

# Education and Subjective Well-Being among Older Vietnamese: Exploring Gender Differences

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## Abstract

*Vietnam, like many developing countries, is facing a rapid aging population. Therefore, understanding factors that are important to well-being in old age has become a key public policy concern. Using data from 2011 Vietnam National Aging Survey, the goal of this study was to examine the association between level of education and the subjective well-being of elderly males and females in Vietnam based on two affective domains: happiness and loneliness (N=2,571). Multinomial logistic regression analyses showed level of education was associated with happiness and loneliness of the elderly but there were distinct gender differences. Higher education was positively associated with men's happiness, but not for women. Regarding loneliness, having university education is associated with a lower level of loneliness for both sexes. The study found those with higher education tended to be happier and less lonely. However, educational level had a stronger effect on males than females. Therefore, raising education level of the next generations is important in improving their subjective well-being during their old age.*

## Keywords

*Education; subjective well-being; happiness; loneliness; elderly*

## Introduction

Subjective well-being approaches relate to why and how people experience their lives in different ways that range from negative to positive scale, including emotional reactions to life events, cognitive evaluation, and affective reaction. Happiness and loneliness are considered affective reaction of subjective well-being (Diener, 1984; 2009; Snyder & Lopez, 2009). Education has been well documented to have a close relationship with subjective well-being of adults (Witter, Okun, Stock & Haring, 1984). Previous studies have found level of education plays an important role in increasing happiness through its economic benefits, such as higher income and good employment. A Spanish study suggests highly educated people have a greater likelihood to find a good job and which also offers a higher level of income, thus, they tend to report a higher level of happiness. In addition, people with higher level of education are more confident and gain pleasure from acquiring knowledge. Their inner happiness is due to their satisfaction with their personal lives as well as them having deeper insights about themselves and the world (Cuñado & de Gracia, 2012). In short, the relationship between education and happiness is mediated by income satisfaction, work environment, and type of labor. However, there are not many studies that explored the relationship between education and happiness among older persons.

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Loneliness among older persons has been widely documented as being a result of changes in social structure, culture, family model, and intergenerational gap. Studies have shown older people become frustrated when family relationships deteriorate. This is aggravated by feelings of social isolation and this is more evident among individuals with reduced mobility or poorer health (Coplan & Bowker, 2013). Many studies have examined the determinants and impact of loneliness among older persons. For example, Pinquart and Sorensen (2001) found that social networks had an impact on loneliness along with other factors, such as age, gender, socioeconomic status, and living in nursing homes. However, not many studies have explored the relationship between level of education and loneliness among older persons. As a result, conducting research to find out the relationship between level of education and subjective well-being in terms of happiness and loneliness among the elderly is crucial because of its significant contribution to knowledge on this topic, especially given the demographic transition (read ageing population) in many countries.

According to a United Nations report (2014), policies that specifically target for the elderly are not in place in many countries, especially in developing countries (United Nations, 2014). Vietnam for example, is a lower middle-income country and has one of the world's rapidly ageing populations. The country faces many issues related to, employment, slow economic growth, and changes in the family structure (from an extended one to a nuclear family) among others (Kham, 2014). Many of the elderly are farmers and live in rural areas. It has to be noted the size of the agricultural land in Vietnam is shrinking due to modernization and industrialization. More than 70% of the elderly (aged 60 and above) still work to earn a living and only about 25.5% of them have pension fund or social allowances. Additionally, the elderly in Vietnam spend an average of 15.3 years battling diseases and disabilities, and 95% of them suffer from chronic diseases (Institute of Social and Medical Studies, 2012). Although the incidence of chronic disease is high among the elderly, the geriatric services at public health facilities are poor, while private services are expensive. Therefore, the elderly face high burden of health care costs, affecting mostly those who are socioeconomically poor (Jones, Anh & Presler-Marshall, 2010). In addition, the family, which is considered the basic unit of society, has undergone significant changes in structure, from a traditional extended family to a modern nuclear family. This new family structure is due to marital breakdowns, resulting in single parents, pre-marital and extra-marital status. This has culminated in relationship breakdown and mutual care responsibilities among family members (Truc, Chankrajang & Yen, 2017). Thus, these changes and transitions have an impact on the psychology and subjective well-being of the elderly. Many of the elderly thus, suffer from mental health. To date, there is no comprehensive research on mental health of the elderly in Vietnam (though there have been studies of this nature but focusing on adolescents, youth, or childhood). Lack of laws on mental health means there is no national action plan on mental health programs for the elderly. This is aggravated by a lack of comprehensive mental health information system. All these have an effect on to the promulgation of good mental health policies for the elderly in Vietnam (Minas, Edington, & Kakuma, 2017).

The Vietnamese culture and traditions are greatly influenced by the Confucian ideology which is based on patriarchy, son preference, and strict rules on gender roles, to the detriment of the women (Bourke-Martignoni, 2001; Goodkind, 1995; Taylor, 2004). To be more specific, men are expected to be the pillar of the family, maintain family lineage which places heavy emphasis on having sons, and to be the breadwinner and make important decisions for family members. The men also play an important spiritual role. In contrast, women are expected to devote themselves to house-keeping, educate and care for their children and family members (Rosenlee, 2006). Women have a lower position in the family and in society, for example, an unmarried daughter is obliged to listen to her father while the married ones obey her husband, and the widowed mother is obliged to respect and carry out the wishes of her eldest son (Connell, 1987; Maharaj, 1995).

There are a number of empirical studies focusing on social structure, family relationship or health status of the elderly in Vietnam, such as their living arrangements, health, intergenerational solidarity, labor force participation and long-term care (Giang & Le, 2017; Le, Quashie & Prachuabmoh, 2018; Teerawichitchainan, Pothisiri & Long, 2015; Truong, Bui, Goodkind & Knodel, 1997). However, there is no research at the national level about the elderly's mental health or its proxy variables, such as their subjective well-being. Therefore, in order to prevent mental traumas among the elderly, the government of Vietnam needs to first undertake a comprehensive study to assess the subjective well-being of its target population before formulating and developing a sound health care policy for them. Many articles and studies have been published on the meaning and determinants of subjective well-being (Bratu, 2011; Diener & Suh, 2000; Knight, Lina & Gunatilaka, 2009; Ross, Eyman & Kishchuk, 1986). Studies also revealed a link between subjective well-being and educational level. In the context of Vietnam, it is important to assess the special impact of educational background on subjective well-being at later life of Vietnamese. This would assist in formulation of policies to improve the education and training systems in the country (Duggan, 2001; Ministry of Education and Training, 2017; Schiller & Liefner, 2007).

## **Research Objective**

The current study examines the relationship between education and subjective well-being (specifically focusing on loneliness and happiness), controlling for other factors, among elderly females and males.

## **Background**

### **Educational background of the elderly in Vietnam**

Based on Vietnam National Aging Survey 2011, older (read elderly) men have a higher level of education compared with their female counterpart (see Table 1). Vietnamese have a Confucian philosophical worldview where women are not highly valued. The men on the other hand, are considered superior and have superior status in the family and society. Women in Vietnam in general have a lower education and hence lower employment status and wage compared with men. The culture also demands them to obey their husbands and male relatives and allow them to be decision makers (Rosenlee, 2006). Older women face financial insecurities as they have no pension allowance and limited skills and knowledge, and which in turn makes it difficult for them to find a job. Many among them suffer from mental problems due to their loneliness as they tend to be without their partners at that age (Honigh-de Vlaming, Haveman-Nies, Bos-Oude Groeniger, de Groot & van't Veer, 2014) and this leads to depression (Singh & Misra, 2009).

**Table 1:** Education of Vietnamese older persons by gender

Education level	Female (%)	Male (%)	<i>p</i> -value
Primary	1,389 (82.53)	590 (53.35)	
Lower secondary	165 (9.80)	275 (24.86)	
Upper secondary	53 (3.15)	131 (11.84)	<0.0001
Professional Secondary	40 (2.38)	33 (2.98)	
College/University	36 (2.14)	77 (6.96)	
Total	1,683 (100)	1,106 (100)	

*Source:* Author's calculation from VNAS, 2011

*Note:* Chi square test was used to determine the significance of the differences in education between the males and females.

## Gender differences in Vietnam

In Vietnam, women play an inferior role compared with men both in the family and in society due to their belief in and practice of Confucian ideology (this was a result of the country being under the rule of China for over 1,000 years) (Huong & Fry, 2004). Patriarchy in Vietnam has ensured women receive lower education which means they do not possess high technical skills or expertise and remain in low positions at their workplace in addition to obeying their fathers, husbands and male relatives (Rosenlee, 2006). Klasen and Lamanna (2009) reported the challenges of gender inequality where women have to depend on their husband's income in the early period of their lives, though many contribute to family income through informal work. Therefore, in later life, these women may face financial crisis, including having no pension fund, no social insurance, or medical insurance or other social benefits which are available only to those who work in the formal sectors. In addition, due to their low level of education and technical expertise, they may face difficulties in finding employment at old age (Klasen & Lamanna, 2009). The first Vietnam National Ageing Survey (2012) also indicated that women are poorer than men (Institute of Social and Medical Studies, 2012). In addition, older persons in Vietnam now were mostly born during the period when Vietnam has not industrialized, modernized, and when campaigns on gender equality were non-existent. Elderly women tend to be alone without their partners due to their longer life expectancy and low rate of remarriage, which likely leads to loneliness. Their primary role is to take care of their family members (Honigh-de Vlaming et al., 2014; UNFPA, 2016), this could possibly lead to depression at old ages (Singh & Misra, 2009).

## Subjective well-being measurement

Subjective well-being includes the sense of overall life (types of life satisfaction) and emotional elements (happiness, loneliness, and depression) (Andrews, 1983; Diener, 1994; Mason, 1978). In other words, subjective well-being is the way an individual evaluates his/ her life through his or her positive and negative experiences based on their personal experience and influenced by social factors, such as level of education, activities and work, age, region, number of sons and daughters, saving, debt, marital status, chronic diseases, and gender (Stember, 1982). Diener and Chan (2011) concluded that high subjective well-being level or positive psychological state can predict longevity because it may lower diastolic blood pressure and cortisol which is related to cardiovascular disease, hypertension, or immune diseases. Moreover, a positive psychological well-being will help people to overcome difficulties in their life. Intervention to improve well-being for Vietnamese older persons is a necessary and

important policy for achieving “successful ageing” in the rapidly changing cultural context and social structure in Vietnam (World Health Organization, 2002).

This study examined two aspects of subjective well-being: happiness and loneliness. These are branches of “affective factors”. These measurements are indicators of subjective well-being in “Guidelines for National Indicators of Subjective Well-being” (Diener, 2006). This classification is in line with the definition of Diener, Suh and Oishi (1997) on subjective well-being. Moreover, it is in line with the authors’ two main assessments of subjective well-being, namely a cognitive and affective evaluations of life.

## **Relationship between education and subjective well-being**

There are a number of theories and articles on the determinants of subjective well-being, such as income level, quality of housing, marital status, attitudes, social comparisons and aspirations (Diener & Suh, 2003; Knight et al., 2009; Ross et al., 1986). In his book on positive psychology, Carr (2013) pointed out that life satisfaction is significantly affected by financial satisfaction. In addition, Giang and Le (2017) found that workers are more likely to report a healthier condition than those who are unemployed or do not work. Besides, health status has always been shown to have a strong and consistent relationship with subjective well-being. For example, heart diseases, such as heart attacks or strokes, have a negative relationship with subjective well-being due to its direct relationship with health conditions (Shields & Price, 2005). Badger and Chappell (1989) pointed out that marriage, companion, and living arrangements are important indicators related to happiness and life satisfaction of older persons. Along with informal social activities, religion is found to play an important role in significantly improving the physical and mental health of the elderly people. The positive impact of religion on emotional well-being at later life or old age has been confirmed in many studies. McFadden (1995) however, argued that religion has a negative effect on subjective well-being of older persons. In the context of Vietnam, inequality, including income and housing quality, has been proven to be important factors related to low degree of happiness and life satisfaction of the elderly (Tran, Nguyen & Van Vu, 2018; Tran & Van Vu, 2018). The current paper examines the relationship between education and subjective well-being, specifically happiness and degree of loneliness, of older persons in Vietnam.

The association between education and happiness is rather complex and multifaceted. Studies have noted positive relationship between educational attainment and happiness (increased education leads to increased happiness) and the inverse relationship between education and happiness (higher education tends to lower happiness) (Clark & Oswald, 1994; Cuñado & de Gracia, 2012; del Mar Salinas-Jiménez, Artés & Salinas-Jiménez, 2011; Ferrante, 2009; Hartog & Oosterbeek, 1998). Improvement in formal education boosts production capacity and creation of more professionals which in turn, increases living standard in society. All these improves level of happiness (Noddings, 2003; Olaniyan & Okemakinde, 2008). Bouaissa (2009) noted highly educated people will have high human capital when entering the labor market, as their learning ability is higher. It was found the duration of learning is less for those with higher education. The human capital of people with low educational attainment increases up until age 42; it then decreases rapidly over time while the human capital of people with high levels of education continues to increase without age restriction and extends into retirement age gradually (Bouaissa, 2009). Therefore, highly educated people are happy for a long time. Similarly, Booth, Coles and Gong (2007) found individuals with better knowledge and ability to work (higher human capital investment) will have greater wages and workplace benefits. Subsequently, these individuals feel happy and satisfied that their human capital values are well remunerated, and hence, they spend more time on their jobs which results in increased

profits and productivity. Therefore, those who are paid well and given better benefits tend to be happier. On the other hand, some authors argue that education can pose an obstacle for human well-being. Higher education leads to greater expectations about income, work and quality of life, and if these expectations are not met, subjective well-being will be reduced. Highly educated people usually have better income, greater wealth and higher status in society. It also means if they become unemployed or face incidents which bring disadvantages in the future, they will suffer a huge economic loss and are also affected mentally (Clark & Oswald, 1994; del Mar Salinas-Jiménez et al., 2011). In addition, highly educated individuals may experience feelings of regret for having to give up some of their life chances, such as delaying their marriage or unable to get a promotion as they were busy with gaining qualification which leads to a reduction of level of happiness (Ferrante, 2009).

Older people tend to be lonely because they experience many disadvantages in life, including having a smaller social network due to the death of their friends, colleagues, family members, and the gap between generations in the family due to the emergence of the independent younger generation, and changes in family structure (Long & Martin, 2000; Truc et al., 2017). Many studies have looked at factors affecting the loneliness among the elderly, but there is a lack of research that have examined the relationship between education and loneliness. Therefore, this study looks at whether educational background has a positive or negative relationship with happiness and loneliness among the elderly in Vietnam where society is aging at a rapid rate compared with other countries. Additionally, not many studies have focused on the long-term benefit of education and subjective well-being of the older population. The current study hence, aims to fill this gap by studying the relationship between educational background and happiness and loneliness among the elderly.

## Data and Sample Selection

The study used data from 2011 Vietnam National Aging Survey (VNAS)., which is the first, and until now the only, nationally representative survey of Vietnamese older persons, and the data's source was taken from The Atlantic Philanthropies, Vietnam Women's Union, Institute of Social and Medical Studies & Indochina Research and Consulting (Institute of Social and Medical Studies, 2012). In Vietnam, individuals aged 60 and above are considered older persons or the elderly (Ministry of Justice, 2009). Although the VNAS has information on 4,007 people aged 50 and over, we only focus on those who are 60 years old and older (2,789 observations). Some observations have missing information, so we deleted 218 observations with missing information, namely question I42d which evaluates degree of happiness, and question I42e which evaluates degree of loneliness. The final sample consisted of 1,545 older females and 1,026 males. The Vietnam National Aging Survey 2011 was carried out under the consent of the Research Council of the Institute of Social and Medical Studies, authorized by the American Medical Board. The researchers explained clearly to all participants and their official representatives the objectives and contents of the research. Their signatures were collected in the informed consent forms before the interview. The respondents had the right to stop or interrupt the interview at any time without any penalty. All personal information, and information provided by the survey is confidential and used only for research purposes (Giang & Le, 2017).

## Variables and regression analysis

An ordered logistic regression was first run to analyze the relationship between education and degree of happiness/ degree of loneliness with all control variables for both genders. Second, tests of the proportional odds assumption were run to see whether the parallel regression assumption was violated. The  $p$  values of these tests were less than 0.0001, so the parallel regression assumption was violated in the case of ordered logistic regression models. Therefore, the multinomial logistic (MNL) regression and relative risk ratio (RRR) was utilized to explore the relationship between level of education and subjective well-being by gender. Four multinomial logistic regression models were used in this study for each indicator of subjective well-being (happiness and loneliness for both genders). The dependent variables are “Degree of happiness” and “Degree of loneliness” based on questions I42d and I42e which asked each respondent the following: “Please tell me whether, in the past week, you have not felt [happy or lonely], felt [happy or lonely] some of the time, or felt [happy or lonely] most of the time”. Thus, dependent variables included three categories which are “not at all” (baseline), “some of the time”, and “most of the time”. The main independent variable is educational background, representing 3 levels, which are primary school (baseline), secondary school, and College/ University. In addition, the researchers controlled for other factor variables, including *demographic characteristics* (age group, marital status, and religion), *socio-economic characteristics* (feeling that one has sufficient income and material support, providing financial support to kin/relatives, being member of a poor household, region lived the most, place of residence (urban/rural), and working status), *family networks* (total number of sons, total number of daughters, having grand-child, and living arrangement), *social networks* (being member of Vietnamese Elderly Association), *health status* (Difficulties in Activities of Daily Living (ADLs) and self-rated health compared to other older persons). ADLs was measured by five main activities which are eating, getting dressed and undressed, bathing/ washing, getting up from the position of lying down, and getting to and using the toilet. Finally, some error terms and un-observed characteristics were assumed in the analysis models, such as self-confidence, aspiration, or the differences in willingness to accept life events of individuals, etc. Mistakes in people’s answers were assumed as random and which do not lead to any bias in the results.

## Descriptive statistics

**Table 2:** Percentage distribution of degree of happiness, and degree of loneliness based on level of education

	Not at all	Some of the time	Most of the time	$p$ value
<b>Degree of happiness</b>				
Overall				
Female	17.35	43.75	38.90	<0.0001
Male	12.28	30.90	56.82	
Primary education				
Female	18.68	45.39	35.93	<0.0001
Male	16.20	36.35	47.46	
Secondary education				
Female	12.68	41.31	46.01	<0.0001
Male	9.25	24.94	65.81	
University education				
Female	8.11	22.97	68.92	0.448
Male	3.77	25.47	70.75	

	Not at all	Some of the time	Most of the time	<i>p</i> value
<b>Degree of loneliness</b>				
Overall				
Female	58.71	26.73	14.56	<0.0001
Male	77.39	16.96	5.65	
Primary education				
Female	55.72	28.30	15.98	<0.0001
Male	71.19	21.47	7.34	
Secondary education				
Female	66.20	23.94	9.86	<0.0001
Male	83.29	12.08	4.63	
University education				
Female	87.84	8.11	4.05	0.270
Male	86.79	12.26	0.94	

*Source:* Author's calculation from VNAS 2011.

Chi square test was used to determine the significance of differences in terms of degree of happiness and loneliness (overall, and by level of education) among both sexes. Table 2 shows there are differences in the reported levels of happiness and loneliness between men and women. In general, Vietnamese older women report worse mental health status than men. For example, the proportion of women reporting "not feeling happy at all" is 5% higher compared with men, while the percentage of men reporting feeling happy "most of the time" is 18% higher than the women. The percentage of women reporting feeling lonely "some of the time" is higher by nearly 10% compared with men, and the proportion of women reporting feeling lonely "most of the time" is approximately triple that of men. In addition, given the same level of education, older males report better psychological well-being. For example, only 35.93% of females having primary education report feeling happy most of the time. For those with secondary education, 46.01% of older females report feeling happy most of the time. Also, it should be noted that for older males, the proportion reporting feeling happy "most of the time" makes up the largest proportion for every level of education. However, for older females, the proportion reporting feeling happy "most of the time" makes up the largest proportion only for those with secondary education and university education.

Similar to the case of happiness, given the same level of education, older males report feeling less lonely than older females. For example, for those with primary education, 71.19% of older males report never feeling lonely. The level of loneliness decreases with higher levels of education for both sexes. In particular, having university education appears to play an important role in reducing loneliness among both genders. For those with university education, less than 1% of older males and 4.05% of females feel lonely most of the time.

In sum, there are differences in the level of happiness and loneliness among both sexes with the same level of education, with older males reporting better psychological well-being. For both males and females, higher level of education is associated with a higher degree of happiness and a lower degree of loneliness.

## Empirical Findings and Discussion

Table 3 and Table 4 show multinomial logistic regression results on happiness and loneliness respectively. Table 3 shows level of education is associated with happiness among males while there is no impact among females, after controlling for other factors, including demographic characteristics, socio-economic characteristics, place of residence, family and social networks, and health status. Compared to those with primary education, the relative risk for reporting



“feel happy most of the time” relative to “do not feel happy” of those with secondary education would be expected to increase by a factor of 1.5, and the relative risk for reporting “feel happy most of the time” relative to “do not feel happy” of those with university education would be expected to increase by a factor of nearly 4.0, given other variables in the model are held constant. In other words, males with a higher level of education are expected to have a higher degree of happiness.

In contrast, education is associated with loneliness among males and females after controlling for other factors. Regarding loneliness among females, compared with those with primary education, the relative risk for reporting “feel lonely some of the time” relative to “do not feel lonely” of those with university education would be expected to decrease by a factor of 0.36, and the relative risk for reporting “feel lonely most of the time” relative to “do not feel lonely” of those with university education would be expected to decrease by a factor of nearly 0.32, given other variables in the model are held constant. Regarding loneliness among the males, compared to those with primary education, the relative risk for reporting “feel lonely most of the time” relative to “do not feel lonely” of those with university education would be expected to decrease by a factor nearly 0.14 given the other variables in the model are held constant. Therefore, in general, once females and males increase their level of education, they are expected to have lower degree of loneliness.

Moreover, as the results on Tables 3 and 4 show, education level among the males has a strong effect on happiness and loneliness. On the other hand, among females, education has no relationship with happiness but it has some effects on loneliness. Here, the Confucian values in Vietnamese society play an important role in subjective well-being of their elderly. Since young, females are defined by subordination to their father (pre-marriage), her husband (post marriage), and her eldest son (after her husband's death) (Knodel, Loi, Jayakody & Huy, 2005). They are also subjected to “four virtues” (skills in housekeeping, such as cooking and sewing, looking presentable, being polite and deferential, as well as morality) (Drummond & Rydstrom, 2004). Therefore, family and children or social relationships could bring meaning to women’s lives more than education, economic wellbeing, material possessions, or power in society. As a result, although education plays a role in reducing loneliness among women in old age, the effect is not as great as in the case of men; additionally, education is not associated with happiness among females.

Age is also not associated with female happiness, while among males, it plays a small role. Elderly females and males report “feeling lonely some of the time”, though fewer males report “feeling lonely most of the time”. Both females and males who spend most of their time in the central region report a lower degree of happiness while females who spend most of their time here report a higher degree of loneliness compared to those who spend most of their time in the South region. The 2010 Statistical Yearbook of Vietnam reported migration rate from Central province is the highest rate compared with South and North regions, especially between 2005 and 2010. The Central suffers from many natural disasters, low socio-economic development, and high unemployment rate due to lack of job opportunities. Young people tend to migrate to other regions for better economic opportunities development, leaving behind their elderly parent, relatives and children. Therefore, it is reasonable to assume the elderly in Central region are at risk of greater feelings of loneliness and are less happy compared to those from the South, which has the highest level of economic development in the country, a high population density and a more modern lifestyle (General Statistic Office, 2010).

Males who live in urban areas report a higher degree of happiness as well as a higher degree of loneliness compared with males who live in rural areas. Compared to free thinkers, females who subscribe to Confucianism report a higher degree of happiness while Christian men

report a higher degree of happiness and lower degree of loneliness. Christianity is meanwhile associated with higher degree of loneliness among females. Tran, Nguyen, Van Vu and Doan (2017) also observed that elderly practitioners of certain faiths in Vietnam have a negative relationship with their subjective well-being. This is an interesting finding as many studies have reported a positive effect of religion on their adherents' psychological well-being. This is an important finding for a deeper understanding of the impact of religion on a communist and transitional country like Vietnam, where the government and people are becoming more a-religious in coping with the fast changing of Vietnam's economic structure (Van Canh, 2017).

Being a member of a poor household is associated with lower degree of happiness among both sexes. This is consistent with findings from Thailand that poverty is closely related to reduced well-being of the elderly (Gray, Rukumnuaykit, Kittisuksathit & Thongthai, 2008). Additionally, being members of a poor household is associated with higher degree of loneliness for both sexes "Household poverty" is synonymous with "feeling income and material support sufficiency". Sufficient income and material support are associated with a higher degree of happiness and a lower degree of loneliness for both sexes. Having one more son is associated with higher degree of happiness among the males and a lower degree of loneliness among females. This is because the patriarchal culture in Vietnam places importance in the sons who play an important role in the family and society. Many Vietnamese families believe that "if you have a son, then your family has a descendant, but if there is no son, then your family has no descendant even if you have ten daughters". The sons are responsible ensuring reverence for and worship of their ancestors. They also inherit the family property. Because the daughters are only named in the genealogy of her husband's family, she has no name in her original genealogy. Therefore, having more sons is expected to increase degree of happiness and decrease degree of loneliness among Vietnamese older persons because the sons bear the responsibility for caring of their parents at old ages (Haughton & Haughton, 1995).

Having difficulties with activities of daily living (ADLs) are associated with a lower degree of happiness and a higher degree of loneliness for both sexes. Similarly, having good health compared with other older persons in the community is linked to a higher degree of happiness and lower degree of loneliness for both sexes. Living with children, living in family with three generations, living with children and grandchildren are associated with higher degree of happiness among older females compared to living alone. For the elderly males, living with children and grandchildren is associated with a higher degree of happiness among males (this is compared with living alone). All types of living arrangements are associated with a lower degree of loneliness among females (compared to living alone), while living with only spouse, living with spouse and children (nuclear family), and living in family with three generations are associated with a lower degree of loneliness among males (compared to living alone). In sum, living alone has disadvantages in terms of happiness and loneliness compared to other types of living arrangements. The findings here are consistent with those of Chen and Silverstein (2000) that social intergenerational support is related to psychological well-being of older parents in China.

The other factors, including marital status, working status, being members of Vietnamese Elderly Association, total number of daughters, and having grandchildren are not associated with happiness among both sexes. However, being married is associated with a lower degree of loneliness for both sexes. Females who are still productively employed, being members of Vietnamese Elderly Association, and having grandchildren report a higher degree of loneliness. Providing financial support to kin/ relatives is not associated with happiness and loneliness for both sexes. Having a social network is reported to contribute to subjective well-

being of the elderly. However, it is interesting to note that being members of Vietnam Elderly Association (VEA), which is the first formal and largest ever national association for older persons in Vietnam, is not significantly associated with happiness for both genders, while it is associated with a higher degree of loneliness among the females.

**Table 3:** Multinomial logistic regression results on the link between education and degree of happiness based on gender

	Female		Male	
	Some of the time	Most of the time	Some of the time	Most of the time
Intercept	1.075 (0.473)	0.307** (0.157)	0.539 (0.435)	0.106*** (0.086)
Education (Ref: Primary level)				
Secondary level	1.169 (0.303)	1.319 (0.351)	0.943 (0.248)	1.547* (0.390)
University level	0.877 (0.451)	2.025 (0.994)	2.391 (1.406)	3.849** (2.200)
Age group (Ref: 60-69 age)				
70-79 age	0.859 (0.164)	0.845 (0.173)	0.868 (0.253)	0.727 (0.204)
80+ age	0.978 (0.224)	1.030 (0.254)	0.961 (0.329)	0.523* (0.177)
Marital status (Ref: Un-married)				
Married	0.557 (0.305)	1.189 (0.638)	0.988 (0.831)	1.333 (1.092)
Region lived in the most (Ref: South)				
North	0.764 (0.179)	1.228 (0.305)	1.176 (0.420)	1.415 (0.495)
Centre	0.577** (0.124)	0.854 (0.197)	0.448** (0.147)	0.661 (0.210)
Place of residence (Ref: Rural)				
Urban	0.931 (0.185)	1.015 (0.210)	1.974** (0.613)	1.366 (0.416)
Religion (Ref: Free thinker)				
Buddhism	1.028 (0.233)	0.879 (0.213)	0.785 (0.259)	0.700 (0.223)
Christianity	1.049 (0.327)	1.064 (0.347)	4.866*** (2.885)	2.670* (1.576)
Confucianism	1.565* (0.395)	1.237 (0.331)	1.285 (0.421)	1.287 (0.407)
Household poverty (Ref: Non-poor household)				
Poor-household	0.763 (0.134)	0.530*** (0.106)	0.642 (0.180)	0.641 (0.177)
Working status (Ref: Stop working)				
Still working	0.883 (0.156)	0.747 (0.141)	0.861 (0.224)	0.729 (0.184)
Feeling income and material support (Ref: Insufficiency)				
Sufficiency	1.795*** (0.351)	2.229*** (0.444)	0.877 (0.239)	1.586* (0.406)
Financial support to kin/relatives (Ref: Not providing)				
Providing	0.960 (0.201)	0.777 (0.172)	1.118 (0.314)	1.107 (0.300)
Vietnamese Elderly Association (Ref: Non-member)				
Member	1.155 (0.221)	1.143 (0.234)	0.858 (0.257)	1.177 (0.345)
Total number of sons	1.005 (0.0541)	1.039 (0.0587)	1.203** (0.0960)	1.132 (0.0888)
Total number of daughters	1.075 (0.0545)	1.057 (0.0568)	0.911 (0.0673)	0.961 (0.0685)
Having grandchild (Ref: No)				
Yes	1.112 (0.374)	1.033 (0.403)	2.480 (1.467)	2.412 (1.360)
Daily life activities (ADLs) (Ref: Not difficulty)				
Difficulty	0.905 (0.147)	0.560*** (0.0979)	0.754 (0.190)	0.468*** (0.116)
Living arrangement (Ref: Living alone)				
Only spouse	1.344 (0.800)	2.259 (1.350)	1.751 (1.592)	2.983 (2.680)
Only children	0.995 (0.299)	1.945** (0.660)	1.320 (0.966)	1.686 (1.287)
Spouse, children	1.578 (0.987)	2.099 (1.325)	1.592 (1.463)	2.030 (1.842)
Spouse, children, grandchild	2.259 (1.364)	2.853* (1.733)	2.392 (2.187)	4.093 (3.699)
Children, grandchildren	1.476 (0.357)	2.488*** (0.709)	2.929* (1.681)	4.768*** (2.843)
Spouse, grandchildren	5.445* (5.216)	4.089 (4.013)	1.657 (1.702)	2.501 (2.518)
No spouse, no children	0.834 (0.269)	0.848 (0.345)	3.626 (4.667)	5.347 (6.828)
Other types	1.284 (0.815)	4.530** (2.855)	2.725 (3.249)	5.054 (5.831)
Health comparison with other older persons (Ref: Much worse)				
Somewhat worse	2.215*** (0.464)	2.480*** (0.615)	1.588 (0.489)	4.343*** (1.491)
About the same	1.811** (0.453)	3.685*** (1.026)	0.858 (0.304)	4.008*** (1.494)
Somewhat better	1.617 (0.494)	4.917*** (1.589)	1.208 (0.517)	9.418*** (4.102)
Much better	1.291 (0.826)	5.221*** (3.189)	2.208 (1.898)	14.25*** (11.78)
Number of observations	1,545		1,026	
Pseudo R-square	0.100		0.141	

*Notes:* Standard errors in parentheses. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table 4:** Multinomial logistic regression results on the link between education and degree of loneliness based on gender

	Female		Male	
	Some of the time	Most of the time	Some of the time	Most of the time
Intercept	0.945 (0.415)	1.087 (0.560)	1.458 (1.136)	7.685* (9.356)
Education (Ref: Primary)				
Secondary level	1.091 (0.223)	0.848 (0.257)	0.719 (0.160)	0.863 (0.334)
University level	0.362** (0.167)	0.315* (0.213)	0.692 (0.253)	0.144* (0.158)
Age group (Ref: 60-69 age)				
70-79 age	1.399** (0.232)	1.189 (0.275)	1.318 (0.324)	0.193*** (0.0933)
80+ age	1.310 (0.254)	1.288 (0.339)	1.651* (0.476)	0.413* (0.194)
Marital status (Ref: Un-married)				
Married	0.384** (0.178)	0.253** (0.161)	0.416 (0.240)	0.131* (0.150)
Region lived in the most (Ref: South)				
North	1.236 (0.239)	0.943 (0.254)	1.243 (0.348)	1.727 (0.879)
Centre	1.109 (0.213)	1.976*** (0.496)	0.838 (0.246)	2.129 (1.073)
Place of residence (Ref: Rural)				
Urban	0.843 (0.139)	1.028 (0.233)	1.480* (0.345)	1.679 (0.718)
Religion (Ref: Free thinker)				
Buddhism	1.087 (0.221)	1.151 (0.318)	0.859 (0.247)	0.709 (0.351)
Christianity	0.893 (0.247)	1.901* (0.675)	0.254*** (0.121)	0.176** (0.155)
Confucianism	0.910 (0.200)	1.237 (0.368)	0.600* (0.165)	0.335** (0.158)
Household poverty (Ref: Non-poor household)				
Poor-household	1.336* (0.217)	1.366 (0.285)	1.786** (0.427)	2.341** (0.913)
Working status (Ref: Stop working)				
Still working	1.130 (0.176)	1.417* (0.297)	0.911 (0.198)	0.904 (0.362)
Feeling income and material support (Ref: Insufficiency)				
Sufficiency	0.637*** (0.0950)	0.508*** (0.110)	0.695* (0.152)	0.730 (0.289)
Financial support to kin/relatives (Ref: Not providing)				
Providing	0.883 (0.169)	1.125 (0.276)	0.703 (0.176)	0.590 (0.263)
Vietnamese Elderly Association (Ref: Non-member)				
Member	0.913 (0.151)	1.539* (0.367)	0.846 (0.218)	1.444 (0.701)
Total number of sons	1.013 (0.0449)	0.896* (0.0582)	0.935 (0.0614)	0.918 (0.103)
Total number of daughters	0.918** (0.0391)	0.876** (0.0530)	1.127* (0.0695)	0.990 (0.112)
Having grandchild (Ref: No)				
Yes	1.365 (0.463)	1.906* (0.722)	0.954 (0.549)	0.902 (0.919)
Daily life activities (ADLs) (Ref: Not difficulty)				
Difficulty	1.247 (0.174)	1.699*** (0.323)	1.453* (0.310)	2.890*** (1.093)
Living arrangement (Ref: Living alone)				
Only spouse	0.836 (0.433)	0.166** (0.118)	0.381 (0.259)	0.117* (0.148)
Only children	0.797 (0.224)	0.214*** (0.0691)	0.385 (0.255)	0.397 (0.305)
Spouse, children	0.831 (0.451)	0.126** (0.102)	0.301* (0.210)	0.0728** (0.0964)
Spouse, children, grandchild	0.311** (0.167)	0.0442*** (0.0366)	0.252** (0.173)	0.0475** (0.0629)
Children, grandchildren	0.566** (0.135)	0.125*** (0.0326)	0.879 (0.417)	0.407 (0.233)
Spouse, grandchildren	1.930 (1.244)	0.000004 (0.0002)	0.330 (0.264)	0.519 (0.695)
No spouse, no children	0.729 (0.251)	0.421** (0.147)	0.913 (0.905)	0.582 (0.736)
Other types	0.354* (0.196)	0.271** (0.157)	0.414 (0.370)	0.0000003 (0.0001)
Health comparison with other older persons (Ref: Much worse)				
Somewhat worse	1.069 (0.225)	0.532** (0.139)	1.439 (0.442)	0.490 (0.216)
About the same	0.637* (0.151)	0.385*** (0.117)	0.923 (0.317)	0.319** (0.175)
Somewhat better	0.540** (0.148)	0.440** (0.151)	0.528* (0.203)	0.157*** (0.0997)
Much better	0.675 (0.312)	0.406 (0.269)	0.661 (0.376)	0.380 (0.346)
Number of observations	1545		1026	
Pseudo R-square	0.173		0.226	

Notes: Standard errors in parentheses. Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## Conclusion and Recommendations

This research has investigated the relationship between educational background and subjective well-being of the elderly in Vietnam. Subjective well-being was measured based on degree of happiness and loneliness among the target group based on a representative survey,

Vietnam National Aging Survey 2011. This paper is based on the first-ever nationally representative research on the benefits of educational investment to increase the well-being of the elderly in Vietnam. Other studies on “returns of education” only focused on economic benefits during the working age. The current research was also built on previous researches that examined mental health issues among the elderly in Vietnam. The strength of the study is to show that education is an important contributor to mental well-being at old age.

It is clear from this study those with a higher level of education have a higher degree of happiness and a lower degree of loneliness. In sum, having a university education plays a very important role in the level happiness and which means less feeling of loneliness among the Vietnamese. Among the females, there is no difference in their subjective well-being among those with secondary and primary education levels. Among the males however, having secondary level education is associated with increased happiness. Therefore, this study suggests having a higher level of education can increase the subjective well-being of the elderly and which contributes to reducing their loneliness. Furthermore, having a good educational background also has a significant impact on other aspects of one’s life, such as increased economic and health status and which in turn can lead to the creation of a wealthy society with humanitarian values (Bleiklie, 2005; Hunt, 1969; Stacey, 1998). Therefore, pursuing education is a long-term sustainable investment to benefit the working population and also their physical health, based on previous studies (Hraba, Lorenz, Pechacova, & Liu, 1998; Ross & Wu, 1995). This in turn leads to increased subjective and psychological well-being of the elderly.

Coupled with the policy for improving the level of education to achieve productive ageing, the government should assist the Vietnam Elderly Association (VEA) which is recognized as the official and largest organization for the older persons, to achieve its mission to improve the well-being of the elderly. This is because being a member of VEA has not increased the level of happiness and worse, some females have reported feeling lonelier. Additionally, the Vietnamese government should formulate policies to improve the subjective well-being of the elderly, particularly those who live in the central region, members of poorer households, those who live alone, those with Activities of Daily Living (ADLs) difficulty, those with health problems, non-religious people, urban people, those who feel that they do not have sufficient income and material support, those who have no son or few sons, and non-married persons.

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