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Predictive Factors for Voluntary and/or Paid Work among Adults in their Sixties

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Abstract Population aging is a current challenge globally as the Baby Boomers are heading towards retirement. In Finland, a regional-council postulated that the rate of retirement in the region will leave more than half of the population retired in the near future. Hence, this study conducted logistic regressions for predictive factors for voluntary and paid work among adults in their 60s from the region by using the Aging and Well-being of North-Savo Survey. Chi Square tests were also implemented in order to examine the link between their current engagement and their well-being. The logistic regressions implemented showed relative covariates of education, income, health and socioeconomic delineation as predictive factors for current and future engagements in voluntary and paid work. Chi Square tests also revealed a link between the current engagement of the respondents and their well-being. However, further studies will be needed so as to determine the differences in the relativity of the predictive factors by gender. In addition, the study suggests the importance of continuing the discussion of older adult's productive engagement and its value base in relation to income and outcomes, as well as spiritual empathy and sustainable future for the elderly.

Keywords Older adults · Paid work · Voluntary work · Productive aging · Survey

1 Introduction

The study aims to empirically examine the predictive factors for voluntary and/or paid work among older adults in North-Savo, Finland. The rationale for the study is premised on the global increase in the aging population which has been recognized as one of the

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challenges of the 21st century. Griffin and Hesketh (2008) attributed the immediate cause of this challenge, as observed among the developed countries, to Baby Boomers heading towards retirement vis-à-vis changing social, health and economic conditions. Until now in many countries, a huge amount of managerial and scientific work, especially in health and the social sciences, has focused on the care needs of those advanced in age from a dependency perspective. This approach has hindered the consideration of older adults as active and productive citizens, and has thus apparently necessitated a change in thinking in this regard. For instance, Futurage—the road map of future aging research, highlights inclusion and participation in the community and the labor market as major priority themes for future aging research (Futurage 2011). However, the forms of productive participation are several, making it necessary for this article to focus on the possible engagement in voluntary and/or paid work, now and in the near future, by older adults in their 60s.

Narushima (2005) has argued that a youth-oriented culture will make it difficult to see retirees as productive. In particular, it is seemingly difficult to measure the exact value of what older people provide through community volunteering, but its financial implications are salient (Griffin and Hesketh 2008). However, a general estimation of voluntary work suggests that the economic impact of the voluntary sector is enormous in many western countries, and pressure exists to increase voluntary work, especially in countries where the care sector has traditionally been organized by public services. Also, in many cases, public health and social services are transforming into the private or voluntary sector (see Rissanen et al. 2010; Oudijk et al. 2011; Stolt et al. 2011). Yet it is important to note that aspects of productive aging other than the economic aspect may be one way to maintain and improve older adults' quality of life. Nevertheless, there are still gaps in our knowledge regarding who actually benefits in the social and cultural context of volunteering, and its role in reducing health and social inequalities (Cattan et al. 2011).

As the retirement age is now on the political agenda of many countries, particularly among countries in the European Union (Kalwij and Vermeulen 2005), the drop in funding and birth rates compels this study to consider adult retirees as part of the future work force. Hence, this article examines the possible productivity of people in their sixties from a region in Finland. The survey data for the article is from North-Savo, Finland, where the average retirement age is 57.4. The Regional Council of North-Savo (2012) postulates that the rate at which aging people in the region increases will leave even more than half of the population retired, in the very near future. This has led to seeing older adults in their sixties as a watershed for participating in voluntary and/or paid work.

In other words, the Aging and Well-being of North-Savo Survey (in Finnish: Ikääntyminenja hyvinvointi Pohjos-Savossa—IKIPOSA) conducted in 2012, provides the empirical platform in this study for exploring both voluntary and/or paid work. The specific research tasks are as follows: *First*, a description and analyses of variables which predict current engagement in voluntary and/or paid work among the respondents, and their willingness to engage in either or both activities in the future. *Second*, an examination of how the current productive activities of the respondents are connected to their well-being. Therefore, the rest of this article is concerned with the following: conceptual or theoretical considerations based on previous research on voluntary and paid work relating to older adults; followed by a description of the survey data and analysis protocol. The results are stated in relation to the research tasks, and, after considering the limitations of the study, some conclusions are drawn and implications for society presented.

2 Conceptual Definition of Voluntary and Paid Work in the Discourse of Older Adults

In the scientific and scholarly discourse of gerontology, the concept of voluntary or paid work is located in a broader concept of 'productive aging.' According to Bass and Caro (2001), the concept of productive aging was coined by Robert Butler to argue the point that people need not only to see older adults from a dependency perspective; rather, this particular age group is relatively productive. Numerous sub-factors that have influenced the productivity of older adults have been synthesized into five main headings graphically by means of "a conceptual model of productive aging" by Bass and Caro (2001, p 47). Apparently, the concepts of voluntary and paid work are embedded in the graphic model and are later illustrated theoretically as: employment, volunteering, assistance with families and career-related education as four forms of productive activity for older adults.

Invariably, 'productive aging' has been used synonymously with 'productive engagement.' According to Thanakwang and Isaramalai (2013), the concept of productive engagement in older adults is multidimensional. It includes paid or unpaid activities, as well as social participation. In other words, the concept is a term that has been used in various ways; hence, Thanakwang and Isaramalai (2013) synthesized the attributes of the concept from the literature and developed a new model and definition of productive engagement. Literature findings indicate that these attributes involve a variety of economically, socially, and spiritually valued activities, such as continuing paid or unpaid work, caring for others, engaging in social activities, and growing spiritually. They all contribute positively to the quality of life of older adults in one way or another as illustrated in Fig. 1 below.

Subsequent research into the productive engagement of older adults in many parts of the world have either used other terminologies or listed other forms of concepts for the observable activities of people advancing in age. For example, Rozanova et al. (2012) in Canada, Croezen et al. (2009) in the Netherlands, Hoglund et al. (2009) as well as Kutner and Love (2003) in the US, have all at different times, used terminologies such as engagement, civic engagement, and social engagement as encapsulating the idea of

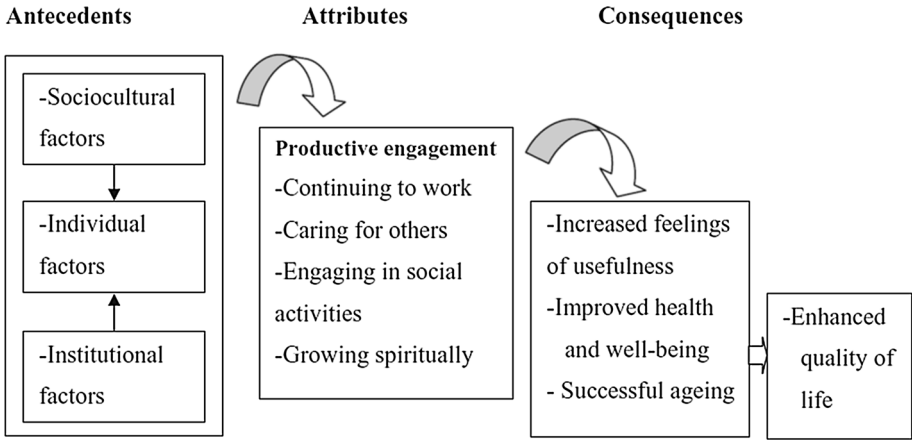

Fig. 1 Model of the concept of "productive engagement in older adults" (Thanakwang and Isaramalai 2013)

volunteerism. Thus, such descriptions across the world represent different linguistic conceptualizations of bio-psycho-social-spiritual humankind or older adults in this case, or aspects of the state of affairs of a population group which are difficult to comprehensively understand and describe in a single scholarly study.

Volunteering as a concept featured in several scholarly pieces of literature, but very few of them elaborated its meaning as a study construct. Although volunteering can be regarded as an activity that is freely chosen, it does not involve remuneration, and it helps or benefits those beyond an individual's immediate family (Cattan et al. 2011). Nevertheless, most of the literature used volunteering in the sense of unpaid work in contrast to paid work (Ahn et al. 2011; Bass and Caro 2001; Jegermalm and Jeppsson Grassman 2009; Matsuba et al. 2007; Parboteeah et al. 2004; Zedlewski and Schaner 2006). Similarly, Baker et al. (2005) investigated five broad categories of productive activity, namely: paid work, formal volunteering, care giving, informal helping behavior and do-it-yourself. They apparently used paid work as an antonym of voluntary work. In other words, basically the concept has one meaning as used in all the literature. It means unpaid work, but the types of work that are not paid for differ considerably among the authors. It is in this sense that the concept of volunteerism is also used in this study. It covers unpaid work, whether formal or informal, organized or unorganized, within and among family members or outside of this scope.

In addition, the meaning of paid work was further illustrated as paid productive activities as opposed to unpaid productive activities. Knapp and Muller (2000) argued that the meaning of paid work includes remunerative self-employment as well as work for others. Altschuler (2004) also associated the meaning of paid work among older women in particular with financial independence from their men. Griffin and Hesketh (2008) illustrated paid work among older adults as a means of providing a time structure which has health benefits, and additional finance; the opportunity to replace a shortage of skilled labor with the skill and experiences of retirees; and reducing the number of people depending on social security. However, in this study volunteerism is focused on simultaneously with paid work; both are constructs which dominate the literature review that follows.

3 Literature Review

Older adults' voluntary engagement or productive aging has been extensively studied globally, and it is seemingly complex, with much attention given to voluntary work as a means to an end, but with less attention to post-retirement paid work. Recently, attention has turned towards knowing the predictive factors for voluntary work in particular, and also to paid work. Hence, the review in this section is divided into two parts. The first part has to do with literature which comprises research into factors seemingly predictive of older adults participating in voluntary or paid work. The second part focuses on the outcomes for the social groups participating in both forms of work. Generally speaking, many of the studies have grouped older adults according to their different voluntary engagements (Croezen et al. 2009), predictive factors for volunteering (Parboteeah et al. 2004), and health challenges (Barlow and Hainsworth 2001). Therefore, it is apparent that there are numerous approaches globally to studying older adults' productive engagement capabilities, such as demographic, health, cultural and economic perspectives. Similarly, in epistemological thinking, studies concerning productive aging have generally attracted different scientific methodologies from both ends of inductive and deductive logic. Thus,

studies related to older adults participating in voluntary and/or paid work have also exhibited these patterns.

3.1 Predictive Factors for Older Adult's Participation in Voluntary and/or Paid Work

Not many studies are concerned with the factors that are predictive of older adults participating in voluntary work (see Rozanova et al. 2012; Ahn et al. 2011; Parboteeah et al. 2004) and paid work. Thus, in those few studies available, the complexities associated with studying the well-being of older adults and the quest for possible predictive factors for voluntary and paid work among them might have warranted almost similar quantitative methodologies. This is apparently so, as the literature review showed that all the studies included robust survey data in their investigations.

For example, both the study of older Australians in Taghian et al. (2012) and the conceptual and empirical study of volunteerism by Cnaan et al. (1996) combined qualitative and quantitative methodologies. Also, Barlow and Hainsworth (2001) used qualitative technique to explore volunteerism among older people with arthritis in England. In particular, Ahn et al. (2011) used the 2008 Aging Texas Well Indicator Survey in order to examine the characteristics associated with volunteering among older adults. While bivariate analyses revealed ethnic differences in volunteering, logistic regression analyses showed three factors (mental health, spirituality and community interactions) as predictive of volunteering among older adults in Texas. Similarly, Matsuba et al. (2007) used Midlife US Survey Data to research on commitment to volunteering among older adults in the US. Their investigation tested a model of psychosocial influences on commitment to volunteering by using structural equation modeling analyses. They discovered social structure, enduring and stable qualities, moral cognition, and social opportunities, as reliable factors for volunteering among older adults. However, they admitted that causal relations among the variables could not be established because of the complex nature of the subject of study.

Furthermore, studies carried out by Zedlewski and Schaner (2006) and Kutner and Love (2003) also used HRS longitudinal survey and AARP survey data respectively. The former discovered moral cognition and religious affiliations while the latter discovered education, religious affiliations, incomes and health, as well as age differences, as predictive factors for volunteering among older adults in the US. Both studies also discovered ethno-cultural consideration as a factor for volunteering among older adults in the US as previously stated in Ahn et al. (2011). The implication of this for emerging multicultural countries is that the complexities of factors influencing volunteerism among older adults may reflect cultural relativity, as different ethnic groups respond differently to volunteerism in terms of value, scope and depth of activity.

What seems to be a universalism of volunteerism among the aged was, however, confirmed with Jegermalm and Grassman (2009) response to skeptics of volunteering among the aged in Sweden. They used survey data and came up with an elderly group labelled "super helper." Religion, health, sociability and being active, as well as social networking were some of the factors that characterized the group. Similarly, the universalism of volunteerism among the aged was also confirmed by Parboteeah et al. (2004) in a cross-national study that involved 21 countries, including Finland. As in other previous studies in this review, they used the World Values Survey to test their hypotheses that three forms of capital are related to volunteering. At a national level of analysis, their Hierarchical Linear Test revealed wealth, education, collectivism, liberal democracy and religiosity as apparent predictors for volunteerism among old adults across countries.

The predictors for paid work and voluntary work were differentiated by Griffin and Hesketh (2008). They conducted a survey among older adults in Australia, and used multinomial logistic regression to examine the predictive factors for the individual determinants of paid and voluntary work. Samples included members from associations of retirees, employees of an NGO, and clients of a major financial institution. They tested a hypothetical framework based on image theory, commonly used for understanding decisions related to retirement. The outcome revealed gender, health, and retirement satisfaction as factors related to voluntary work, while education was related to paid work. In general, all the literature reviewed above apparently recognized the complexities involved in making inferences about predictors or causality of voluntary or paid work among older adults. Nevertheless, all the studies reviewed discovered some common predictive factors through their choice of similar methodology of investigation.

3.2 Well-Being as a Motivating Outcome

Apart from the few studies on predictive factors for older adult's participation in voluntary or paid work, more scholarly inquiries are available on desired outcomes as factors motivating them to participate in voluntary work, and apparently for paid work by extension. Such motivations include meeting certain ends, such as mental health and/or social belonging (see Sirven and Debrand 2008; Lee et al. 2008 as examples). The majority of these studies deployed quantitative methods—(for example, Veerasamy et al. 2014 for studies conducted in Malaysia; and for studies conducted in USA, see Borgonovi 2008; also Musick and Wilson 2003). In addition, due to the availability of numerous articles on volunteerism as a means to well-being of older adults, these articles have attracted a systematic review and meta-analysis of the health and survival of volunteers as conducted by Jenkinson et al. (2013). These possible dimensions, as reflected in studies on predictive factors earlier, show the complexities associated with studying productive aging in general, and voluntary and paid work by older adults in particular.

The systematic review by Jenkinson et al. (2013) of 40 research papers asserted that volunteering helps the mental health of older adults. It also helps their survival by, for example, improving employment opportunities and widening social circles or using the activity as a distraction from problems in their daily lives. Proteau and Wolff's (2008) study on self-reported explanations for volunteering in France showed that many volunteers sought to make friends and to meet other people through the activities for volunteers. Van Willigen (2000) assessed the long-term impact of volunteering on life satisfaction and the perceived health of persons aged 60 and older. The result showed increases in life satisfaction over time and greater positive changes in the perceived health of the elderly. Hong and Morrow-Howell's (2010) literature review revealed the positive outcomes of volunteering and well-being among older adults as lower mortality outcomes, improved physical function, higher self-rated health, fewer depressive symptoms, lower pain and greater life satisfaction (see also Cattan et al. 2011; Hoglund et al. 2009; Rios et al. 2013).

Furthermore, the motivation and expected outcome for participating by older women in paid work have attracted a feminist approach. Using qualitative methods, Altschuler (2004) researched into the meaning and experiences of paid work by older women from diverse ethnic backgrounds in Los Angeles. She discovered, among other things, that the desire for financial independence from men or husbands was one of the reasons for older women's participation in paid work. However, her findings may not be applicable in those social democratic countries with welfare regimes, where either partner may be the primary bread winner for their family from the outset. In addition, both genders do have social security in

case they become unemployed, thereby limiting the scope of applicability of Altschuler's (2004) findings.

Thus, the literature review section has revealed some complexities associated with studying productive aging in general. It has also shown the extent of epistemological and methodological dispositions to similarities and differences in studying older adults' participation in voluntary and/or paid work in specific national and international contexts. Most importantly, the causality of participation in voluntary work has been difficult to establish, but several predictive factors as well as well-being outcomes for older adults have been discovered. In addition, the predictors for paid work and voluntary work were differentiated from each other (Griffin and Hesketh 2008). Hence, this study also uses survey data so as to investigate possible predictive factors for voluntary work, paid work and well-being outcomes for engaging in productive activities by older adults in their sixties from North-Savo, Finland. Subsequently, the implications of the study for the region are illustrated in the concluding section.

4 Design and Implementation

4.1 Data Collection

The article used a secondary survey data which emerged from a project called 'Age Innovation 2012–2014' implemented by the University of Eastern Finland in collaboration with the municipalities in North-Savo, Finland, and funded by European Social Fund. A part of the project is the Aging and Well-being of North-Savo Survey. This was primarily intended for the investigation of productive aging in relation to functional capacity, social relations and well-being, hobbies and exercise habits, and health and attitudes, as regards the future of older adults in North-Savo, and conducted with a semi-structured questionnaire posted to the participants. The data were collected in 2012 and 2013 with the help of the Finnish Population Register Center which supplied the contacts (N = 5822) of pensioners, recently retired or about to retire, and those still in working life; who are in their sixties (n = 3902) and 70 s (n = 1920) and living in North-Savo. The total response rate was 42.9 % (n = 2496). However, for the purpose of this article, the data of participants in their seventies and older (n = 993) were excluded; and the remaining data of participants in their sixties (n = 1503) were subsequently subjected to analyses.

4.2 Description of Variables and Measures

4.2.1 Independent Variables

The data analyzed for the article consists of six independent categorical variables—*Gender* with a two-point scale (male/female), *Education Level* with a three-point scale (basic/intermediate/college/university degree), *Socioeconomic Group* with an eight-point scale based on the classification of Statistics Finland (self-employed/in managerial position/upper-level employee/lower-level employee/manual worker/agriculture/stay-at-home mother or father/and others unspecified), *Income* with a dichotomous scale (sufficient/not sufficient), *Health* with a three-point scale (very poor or poor/neither poor nor good/very good or good), *Quality of Life* with a three-point scale (very poor or poor/neither poor nor good/very good or good). The distributions of the cases (n = 1503) over the values of the independent variables are shown in Table 1.

Table 1 The respondents' characteristics and distribution of values (n = 1503)

	n	%
Gender		
Male	675	44.9
Female	828	55.1
Missing	0	
Education level		
Basic	501	33.3
Intermediate	475	31.6
College/university degree	453	30.1
Missing	74	4.9
Socioeconomic group		
Self-employed person	131	8.7
In managerial position	76	5
Upper-level employee	179	11.9
Lower-level employee	270	18
Manual worker	621	41.3
Farmers/loggers	115	7.7
Stay-at-home mother/father and other	72	4.8
Missing	39	2.6
Income		
Sufficient	1080	71.9
Not sufficient	400	26.6
Missing	23	1.5
Health		
Very poor or poor	103	6.9
Nor poor neither good	519	34.5
Very good or good	867	57.7
Missing	14	0.9
Quality of life		
Very poor or poor	51	3.4
Nor poor neither good	290	19.3
Very good or good	1142	76
Missing	20	1.3
Currently engaged in voluntary work		
Yes	317	21.1
No	1149	76.4
Missing	37	2.5
Currently engaged in paid work		
Yes	764	50.8
No	739	49.2
Missing	0	
Willing to volunteer in the future		
Yes	480	31.9
No	1023	68.1
Missing	0	

Table 1 continued

	n	%
Willing to do paid work in the future		
Yes	699	46.5
No	804	53.5
Missing	0	

4.2.2 Dependent Variables

All the scales for the dependent variables are dichotomous. Each response to the dependent variable *currently engaged in paid or voluntary work* is computed on the basis of yes or no. The five-point scale for the variable engaged in voluntary work in the original survey was for the purpose of this study combined into a dichotomous scale, that is, to 'Yes or No'. The responses to variables *willing to volunteer in the future* and *willing to do paid work in the future* are also dichotomous. Also, see Table 1 for the distribution of the cases (n = 1503) and the value of the dependent variables.

4.2.3 Measures

Among the 1503 cases and responses of adults in their sixties from the survey used for this study, the relationships between the categorical independent variables and the dependent variables as relating both to current and future engagement in voluntary and/or paid work were measured using logistic regression. Chi square tests were also conducted to ascertain the present level of the well-being of those respondents currently engaged in voluntary and paid work.

In other words, using the Statistical Package for Social Sciences (SPSS) version 19, four logistic regression models were implemented concerning the first research question of the study. In the first two models as in Table 2, two dependent variables, *currently* engaged in voluntary and/or paid work were regressed against the categorical independent covariates. Similar regression models were conducted for the other two variables concerning the respondents' willing to work in the *future*, as in Table 3. In all the models implemented, the method "Enter" was used, which indicates that all variables included are considered simultaneously. The models fit statistics are shown in "Appendix 1".

For the second research question of the study, Chi Square tests were conducted to ascertain the relationships between the independent covariates of *Health* and *Quality of life* and the dependent covariates of *voluntary work* and *working full-time or part-time* among the respondents currently engaged in productive activities as presented in Table 4.

5 Results

5.1 Description of Respondents' Characteristics and Distribution of Values

The characteristics of the respondents and the distribution of response values are presented in Table 1. There is near parity of gender among the respondents −44.9 % male to 55.1 % female—thus both genders are well represented in the study. Levels of education are almost evenly distributed but for the missing cases. However, the respondents differ in

Table 2 Logistic regressions for those currently engaged in voluntary and/or paid work (Models 1 and 2)

	Voluntary work (Model 1) OR (95 % CI)	Paid work (Model 2) OR (95 % CI)
Gender		
Male	1	1
Female	0.948 (0.721–1.245)	1.111 (0.876–1.409)
Education level		
Basic	1*	1***
Intermediate	1.131 (0.805–1.589)	1.138 (0.858–1.509)
College/university degree	1.714 (1.145–2.564)**	2.168 (1.521–3.091)***
Socioeconomic group		
Self-employed person	1***	1***
In managerial position	1.448 (0.769–2.728)	0.865 (0.436–1.717)
Upper-level employee	0.429 (0.238–0.775)**	0.552 (0.319–0.957)*
Lower-level employee	0.672 (0.401–1.125)	0.462 (0.283–0.756)**
Manual worker	0.578 (0.358–0.931)*	0.461 (0.295–0.721)**
Farmer/loggers	1.3000 (0.718–2.354)	0.377 (0.212–0.672)**
Stay-at-home mother/father and other unspecified	0.623 (0.302–1.285)	0.186 (0.094–0.370)***
Income		
Not sufficient	1	1
Sufficient	0.990 (0.715–1.371)	2.027 (1.535–2.678)***
Health		
Very poor or poor	1	1***
Nor poor neither good	0.977 (0.539–1.770)	2.983 (1.645–5.412)***
Very good or good	0.915 (0.492–1.702)	4.285 (2.326–7.893)***
Quality of life		
Very poor or poor	1	1
Nor poor neither good	1.105 (0.481–2.534)	0.663 (0.311–1.415)
Very good or good	1.260 (0.550–2.890)	0.679 (0.319–1.442)
Currently engaged in paid work		
No	1	
Yes	0.686 (0.517–0.911)**	
Currently engaged in voluntary work		
No		1
Yes		0.690 (0.520–0.915)*
Constant	0.347*	0.427*
Pseudo R^2	0.048	0.170
N	1337	1337

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

their socioeconomic groups; nevertheless, the majority (71.9 %) acknowledged receiving sufficient income. Their health and quality of life indicators are also positively on the increase and very encouraging. Most importantly, the majority of the respondents are

Table 3 Logistic regressions for those willing to volunteer for work and/or paid work in the future (Models 3 and 4)

	Voluntary work (Model 3) OR (95 % CI)	Paid work (Model 4) OR (95 % CI)
Gender		
Male	1	1
Female	2.094 (1.607–2.730)***	0.805 (0.636–1.019)
Education level		
Basic	1	1*
Intermediate	1.215 (0.880–1.678)	1.029 (0.774–1.369)
College/university degree	1.218 (0.833–1.782)	1.498 (1.054–2.130)*
Socioeconomic group		
Self-employed person	1	1
In managerial position	1.000 (0.517–1.933)	0.598 (0.320–1.116)
Upper-level employee	0.981 (0.565–1.703)	1.396 (0.830–2.347)
Lower-level employee	1.025 (0.621–1.692)	1.088 (0.680–1.742)
Manual worker	0.596 (0.371–0.959)	1.047 (0.681–1.608)
Agriculture	0.949 (0.513–1.755)	1.284 (0.729–2.261)
Stay-at-home mother/father and other	0.765 (0.375–1.562)	0.905 (0.472–1.736)
Income		
Not sufficient	1	1
Sufficient	1.386 (1.006–1.911)*	0.696 (0.525–0.923)*
Health		
Very poor or poor	1	1
Nor poor neither good	1.075 (0.576–2.006)	1.464 (0.859–2.496)
Very good or good	1.477 (0.781–2.792)	1.367 (0.636–1.019)
Quality of life		
Very poor or poor	1	1
Nor poor neither good	1.515 (0.613–3.746)	1.106 (0.535–2.284)
Very good or good	1.760 (0.720–4.300)	1.118 (0.542–2.306)
Engaged in voluntary work		
No	1	1
Yes	5.072 (3.788–6.791)***	1.434 (1.083–1.898)*
Engaged in paid work		
No	1	1
Yes	0.932 (0.714–1.219)	3.477 (2.720–4.444)***
Constant	0.082***	0.377**
Pseudo R^2	0.207	0.144
N	1337	1337

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

currently engaged in either paid or voluntary work, and a combined greater percentage is also willing to be part of the workforce in the future either as a volunteer or paid worker.

Table 4 Frequencies of productive engagements as related to well-being outcomes (%)

	Currently engaged in voluntary work		Currently engaged in paid work	
	n	%	n	%
Health[a]				
Very poor or poor	22	21.6	21	20.4
Neither poor nor good	107	21.3	223	43.0
Very good or good	185	21.8	513	59.2
Total	314	21.6 (ns)	757	50.8***
χ^2 (*df*)	0.038 (2)		75.155 (2)	
Quality of life[b]				
Very poor or poor	10	20.0	18	35.3
Neither poor nor good	57	20.1	110	37.9
Very good or good	246	22.0	627	54.9
Total	313	21.6 (ns)	755	50.9***
χ^2 (*df*)	0.549 (2)		31.812 (2)	

ns not significant

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

[a] Missing in voluntary work: 49, missing in paid work: 14

[b] Missing in voluntary work: 53, missing in paid work: 20

5.2 Logistic Regression for Those Currently Engaged in Voluntary and/or Paid Work

In the four models, out of n = 1503 cases, 1337 (88.9 %) were included in the logistic regression analyses; while 166 cases were missing. The odds ratio, with a 95 % confidence interval, and probability values for each category of the independent variables are included in Tables 3 and 4. In order to ascertain how the independent covariates of cases have predicted current engagement in voluntary and paid work, two models of logistic regression were implemented as in models 1 and 2 (see Table 2 below). In general, as portrayed in the table, *gender* did not have any positive association, that is, with being currently engaged in either voluntary work or paid work.

In model 1, the category of *College/University Degree education* predicts current engagement in voluntary work more among the cases (OR 1.714) compared to *Basic education*, while *Intermediate education* has a negative association. The *Upper-level employee* and *Manual worker categories* of the Socioeconomic variable predict current engagement in voluntary work among the cases (OR 0.429 and 0.578 respectively). Furthermore, being currently engaged in paid work reduces the odds of being currently or simultaneously engaged in voluntary work (OR 0.686).

In model 2, different categories of the covariates of Education, Socioeconomic group, Income, and Health predict current engagement in paid work. *College/University Degree education* (OR 2.168), *Sufficient income* (OR 2.027), *Very good or good* (OR 4.285), *Neither poor nor good* (OR 4.285) predict with strong significance current engagement in

paid work among the cases, while all the categories in the Socioeconomic variable with the exception of *In managerial position* have positive connections to being currently engaged in paid work. Also, being currently engaged in voluntary work is negatively connected to simultaneous or current engagement with paid work (OR 0.690).

5.3 Logistic Regression for Willingness to Volunteer for Work and/or do Paid Work in the Future

In order to ascertain how the independent covariates have predicted willingness among the cases to engage in voluntary and paid work in the future, two models of logistic regression are well implemented; and they are displayed as models 3 and 4 in Table 3. For model 3, the result indicates that only the categories of the independent variable Gender—*Female* (OR 2.094); and Income—*Sufficient income* (OR 1.386); are statistically significant in determining the willingness to engage in voluntary work in the future. As for those cases of people currently volunteering, the odds ratio (OR 5.072) of the sample indicates they are willing to volunteer in the future; in addition, the odds ratio (OR 1.434) in model 4, simultaneously indicates they are also willing to engage in paid work in the future. Furthermore in model 4, the odds ratio (OR 3.434) of those currently engaged in paid work indicates that they are as very willing to engage in paid work in the future.

In other words, model 4 revealed *Basic education*, *College/University Degree education*, and *Sufficient income* as the statistically significant factors for predicting willingness to engage in paid work in the future. The model also shows that respondents with College/University Degree education have a higher odds ratio (OR 1.498) to continue working in the future than those with basic education, whereas an intermediate education did not have any significant effect in this regard. Also, the odds ratio for *Sufficient income* category is OR 0.696 for willing to engage in paid work in the future.

5.4 Chi Square Tests: Frequencies of Productive Engagements as Related to Well-Being Outcomes

Based on the χ^2 tests (crosstabs), well-being is more is more closely related to paid work than to voluntary work. The variables Health and Quality of life are significantly related to being currently engaged in paid work as displayed in Table 4 below.

In other words, the category Very poor or poor health is seemingly connected to withdrawal from paid work, but this is not the case with voluntary work. Similarly, the categories of quality of life as a variable—Very good or good is apparently connected to participation in paid work by older adults.

6 Discussion and Conclusion

The study examined predictive factors for voluntary and/or paid work among older adults in their sixties from the North-Savo region of Finland. It also investigated the relations between current engagement in productive activity among the respondents and their well-being. The results revealed *Basic* and *College/University Degree education*, *Sufficient income*, *Good health* and *stay at home mother/father* in the Socioeconomic variable as the predictive factors for currently engaged in voluntary and/or paid work by North-Savo adults in their sixties. The same criteria predict for those willing to engage in voluntary or

paid work in the future. However, some predictive factors are more emphatic for paid work than for voluntary work. The variables—college/university degree education, sufficient income and well-being are more predictive of paid work than for voluntary work, while well-being is a predictive factor for both forms of engagements among older adults. The variables—Health and Quality of life, were also discovered to be related to currently engaged in paid work. In other words, comparatively speaking there are slight differences in the predictive factors for older adults' engagement in voluntary and paid work in this study and those cases in the literature review section. Hence, this study asserts that cultural relativity also accounts for differences in predictive factors for older adults' engagements in voluntary and/or paid work in different contexts.

Thus, in contrast to what is illustrated in the literature review, education among North-Savo older adults in their sixties is not an all-rounder factor for predicting voluntary and/or paid work. One wonders why only *basic* and *college/university degree* education categories are predictors while *intermediate* education is excluded. If the variable education is taken as an all-rounder factor, then the study would have fully confirmed and supported previous studies such as those conducted by Kutner and Love (2003) and Parboteeah et al. (2004). Those studies empirically asserted education as one all-round factor for predicting older adult engagements in voluntary work. Nevertheless, this study also partly supports Griffin and Hesketh (2008) regarding paid work while it does not support the voluntary work aspect.

However, *Income*, as a variable, is an all-rounder factor for currently being engaged in paid work and for being willing to engage in paid work in the future. Hence, the findings about the variable support those of Kutner and Love (2003) in this regard. Consequently, *Income* becomes a strong predictive factor for predicting older adults' engagement in paid work across countries. The variable *Health* as a predictive factor for voluntary and/or paid work among older adults is apparently similar to that of *Income* in this study. It confirms the findings in Jegermalm and Grassman (2009) and Griffin and Hesketh (2008). Hence, *Health* also becomes a strong predictive factor for older adults' engagements across countries. Furthermore, Chi Square tests show *Health* and *Quality of life*, as indicators of well-being, are connected to participation in paid work by older adults. On the other hand, the variable *Socioeconomic group* has so many categories which did not predict for older adults willingness to engage in voluntary and/or paid work in the future. Nevertheless, the variable's categories predicted significantly for currently engaged in paid work which may be due to the immediate economic gains for the respondents.

Unique to this study is the high odds ratio (OR 2.094) of North-Savo's older females willing to engage in voluntary work in the future. This is a high odds ratio compared to their male counterparts with an odds ratio of 0.805. Some feminist studies (Arber and Ginn 1995; Ungerson 1995) have addressed the role of female gender in voluntary work decades ago, and this issue is still relevant nowadays, particularly in Finland or the Nordic countries, in view of the findings of this study. However, it is pertinent to ask why a high odds ratio is lacking in their male counterparts and why is the females' odds ratio in case of current engagement in paid work totally different?

However, the study is limited by its apparent relativity; this accounts for the slight differences in the study findings compared to similar studies around the world. The study is also limited by the level of response, the characteristics of the respondents, and the data-gathering instrument; categorical concepts in some of the independent variables need to be restructured in order to eliminate the apparent conceptual repetition or ambiguity. Despite the limitations, the general policy implication of this study for social policy is the relativity and applicability of its findings for preparing older adults for future voluntary and/or paid

work. Specifically, the study has been able to establish the values inherent in voluntary and/or paid work for older adults in their sixties in North-Savo, Finland. In addition, the policy implications of the study for the region are: first, it discovered factors that will result in older adults subsisting on voluntary and/or paid work which governments can improve upon; second, it provides evidence to make up for the shortage of skilled workers amid the retirements of Baby Boomers; third, voluntary and paid work are a discovered avenue for managing mental health problem among the older adults of the region, and fourth, social networking and a sense of belonging are also parts of the values derived by the respondents.

In conclusion, in addition to its policy and individual implications, the study also discovered the conceptual analyses of 'productive aging' to be multidimensional and complex, hence, there is a need for future studies to describe the meaning of the concept in detail. The literature review section also showed that, in the social sciences, the predictors and outcomes of voluntarism among the elderly are more the focus of studies in comparison with participation in paid work. In addition, those factors which are seemingly less predictive of older adults' engagement in productive activities in the future could be addressed by the process of empowerment, which can motivate and encourage older adults to be part of a future workforce. In general, the study suggests that it is ethically right and very important to continue the discussion of the role of productive activities for older adults and its value base in relation to income and outcomes for the elderly (Arendt 2005) as well as in relation to spiritual empathy and a sustainable future as asserted by Biggs (2014). It also suggest that, if the observed difference among the gender is to be balanced, future studies could focus on the possible changes needed in voluntarism and/or paid work.

Appendix 1: The Fit of the Models

Model 1: Current Participation in Voluntary Work

The Omnibus Test of model 1 coefficients showed the Chi square (χ^2) value of 42.707 ($df = 15$) with a high significant p value of <0.001, which indicated that the independent/explanatory variables selected in the model had a positive influence on the fit of the model when compared with the constant/baseline model. The fit of the model was also tested with the Hosmer and Lemenshow Test, which showed the p value of 0.730 and, based on the high p value, we can say that the model and the data have a good fit. On the contrary, the Nagelkerke Pseudo-R^2 was 0.048 which is very poor for the model. Also, the classification of predicted values of observations was poor. It could not correctly classify those who participate in voluntary work at all. Of all the observations, the model was able to classify 78.2 %. The percentage did not increase from the null model at all.

Model 2: Current Participation in Paid Work

The Omnibus Test of model 2 coefficients was significantly better than the baseline model, and Chi Square (χ^2) = 182.067, $df = 15$, $p < 0.001$. Also, the Hosmer and Lemenshow Test showed a good fit of the model with high p value (0.487), but the Nagelkerke Pseudo-R^2 was only 0.170. The model correctly classified 57.5 % of those who did not participate in paid work, and 70.6 percent of those who did work. The overall percentage was 64.3

percent. The percentage increased from the null model (52.1 %) by over 12 percentage points.

Model 3: Future Participation in Voluntary Work

According to the Omnibus Test of model 3 coefficient, the Chi square was highly significant ($\chi^2 = 214.749.509$, $df = 15$, $p < 0.001$); this showed that the new model (with independent/explanatory variables included) was significantly better than the baseline model. The Nagelkerke Pseudo-R^2 was 0.207, which is considered to be an adequate fit of the model. The Hosmer and Lemenshow Test showed a good fit of the model with a high p value (0. 301). However, when we evaluate the model based on the accuracy of the classification of predicted values of observations, the model was only moderate. It correctly classified only 34.3 % of those who were willing to participate in voluntary work in the future. Of those who were not willing to participate, the model correctly classified 91.2 %. Of all the observations, the model was able to classify 72.8 %. The percentage increased from the null model (67.8 %) by five percentage points.

Model 4: Future Participation in Paid Work

Also, the Omnibus Test of model 4 coefficient showed the positive influence of independent variables selected for the model when compared with the constant model ($\chi^2 = 152.795$, $df = 16$, $p < 0.001$). The Nagelkerke Pseudo-R^2 was only 0.144, which indicates a relatively poor fit of the model. Instead, the Hosmer and Lemenshow Test indicated a better fit of the model with high p value (0.969). The model correctly classified 62.6 percent of those who were not willing to work in the future, and 67.0 percent of those who thought they would consider working. Altogether, the model correctly classified 64.7 percent of cases, which was a slight increase over the null model (52.7 %).

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