stronger when control factors were added. There were no changes between model 1 and model 2, indicating that the motivations do not influence the association between resources and volunteering intensity. Regarding motivations, a strong positive association with the

intensity of voluntary work was observed only for “competence”, indicating that this motive was the single important motivation for the intensity of voluntary work. When we observed the changes in the regression weights over model 2 and model 3, it can be seen that the motive “interesting” lost its significance when control factors were added (in model 3). It may suggest that the association between motive “interesting” and voluntary work intensity may be partly mediated by age. Model 3 also showed that older adults aged 60 and older are more likely to be active in voluntary work than those aged 50-59.

The results showed that there was a consistent association between human capital and cultural capital with the intensity of voluntary work. Active volunteers tend to have university/college education and high cultural capital resource. People in bad health conditions have a higher likelihood of being active volunteers than those in pretty good, very good, and excellent health conditions. The association between motivations and the intensity of voluntary work was observed only for the motive “competence”, which further indicated that inactive volunteers are more likely to become active when they are motivated by using their competence in voluntary work.

Discussion

Guided by the resource perspective by Wilson and Musick (1997) and the functional approach by Clary and Snyder (1992, 1999), this study aims to examine the association between resources (objective factors) and motivations (subjective factors) with the intensity of volunteering among Norwegian people aged 50 and older. The findings partly corroborate the resource perspective of Wilson and Musick (1992, 1999) since only education and cultural capital factors have significant positive association with the intensity of volunteering. Our result does not totally support the notion that resource-rich people have a higher intensity of voluntary work than resource-poor people since subjective health status has a negative association with volunteering intensity and income, social capital does not relate to the

intensity of voluntary work. Our sample showed that only one motivation, “competence”, relates to the intensity of volunteering, indicating that the motivation to volunteering is not multifaceted. Therefore, the present study does not support Clary and Snyder's (1992, 1999) functional approach about the various preferences, needs, and goals that enhance voluntary work engagement. However, the combination of objective (resource) and subjective (motivations) factors may be used to design suitable voluntary work strategies in recruitment, placement, and retention of volunteers.

The results of this study provide us a deeper understanding of older volunteering. When we examine the association between resources and the intensity of voluntary work in *the first research question*, the results showed that higher education and cultural capital help older adults become more active in voluntary work. Subjective health status is negatively associated with the intensity of voluntary work, which is surprisingly not in line with the assumption that people should have good health resources to engage in volunteering. Social capital, including the presence of children, cohabiting status, and friend network, does not play significant roles in voluntary work intensity. *The second research question* results indicate that only utilizing competence is an essential motivation for active engagement in voluntary work besides resource factors. Thus, our sample findings are not in line with the notion that the motivations of volunteering engagement stem from the combination of other-interest and self-interest (Clary & Snyder, 1999; Warburton & Dyer, 2004; Warburton, Terry, Roseman, & Sharp, 2001). In our sample, active older volunteers are more likely to be motivated by their needs to use knowledge and skills rather than concern about the obligation or duty with others.

There are some noticeable conclusions drawn from the results. Firstly, active volunteers are likely to have university/college education, and they are motivated by using their knowledge and skills in voluntary work. Secondly, active volunteers are less likely to have

excellent and good health, while people with poor health tend to engage more in voluntary work. Thirdly, the individual preference for morality and religion may positively relate to the intensity of volunteering. Although only around half of the resource factors and only one motivation have a significant positive association with volunteering intensity, this study's findings still suggest an integrated theory of resource perspective and functional approach. Both objective and subjective factors should be used simultaneously to understand volunteering behavior.

The present study has some practical implications for voluntary organizations. Research question 3 is answered based on the results of research questions 1 and 2. This study shows that voluntary organizations should rely on a combination of objective and subjective factors to encourage older people to become active volunteers. Understanding the factors related to the intensity of volunteering involvement may help voluntary organizations to confront the difficult tasks of recruitment, placement, and retention of volunteers. In the recruitment step, voluntary organizations should use objective factors, such as education, health, benevolent attitude, and religious attitude, to categorize the potential active and inactive volunteers. For example, in our sample, the potential active volunteers are likely to have university/college education, poor health, and high morality attitude, and the potential inactive volunteers have the likelihood of being aged 50-59, with primary or no education and excellent health. The subjective factors should be used to tailor the suitable persuasive messages to volunteers such that they are motivated to engage in voluntary tasks actively. In the placement and retention step, the voluntary organizations' leaders should assign voluntary tasks to volunteers in line with their competencies. For example, voluntary organizations should give volunteers opportunities to choose voluntary schemes based on their proper knowledge and skills. The purpose of this strategy is to do voluntary work to become more

attractive and meaningful. The voluntary program related to benevolence values, religious congregations, and faith-based can attract older volunteers' engagement.

Limitation of study and suggestion for further studies

Although our study provides some insights into formal volunteering, several limitations should be considered. Guided by a combined conceptual framework of resources perspective and functional approach, this study examined the association between human capital, social capital, cultural capital, motivations, and volunteering intensity. However, some factors related to human capital and social capital, such as occupation, marital status, and frequent contact with extended family, neighborhood, were not considered. Cultural capital was examined by the self-evaluated attitude of benevolent and religious but did not examine how much respondents value helping others and religious denomination. Besides, the different motivations across activities were not scrutinized in this study.

Regarding the methodology, the cross-sectional study does not allow for conclusions on the causal direction of associations between resources, motivations, and volunteering intensity. Moreover, we included only Norwegian data, indicating that our results are valid for the Norwegian context and possibly other Scandinavian countries. The original ordinal-scale dependent variables were dichotomized into binary variables, which resulted in the loss of information but allowed for a distinction between active and inactive volunteers.

This study suggested that further studies should use a combined conceptual framework of resource perspective and functional approach of volunteering with various sets of data, especially non-US data. The resources' indicators should be expanded, such as race and ethnic group, family income, occupation, mental health and physical health, informal and formal social network, the appraisal from respondents toward the value of benevolence and religion, and so on. Future studies should investigate the motivations for particular volunteer activities and further examine the barriers to volunteering (Petriwskyj &

Warburton, 2007). Moreover, it may suggest that longitudinal studies should be conducted to observe the causal relationship between the resources, motivations, and volunteering intensity.

Conclusion

To our knowledge, this study is one of the first studies that used a combination framework of resource perspective (objective approach) and functional approach (subjective approach) of volunteering intensity. Our study contributes to the debates about older volunteering and may suggest that both resource and motivation are contributing factors to the likelihood of older volunteering engagement. Although NorLAG is a longitudinal study, the limitation of this study is that the motivations for volunteering have been collected at one point in time (the last round, 2017) that prevent us from measuring the direction of effects. From this perspective, more studies are needed to examine the causal relationships between resources, motivations, and volunteering. These findings may be particularly relevant within the context of Norway and countries with similar characteristics, such as Scandinavian countries. Future studies should expand more factors concerning individuals' resources, provide a clearer explanation for the different motivations across various types of volunteering activities, and explore the barriers preventing older adults from volunteering.

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Figure and Tables

Figure 4

A combined conceptual framework of resource perspective (Wilson & Musick, 1997) and the functional approach of volunteering (Clary & Snyder, 1992, 1999)

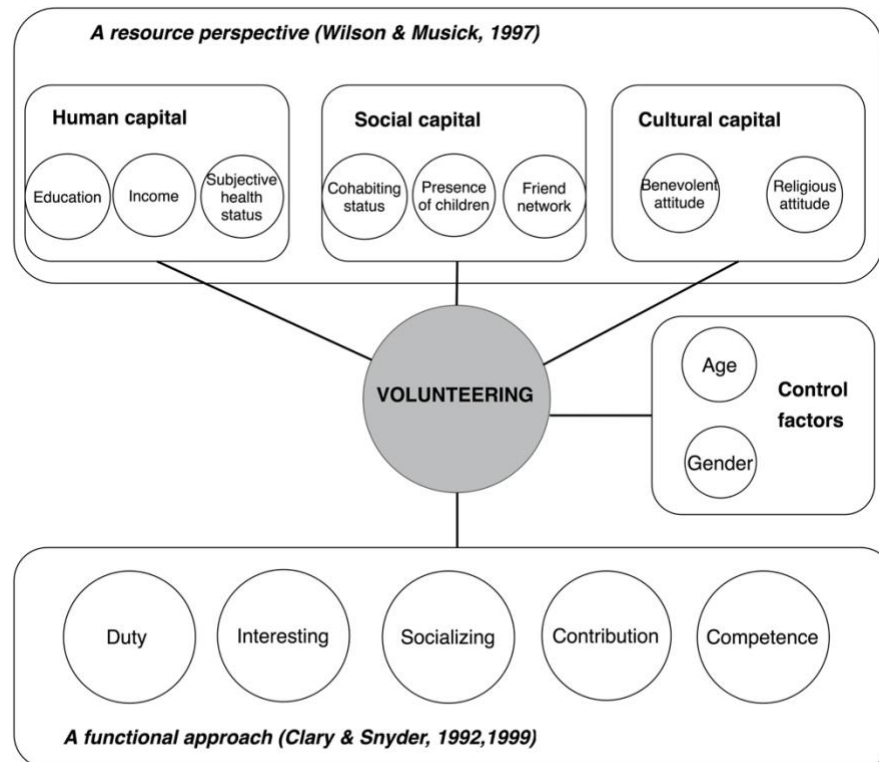


Table 1*Multicollinearity statistic of independent variables*

Independent variables	Tolerance	VIF
Education	.921	1.086
Income	.930	1.075
Subjective health status	.942	1.061
Cohabiting status	.951	1.052
Presence of children	.942	1.061
Friend network	.993	1.007
Benevolent attitude	.989	1.011
Religious attitude	.967	1.034
Duty	.968	1.033
Interesting	.834	1.199
Socializing	.892	1.122
Contribution	.898	1.114
Competence	.895	1.118

VIF: variance inflation factor

Table 2*Descriptive statistic of dependent, independent, and control variables (N=2222)*

Variables	N	Missing	%	Mean	Range
The intensity of voluntary work	1599	623			
<i>Inactive</i>			40.8		
<i>Active</i>			59.2		
Education	2217	5			
<i>No education or primary school</i>			11.0		
<i>High school</i>			46.5		
<i>University and college</i>			42.4		
Income (in NOK)	2191	31		426859	10000-4460000
Subjective health status	2218	4			
<i>Bad</i>			4.3		
<i>Pretty good</i>			18.8		
<i>Good</i>			27.8		
<i>Very good</i>			28.8		
<i>Excellent</i>			20.2		
Cohabiting status	2222	0			
<i>Not living with spouse/cohabitant</i>			25.6		
<i>Living with spouse/cohabitant</i>			74.4		
Presence of children	2222	0		2.24	0-9
Friend network	2216	6			
<i>Do not have good friends</i>			0.8		
<i>Having good friends</i>			99.2		
Benevolent attitude (No/Yes)	1587	635			
<i>Yes</i>			94.1		
Religious attitude (No/Yes)	2209	13			
<i>Yes</i>			47.9		
Duty (No/Yes)	2214	8			
<i>Yes</i>			30.8		
Interesting (No/Yes)	2220	2			
<i>Yes</i>			89.9		
Socializing (No/Yes)	2220	2			
<i>Yes</i>			81.8		
Competence (No/Yes)	2215	7			
<i>Yes</i>			78.4		
Contribution (No/Yes)	2218	4			
<i>Yes</i>			96.5		
Age	2222	0			
50-59			38.2		
60-69			35.1		
70+			26.7		
Gender	2222	0			
<i>Men</i>			56.0		
<i>Women</i>			44.0		

N: Number of valid observations, %: percentage

Table 3

Stepwise binomial logistic regression models for the intensity of voluntary work regressed on resource, age, and gender (OR)

Factors	Model 1	Model 2	Model 3	Model 4
Human capital				
Education				
<i>No and primary school (ref)</i>				
<i>High school</i>	1.352	1.359	1.388	1.351
<i>University and college</i>	1.461*	1.475*	1.480*	1.484*
Income				
	1.000	1.000	1.000	1.000
Subjective health status				
<i>Bad (ref)</i>				
<i>Pretty good</i>	.499*	.509*	.497*	.444*
<i>Good</i>	.661	.671	.649	.593
<i>Very good</i>	.508*	.516*	.505*	.473*
<i>Excellent</i>	.432**	.440**	.436**	.419**
Social capital				
Cohabiting status				
<i>Not living with spouse/cohabitant (ref)</i>				
<i>Living with spouse/cohabitant</i>		.895	.891	.921
Presence of children				
		.994	.984	.964
Friend network				
<i>Do not have good friends (ref)</i>				
<i>Having good friends</i>		1.269	1.282	1.428
Cultural capital				
Benevolent attitude				
<i>No (ref)</i>				
<i>Yes</i>			1.695*	1.965**
Religious attitude				
<i>No (ref)</i>				
<i>Yes</i>			1.268*	1.251*
Control factors				
Gender				
<i>Men (ref)</i>				
<i>Women</i>				.802
Age				
<i>50-59 (ref)</i>				
<i>60-69</i>				1.399**
<i>70+</i>				2.299***

*Dependent variable: The intensity of voluntary work (0=Inactive, 1=Active); *p<0.05, **p<0.01, ***p<0.001; OR: odds ratios, ref: reference categories*

Table 4

Stepwise binomial logistic regression models for the intensity of voluntary work regressed on resources, motivations, age, and gender (OR)

Factors	Model 1	Model 2	Model 3
Human capital			
Education			
<i>No and primary school (ref)</i>			
<i>High school</i>	1.371	1.359	1.317
<i>University and college education</i>	1.465*	1.568*	1.550*
Income			
	1.000	1.000	1.00
Subjective health status			
<i>Bad (ref)</i>			
<i>Pretty good</i>	.508*	.487*	.438*
<i>Good</i>	.665	.633	.583
<i>Very good</i>	.521*	.497*	.466*
<i>Excellent</i>	.446*	.440*	.423**
Social capital			
Cohabiting status			
<i>Not living with spouse/cohabitant (ref)</i>			
<i>Living with spouse/cohabitant</i>	.896	.875	.909
Presence of children			
	.984	.995	.975
Friend network			
<i>Do not have good friends (ref)</i>			
<i>Having good friends</i>	1.280	1.514	1.660
Cultural capital			
Benevolent attitude			
<i>No (ref)</i>			
<i>Yes</i>	1.667*	1.675*	1.917**
Religious attitude			
<i>No (ref)</i>			
<i>Yes</i>	1.269*	1.281*	1.259*
Motivations			
Duty ¹ (<i>Important</i>)		.871	.928
Interesting ¹ (<i>Important</i>)		1.503*	1.366
Socializing ¹ (<i>Important</i>)		1.326	1.313
Competence ¹ (<i>Important</i>)		1.865***	1.882***
Contribution ¹ (<i>Important</i>)		1.257	1.338
Control factors			
Gender			
<i>Men (ref)</i>			
<i>Women</i>			.809
Age			
<i>50-59 (ref)</i>			
<i>60-69</i>			1.352*
<i>70+</i>			2.239***

*Dependent variable: The intensity of voluntary work (0=Inactive, 1=Active); *p<0.05, **p<0.01, ***p<0.001; OR: odds ratios; ref: reference categories*

¹*Not important is (ref)*