

**EXPLORING FACTORS AFFECTING LIFE DISSATISFACTION  
IN THE EDLERLY**

By  
**KIM, Kye Chul**

**THESIS**

Submitted to  
KDI School of Public Policy and Management  
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For the Degree of  
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# Exploring Factors Affecting Life Dissatisfaction in the Elderly

## Abstract

The aging of the world's population, and the issues that each nation is facing as its aging citizens increase in number, is receiving increasing attention from the media, government and policy-making officials, international. Since Korea is moving towards the aged society, increasing is the social attention on overall depression and life dissatisfaction of the elderly. The purpose of this study is to find the factors affecting depression of elderly among demography characteristics of aged people, categorized dissatisfactions and sources of income, based on the 2014 national survey data of the actual living condition of the elderly and welfare need. We found that many factors have significant impact on the depression of the elderly, such as socio-demographic characteristics, the level of economic, social, physical, children relative dissatisfactions. Path analysis was utilized to identify the links and pathways between these factors and examine their impact on quality of life for people with depression.

**Keywords:** Depression, Population aged, Life Dissatisfaction, Structural Equation Modeling

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## **I . Introduction**

The world's older population is growing more than twice as fast as the world's total population (United Nations, 2009). More than 1.2 million people join the ranks of the older population per month. In countries like Nigeria, India, Italy, Japan, and China, the proportion of population that is aged 65 and older will more than double between 2000 and 2050. The aging of the world's population, and the issues that each nation is facing as its aging citizens increase in number, is receiving increasing attention from the media, government and policy-making officials, international organizations such as the United Nations, and researchers.

In the modern society, elderly people are forcibly or voluntarily excluded from the labor market, the loss of roles in the family due to the nuclear family, and the declining status in society. The elderly is undergoing major changes as a turning point in social retirement. This leads to social isolation and economic deprivation as well as changes in social status and economic income. In particular, Korea is ahead of the world in the fastest pace of entry into the aging society because of its higher aging rate than any other country.

According to the World Health Organization (2010), nearly two billion people across the world are expected to be over 60 years old by 2050, a figure that's more than triple what it was in 2000. Because of such increases in their aging populations, some of the world's largest economies have started facing subsequent increases in their health-care costs, higher pension costs, and a decreasing proportion of their respective citizenries active in the workforce. A major contributing factor to this trend has been diminishing fertility rates in these countries in recent decades, further compounded by longer lifespan. In order to adapt to their increasingly aging populations, many countries have raised the retirement age, reduced pension benefits, and have started spending more on elderly care. With lesser numbers of



individuals entering the population and people living much longer lives, people above the age of 65 now make up an increasing share of the world's total population.

We take a look at those countries which are particularly well-known for their rapidly rising numbers of aging citizens. Japan is home to the oldest citizenry in the world, with 26.3% of its population being 65 years of age or older. In the year 2014, the percentage was about 25.8%, which shows that the number is steadily rising each year. It is predicted that nearly a third of the Japanese people (32.2%) will be senior citizens by 2030. At the present moment, more than one in four people in the country are over the age of 65, whereas the country's population aged between 15 and 64 fell by 4% between 2000 and 2010.

Next on this list is Italy, with 22.4% of its population being 65 years of age or older. The country's elderly population is known to have remained at around 20% in the period between 2005 and 2010, but has steadily been on the rise in the few years since. Most interestingly, and in line with these figures, the younger population of people aged between 0 and 14 has not exhibited growth since 1999, and remained at a mere 14% until recently. Largely due to its aging populace, Italy is known to have the highest relative public spending on pensions of any country in the EU. Pensions take over 16% of Italy's GDP, as compared to 11% for the rest of the European Union.

According to the American Psychological Association (2010), an older adult may also sense a loss of control over his or her life due to failing eyesight, hearing loss and other physical changes, as well as external pressures such as limited financial resources. These and other issues often give rise to negative emotions such as sadness, anxiety, loneliness and lowered self-esteem, which in turn lead to social withdrawal and apathy. More serious outcome is chronic depression, or depression that is recurring and persistent. Chronic depression has both physical and mental consequences that may complicate an older adult's existing health condition and trigger new concerns.

The research on depression for the elderly has been carried out by various approaches. The majority of these studies are studies on the frequency of depression, symptom and diagnosis treatment in psychiatry, family medicine and psychology. Over the year's psychologists have devoted much effort to assessing the quality of individual experience, both in the clinic and in the experimental are difficult to project their findings directly to larger populations (Campbell, 1976). According to Centers for Disease Control and Prevention (2013) statistics, it is estimated that about 14% of the US population aged 65 years and older experience depressive symptoms, with major depression found in 13.5% of senior citizens who require home care. The overall level of depression showed a negative correlation and was significantly related to the quality of life (Lubica, 2016).

As per the WHO (2013), four factors which directly influences the level of Life satisfaction among the elderly are: physical health condition, mental health condition, social relationship and environment. The significant independent predictors of depression were higher age, low education and financial dependence, unemployment and illiteracy were also seen to be associated factors (Charchit, 2016). Depressive symptoms in older adults have been associated with increased risk of disability, decreased quality of life, and increased societal costs because of higher health care needs and poorer health behaviors (Phyllis, 2016). Difficulty in performing these physical activities would result in a decreased life satisfaction and the presence of depressive symptoms (Kennison & Cox, 2013).

Moreover, even if physical functioning declines, **life satisfaction would not be affected if there is strong social support (Hsu, 2009). Life satisfaction may be defined as conscious, cognitive, and global judgment of one's own life. It is not an assessment based on externally imposed objective standards; rather, it depends upon a comparison of one's circumstances to one's own internal standards or criteria (Diener & Emmons, 1985). Social support and its relationship to the development of depression is the object of a multitude of**

studies that revealed consistent findings showing that the lack of social support would lead to the development of depressive symptoms (Boen, 2012). Hence, the majority of those who had strong family support was not depressed and has higher degree of life satisfaction (Choi, 2008).

Previous studied (Campbell, 1976) discussed marriage and family life have the strongest overall effect, followed by friendship, though this varies for different age groups. According to Reis and Franks (1994) studied 846 individuals who were 33 or over and found that anxiety and depression, subjective health and number of doctor visits were associated with both intimacy and social support, but that social support was the key predictor; it consisted here of actual help, group belongingness, positive appraisal and having a special bond. Prior studied (Inglehart, 1990) also found that in Europe 81% of married women said they were satisfied or very satisfied with their lives, compared with 75% of the single. The effect of being widowed or divorced is more marked-66% of the widowed and 57% of divorced or separated women were satisfied.

Life satisfaction has been conceptualized as a cognitive constituent of subjective well-being. High satisfaction suggests that the quality of life, in the population concerned, is good. Low satisfaction on the other hand marks serious shortcomings of some kind. This is consistent with Bradley & Corwyn (2004) who say that life satisfaction reflects both the extent to which basic needs are met and the extent to which a variety of other goals are viewed as attainable. From this perspective it reasonable seems that by realization of more goals, satisfaction with life will also increase.

According to Beutell (2006), it is believed that life satisfaction is related to better physical, and mental health, longevity, and other outcomes that are considered positive in nature. In addition, Chow (2009) argues that improved levels of life satisfaction might give

rise to better health in the future. Recent research, nevertheless, acknowledges that life satisfaction should be important Considerations for organizations (Nadkarni & Stening, 1989).

Based on these considerations, the purpose of this study is to investigate essence plan by this whether or not relatively with depression laying stress on life dissatisfaction of elderly and other some factors influence in the old people depression and reduce depression level.

The following research questions will be investigated:

1. There will be no significant difference in the level of life Dissatisfaction among socio-demographic. (Gender, Education, Age, Marital status, Economic dependence)
2. There will be no significant difference in the level of depression among socio-demographic. (Gender, Education, Age, Marital status, Economic dependence)
3. LDS and depression are positively correlated with each other.
4. Economic LDS affects increased level of depression.
5. Health LDS affects increased level of depression.
6. Relation of spouse LDS affect increased level of depression.
7. Relationship of children LDS affect increased level of depression.
8. Relationship of social LDS affect increased level of depression.
9. Relationship of relative LSD affect increased level of depression.
10. The depression had mediating effects on overall satisfaction of life

## **II. Literature Review**

### **2.1 Definition of Depression**

Depression is a common mental disorder, characterized by persistent sadness and a loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks. In addition, people with depression normally have several of the following: a loss of energy; a change in appetite; sleeping more or less; anxiety; reduced concentration; indecisiveness; restlessness; feelings of worthlessness, guilt, or hopelessness; and thoughts of self-harm or suicide. (WTO, 2012)

Depression is specific alteration in mood, whether sadness, apathy less than that of non-depressed group. It includes a negative self- image involving self-blame, activities were significantly correlated to life satisfaction. Overall desire for self-punishment, desire to escape, to hide or die, changes in study indicates that positive thinking and higher level of activity level of activity is there, either there will be increased agitation or leads to positive mental health Hyperactivity (Arisha, 2016). Depression is a treatable, yet disabling, disorder that constitutes one of the most significant health issues among the elderly (Davidson 2012). Depression is highly correlated with quality of life (McCrae, 2005) and bi-directionally correlated with self-concept (Almeida & Quintão, 2012). Depression also influences many aspects of the experience of pain including the perception of and reaction to pain (Jana, Gallagher, 2000).

Depressive symptoms not only have an important place as indicators of psychological well-being but are also recognized as significant predictors of functional health and longevity. Longitudinal studies demonstrate that increased depressive symptoms are significantly associated with increased difficulties with activities of daily living (Penninx, 1998). Community-based data indicate that older persons with major depressive disorders are at increased risk of mortality (Bruce, 1994). There are also studies that suggest that depressive disorders may be associated with a reduction in cognitive functions (Speck, 1995).

## 2.2 Aging and Depression

Depression currently affects as many as 27% of community-dwelling adults over 60 years of age (Blazer, 1987). The number of depressed individuals is expected to rise when 80 million baby boomers, who have higher rates of emotional disorders than the present cohort of older adults (Klerman & Weissman, 1989), reach the age of 65 in the year 2020 (US Senate Special Committee on Aging, 1987). Late life depression is a serious health concern. Individuals who are depressed have more emergency room visits (Johnson, 1992), higher outpatient charges and poorer health (Callahan, 1994). Suicide rates for the elderly are almost double those of other age groups (Casey, 1994), with those suffering from medical and/or emotional illness at highest risk (Casey, 1991).

One reason the elderly do not receive appropriate mental health care is that many physical, mental and emotional changes commonly associated with depression are also associated with the normal aging process. While recent studies have examined physicians' general knowledge of depression (Shao, 1997), physician attitudes toward depressed patients (Badger, 1997) and physician practice patterns related to late life depression (Callahan, 1996), there is a paucity of studies which have looked especially at physician knowledge of late life depression.

The assumption that aging is associated with an increased risk of depression is a recurring theme in the gerontological literature. Yet empirical studies that have investigated the relation between aging and depression do not show consistent support for this assumption or hypothesis (Newmann, 2016).

Depression is the commonest mental health problem in later life. At least one in ten people aged 65 or more have significant symptoms of depression like sadness, loss of energy and difficulties sleeping (Sharma & Copeland 1989). Poverty and depression seem to go together, and poorer and less educated older people show less awareness of the symptoms of

depression and are less likely to seek help or treatment. Depression is more common in older women than in older men (Steve, 2005). Depression and disability commonly go together but the older people with disabilities are not depressed. Explanations about associations between disabilities, illness and depression symptoms that simply show the overlap statistically are not satisfactory, because disability and depression can cause each other, and increased disability due to depression is only partly explained by personal characteristics like age, sex, ethnicity, social class or education, or by medical conditions and cognitive ability (Lenze, Rogers 2001). Here we run out of strong evidence, largely because of the shortage of long-term studies of depression in the community (Katona, 1989). The association between poor health and depression appears to be stronger for men and for those aged 75 and over than for women and ‘younger’ old people (aged 65–74 years). Poor health, loss of mobility and depression are linked with loneliness and social isolation (Cattan, 2002). Subjective measures of ill-health like pain, or self-rating of overall healthiness and well-being, are more strongly related to depression than are more objective measures of illness or disability like the number of chronic diseases or the degree of functional limitation (Beekman, 1995).

Nearly a third of older people with four or more medical problems are depressed, compared with 1 in 20 of those without a significant illness (Kennedy, 1990), and the frequency of depression among patients with poor physical health attending their general practitioner is twice that of healthy older people (Evans & Katona, 1993).

Prior studies discussed that elderly Koreans were exposed most to income poverty, followed in order by health poverty and housing poverty. One in four elderly Koreans reported having depression (Kim, 2015). Depression was more common among unmarried/separated and those who belong to lower socioeconomic status. These differences

were found to be statistically significant. However, effect of gender, education, and work status of the subjects on depression was not statistically significant (Sharvanan, 2000).

According to prior studies (Bhardwaj, 1991), found out correlation of life satisfaction with depressed and non-depressed elderly people on a sample of 200(100 depressed elderly & 100 non-depressed) with the mean age of 63 years, revealed that the mean life satisfaction scores of depressed aged were significantly less than that of non-depressed group.

In Canada, approximately 4,000 individuals committed suicide in 1996, with 25 per cent occurring among Ontarian residents (Stewart, 2002). Approximately 15 to 20 per cent of depressive patients end their lives by committing suicide, a common and often avoidable outcome of this illness (Goodwin, 1990). People with major depressive disorder are at highest risk of suicide where 40 per cent to 60 per cent of completed suicides involve patients with depression compared to all of the psychiatric conditions (Reesal, 2001) therefore, these patients should be regularly assessed for suicide. In Canada, women are three to four times more likely to attempt suicide than men (Centre for Addiction and Mental Health, 2002).

The disparity between the sexes was larger in those in younger age groups (3.5 to 1 female to male ratio among those aged 15 years or younger) compared to other age groups (Bland, 1998). Similarly, analyses using data from the CCHS found that suicidal thoughts among Canadians aged 15 years or older was 3.7 per cent; a higher disparity between the sexes was found among those aged 15 to 24 years with 7.3 per cent of women reporting these thoughts compared to 4.7 per cent men. There are relatively little differences between the genders across all other age groups (Statistics Canada, 2002).



### 2.3 Definition of Life Satisfaction

A lot of the data on happiness comes from social surveys, often with large numbers of respondents. It is expensive to ask a lot of questions so often there was only one question, of the form “How happy are you?”, or “How satisfied are you with your life as a whole?”

Single item which was intended to measure the two aspects, affect and satisfaction “How do you feel about your life as a whole?” from “delighted” to “terrible” with a seven-point scale (Andrews, 1976). The Quality of American your life asked another version of this question: “How satisfied are you with your life as a whole these days?”

Since quality of life has a complex composition, it is not surprising that there is neither a universal definition nor a standard form of measurement (Cummins, 1997). Although the quality of life is a very popular term in our daily speech, there is no agreement on its meaning like welfare, utility and so on (Culyer, 1990). However, there is agreement that it is a multidimensional concept (Andre, 2001). In other words, it has a set of dimensions. Moreover, it covers some objective components related with observable living conditions and some subjective components related to perceptions of individuals about their living conditions (Lawton, 1997)

Indeed, quality of life as a concept has been defined for a long time. While most scholars agree about the meaning of quality, i.e., “quality notion has the same meaning as grade and that grade ranges from high to low, from better to worse” (Bowling & Windsor, 2001). Quality is linguistically understood as value attribute or the essential nature of objects or phenomena” (Kovac, 2004), there is less agreement the meaning of life as a concept. The meaning of life is usually to the meaning of mental life that narrowly means “satisfaction and kindred states such as one’s sense of well-being, happiness or unhappiness” (Schuessler & Fisher, 1985).

As quality of life involves many domains, such as life satisfaction, happiness, welfare, health, environment, trust, security, economy, freedom, etc., it can be called an interchangeable concept (Anderson, 2004). Moreover, it can be defined as a total of material means which one has and nonmaterial means namely freedom, justice, security, trust, and quarantines that cover today and tomorrow (Ozcan, 2003). Therefore, the meaning of quality of life as a concept changes from individual to individual by their point of view.

Traditional economic theory defines quality of life as objective variables such as a household's income, GNP, employment (Zhao, 2005). Later, leisure time, savings for holidays, and recreation were added. However, the concept was not enough to define its meaning. In 1960, President Eisenhower's commission improved the quality of life concept to cover health, education, well-being, economy, and industrial growth. Therefore, the concept came close to today's meaning (Andre, 2001). However, since the 1960s the quality of life concept has become more problematic to define and measure because it covers other domains of life that are hard to measure (Gerson, 1976). In other words, as postindustrial society is more complex, more variable are needed (Zhao, 2005).

For a long time, standard of living was used instead of quality of life. Standard of living is defined by The International Society for Quality of Life Studies (Andre, 2001) as "a measurement of quality and quantity of goods and services available to people, like the Gross Domestic Product (GDP) per capita, the number of doctors per thousand people, the percentage of GDP spent on health and education, or the number of television sets and telephones per household." However, these notions differ from each other.

Andrew (1974) states life satisfaction symbolizing an overarching criterion or ultimate outcome of human experience. Life satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from negative to positive. It is one of three major indicators of well-being: life satisfaction, positive affect, and negative

effect (Diener, 1984). Life satisfaction is characterized, in agreement with the cognitive theory, as “individual’s cognitive judgment about comparisons based on the compatibility of their own living conditions with the standards” (Diener, Emmons, 1985).

Life satisfaction is generally assumed and expected to decline in older age, most notably as health conditions deteriorate. In reality, the general finding of the large body of gerontological literature on the relationship between age and life satisfaction is that there is no age-related decline in life satisfaction (Larson, 1978).

Life expectancy rate are increasing in the world while the mortality rate is staying stable and the birth growth rate is gradually decreasing (Tufan, 2001). Aging and problems related to aging has become of greater interest (Duyan, 2000). As people age, health related problems increase and life quality decreases since health affects all aspects of life, including participation in social life, income, level of mobility, and dependency (Onur, 1995). It is important to identify the specific factors that contribute to higher life-satisfaction because several studies show a link between happiness and mortality (Sabin, 1993). Horgas (1998) asserted that successful aging is related to participation in activities beyond self-maintenance.

Social interaction also is related to sense of well-being (Horgas, 1998). It has been shown that when people do not participate in social activities, they may feel lonely and view life more negatively (Peterson, 1997). Research on the mental capacities of the elderly has shown that those adults who continue to use their minds show almost to intellectual decline as compared to those who spend considerable time doing nothing or just thinking alone (Bee, 2000).

The increasing number of older people, with higher expectations of ‘a good life’ within society and with their high demands for health and social care, has led to international interest in the enhancement, and measurement, of quality of life in older age.

It is a concept that is dependent on the perceptions of individuals, and is likely to be mediated by cognitive factors (Bowling, 2005). It reflects macro, societal, as well as micro, individual, influences, and it is a collection of objective and subjective dimensions which interact (Lawton, 1991). Lawton (1982) developed a popular model and proposed that well-being in older people may be represented by behavioral and social competence (e.g. measured by indicators of health, cognition, time use, and social behavior), perceived quality of life (measured by the individual's subjective evaluation of each domain of life), psychological well-being (measured by indicators of mental health, cognitive judgments of life satisfaction, positive-negative emotions) and the external, objective (physical) environment (housing and economic indicators). He thus developed a quadripartite concept of the 'good life' for older people (Lawton, 1983a), which he later changed to 'quality of life' as the preferred overall term, accounting for all of life. However, there is no consensus within or between disciplines about conceptual definitions or measurement of quality of life. Most investigators have based their concepts and measures on experts' opinions, rather than those of lay people (Rogerson, 1989).

## **2.4 Aging and Life Satisfaction**

The diverse research results on the relationship between age and subjective well-being have been frequently reported. Life satisfaction, morale and happiness are the three measurements most commonly used for subjective well-being. It has been shown that a negative relationship between happiness and age was demonstrated by survey results in the 1950s and 1960s, but no relationship at all emerged in surveys conducted during the 1970s (Campbell, 1981). In the 1980s, a significant positive relationship was reported by studies using the same measure and controlling for a number of acknowledged correlates of well-being, such as health and income (Mueller, 1983).

Another review of the subjective well-being also reports that it has a weak relationship with age (Larson, 1978). Moreover, only a minority of them was statistically significant. Five out of eleven studies controlled on other variables and resulted in insignificant regression coefficients. Of the 11 studies, 2 were based on longitudinal data, and neither of them found significant changes in subjective well-being.

Numerous measures of subjective well-being have been proposed. Life satisfaction, happiness, affect and morale are the four most frequently studied concepts. Several have defined a multi-dimensional construction. In spite of the high correlations among the measures of subjective well-being, a limitation on its interpretation is worth a special note. It is in regard to the extent to which the measurements can be assumed to measure the same thing in different populations (Larson, 1978).

There have been various attempts to define and to measure the psychological well-being of older people, usually with goal of using such a measure as an operational definition of “successful “aging. In many researched on aging, however, it becomes necessary to establish some measure of success or well-being in relation to which other social and psychological variables can be studied.

In general, quality of life can be measured by countable or objective indicators- such as GDP per capital and infant mortality rate- and by uncountable or subjective indicators such as life satisfaction, happiness, and individual perception of well-being (Shackman, 2005). Additionally, Inkeles (1993) states that the most effective method is to use objective and subjective measures together.

In addition, Veenhoven (2004) claims an alternative measurement in that “quality of life in a society can be measured by how long and happy its inhabitants live.” Another measurement is Allardt (1993) model. It combines objective and subjective indicators and measure quality of life in terms of having, loving, and being.

Nowadays, the consensus is that the best measure of quality of life is to use both subjective and objective indicators together (Christoph, 2003). In other words, “any quality of life study should have both an internal side and an external side (Andre, 2001).

## **2.5 Life Dissatisfaction**

Life satisfaction, a person's overall evaluation of the quality of his or her life, is an important indicator of that person's subjective sense of well-being (Diener, 1999). Life satisfaction has been integrated as one of the major components of subjective well-being and it has been used to compare the subjective well-being of people from different countries and cultures, as well as to indicate a person's overall state of physical health, mental health, and socioeconomic status (Diener, 1999). The predictors for the composite score of subjective well-being have been found to include health, income, individualism, marriage, and human rights in ecological studies (Diener, 1999). At the person level, life dissatisfaction has been identified as a risk factor for all-cause mortality, suicide, and work disability (Koivumaa-Honkanen, 2004). For example, among men who reported dissatisfaction with life, the overall risk for death from all causes was 2 times higher, the risk for death from disease was 1.8 times higher, and the risk for death from injury was 3 times higher than corresponding risks among men who reported satisfaction with life (Koivumaa-Honkanen, 2000). In addition, life dissatisfaction was associated with a 1.7 times higher risk for suicide in a 20-year follow-up period (Koivumaa-Honkanen, 2001).

Similarly, in an 11-year follow-up study, life dissatisfaction was associated with 3 times greater risk for work disability among women and 2 times greater risk among men. (Koivumaa-Honkanen, 2004) Because of its strong associations with many adverse health outcomes, life dissatisfaction has been proposed as a composite indicator of health risk (Koivumaa-Honkanen, 2001). Moreover, life dissatisfaction has been found to be associated

with poor self-rated health (Perlman & Bobak, 2008), which, in turn, has been strongly associated with increased mortality risk (DeSalvo, 2006). Therefore, it is possible that life dissatisfaction may have direct and/ or indirect effects as mediated through poor self-rated health on increased mortality risk. The correlates of life dissatisfaction are not well understood at the person level. Several previous studies conducted among some special populations such as the elderly and among people with mental disorders, spinal cord injuries, or HIV/AIDS have shown that self-rated health, physical impairments, wealth, social support, and family relationships are significantly associated with life dissatisfaction (Heckman, 1997).

Results of one recent study that used a population based sample showed that level of life dissatisfaction among adults was positively associated with health risk behaviors, chronic illnesses, and symptoms of depression and anxiety and negatively associated with health-related quality of life after adjustments for respondents' demographic characteristics and socioeconomic status (Strin, 2008). Highly prevalent health risk factors, whereas diabetes, cardiovascular disease (myocardial infarction, coronary heart disease, and stroke), asthma, and disability are highly prevalent chronic illnesses or conditions in the general U.S. population (Kilme, 2008). Clustering of health risk factors or chronic illnesses is common (Greenlund, 2004) and is associated with the impairment of health-related quality of life (Li, 2008). Most previous studies have examined the associations of life dissatisfaction with single health risk factors or health outcomes, but rarely with the clustering of health risk factors and chronic illnesses.

### **III. Theoretical Background**

#### **3.1 Disengagement Theory**

In the early 1960s, the disengagement theory postulated that human aging involves an inevitable severance of relationship with others and this process is beneficial to society and the individual (Cumming & Henry, 1960). This was soon challenged by the identity crisis

theory whereby the leisure time acquired after retirement might be filled up with social activities, but dignity and self-confidence was not obtainable through leisure activities (Miller, 1965).

At the same time, the activity theory regarded that life satisfaction decreased as activities decreased. This thus assumes that when changes occur, the typical response is to restore the previous equilibrium (Havighurst, 1961). Later on, the continuity theory argued that when retirement is institutionalized or widely accepted, an identity crisis can be avoided. In other words, it assumes evolution and allows changes to be integrated into one's prior history without necessary.

The use of life satisfaction as a subjective social indicator is primarily based on the perspectives of ecology and resource exchange (Rettig & Leschentrutt, 1999). From an ecological perspective, men interact with their physical environment and social institutions. This interaction is assumed to be an exchange of resources between a government institution and individuals in the society.

Disengagement of the elderly is also of benefit for society because it frees up positions in paid work and in other domains for the entry of young individuals, thereby ensuring that young individuals undergo the training they will need to eventually take up positions of authority while also ensuring that the elderly are disengaged before they undergo the loss of skill that will compromise their performance in important social roles (Achenbaum and Bengtson 1994). Disengagement theory is functionalist also because, according to this standpoint, the disengagement of the elderly from society safeguards against their deaths causing disruptions to the larger social system (McPherson 1990). This theory of aging is related to modernization theory because it holds that the status of the elderly, by necessity, must decline with the increasing efficiency of society that accompanies its modernization. This makes the disengagement of the elderly a natural process (Moody 2010).



The specific life domains in turn are affected by three categories of determinants - characteristics of the domain, configuration of evaluation on the objective characteristics, and personal characteristics (Campbell, 1976).

### **3.2 Activity Theory**

Activity theory, developed by Robert Havighurst, maintains that active middle age roles and norms are still appropriate in the older years, although to a lesser degree (Bengtson & Haber, 1975). There is an emphasis here on the positive benefits of remaining 'engaged', and on finding substitutes for roles lost through retirement or widowhood (Markson, 1980). Activity theories of aging often argue that the actions of some aged persons in supposedly disengaging are often misinterpreted, Matthews (1977), in an analysis of actions of the aged attending a senior centre, argues that the decision of some of the aged to withdraw from the centre was a strategy employed by them in their own interest, so that they might feel more autonomous, with activity theory the theme is not disengagement but 'engagement'. Activity theory centres on middle age, holding that maintenance of the activity level of middle age is the best way to cope with ageing (Havighurst, 1963). The norms for old age are in some ways not very different from that of middle age.

### **3.3 Cross-Linkage Theory**

The cross-link theory of aging hypothesizes that with age some proteins become increasingly cross-linked or enmeshed and may impede metabolic processes by obstructing the passage of nutrients and wastes between the intracellular and extracellular compartments (Lueckenotte, 2000). An example of this would be the changes associated with aging skin. The skin of a baby is very soft and pliable, whereas the aging skin loses much of its suppleness and elasticity. This aging process is similar to the process of tanning leather, which purposefully creates cross-links (Bjorkstein, 1976).

By the end of the 1960s, Bjorksten believed that the evidence supporting the cross linkage theory was so conclusive that he stopped working to prove the theory, and embarked on greater efforts toward specific applications to retard aging based on the theory.

Cerani has shown that blood sugar reacts with bodily proteins to form cross-links. He has found that the crystallis of the lens of the eye, membranes of the kidney, and blood vessels are especially susceptible to cross-linking under the conditions of increased glucose. Cerani suggests increased levels of blood glucose cause increased amounts of cross-linking which accelerate lens, kidney, and blood vessel diseases (Schneider, 1992).

This theory proposed that cells wear out over time because of continued use. When this theory was first proposed in 1882 by Weisman, death was seen as a result of tissues being worn out because they could not rejuvenate themselves in an endless manner (Hayflick, 1988).

### **3.4 Continuity Theory**

The continuity theory dispels the premises of both the disengagement and activity theories. According to this theory, being active, trying to maintain a sense of being middle-aged, or willingly withdrawing from society does not necessarily bring happiness. Instead, the continuity theory proposes that how a person has been throughout life is how that person will continue through the remainder of life (Havighurst & Neugarten, 1963).

George Maddox was the first researcher to use the idea of continuity to describe the behavior of aging individuals in 1968 when he observed that people tended to engage in similar activities and to continue familiar lifestyle patterns as they age; however, the continuity theory of aging was not introduced until 1989. Robert Atchley is credited with the development of this theory.

### **3.5 Age Stratification Theory**

Beginning in the 1970s, theorists on aging began to focus more broadly on societal and structural factors that influenced how the older population was being viewed. The age stratification theory is only one example of a theory addressing societal values. The key societal issue being addressed in this theory is the concept of interdependence between the aging person and society at large (Johnson, 1972). This theory views the aging person as an individual element of society and also as a member, with peers, interacting in a social process. The theory attempts to explain the interdependence between older adults and society and how they are constantly influencing each other in a variety of ways. Riley (1985) identifies the five major concepts of this theory: (1) each individual progresses through society in groups of cohorts that are collectively aging socially, biologically, and psychologically; (2) new cohorts are continually being born, and each of them experiences their own unique sense of history; (3) society itself can be divided into various strata according to the parameters of age and roles; (4) not only are people and roles within every stratum continuously changing, but so is society at large; and (5) the interaction between individual aging people and the entire society is not stagnant but remains dynamic.

### **3.6 Person-Environment Fit Theory**

One of the newer aging theories relates to the individual's personal competence within the environment in which he or she interacts. This theory was proposed by Lawton (1982) and examines the concept of interrelationships among the competencies of a group of persons, older adults, and their society or environment. Everyone, including older persons, has certain personal competencies that help mold and shape them throughout life. All P-E fit theories share the following assumptions: People seek out and create environments that allow them to behaviorally manifest their traits (e.g., dominant individuals seek leadership

positions); the extent to which people fit their work environments has significant consequences (e.g., satisfaction, performance, stress, productivity, turnover), with better fit associated with better outcomes; and P-E fit is a reciprocal and ongoing process whereby people shape their environments and environments shape people (Rounds & Tracey, 1990).

### **3.7 Free Radical Theory**

Free radicals are byproducts of fundamental metabolic activities within the body (Lueckenotte, 2000). Harman (1956) was the first to suggest that the administration of chemicals terminating the propagation of free radicals would extend the lifespan or delay the aging process. Animal research has demonstrated that administration of antioxidants did increase the average length of life, possibly due to the delayed appearance of diseases that may have eventually killed the animals studied. It appears that administration of antioxidants postpones the appearance of diseases such as cardiovascular disease and cancer, two of the most common causes of death. It appears that antioxidants also have an effect on the decline of the immune system and on degenerative neurologic diseases, both of which affect morbidity and mortality (Hayflick, 1996).

### **3.8 Immunity Theory**

The immune system is a network of specialized cells, tissues, and organs that provide the body with protection against invading organisms (Lueckenotte, 2000). Accompanying these changes is a decrease in the body's defense against foreign pathogens, which manifests itself as an increased incidence of infectious diseases and an increase in the production of autoantibodies, which lead to a propensity to develop autoimmune-related diseases (Hayflick, 1996).

### **3.9 Eight Stages of life Theory**

Erikson (1993) proposed a theory of psychologic development that reflects cultural and societal influences. The major focus of development in this theory is with an individual's ego structure, or sense of self, especially in response to the ways in which society shapes its development. In each of the eight stages identified by Erikson, a "crisis" occurs that impacts the development of the person's ego. In 1968, Peck expanded Erikson's original theory regarding the eighth stage of older adulthood. Erikson grouped all individuals together into "old age" beginning at age 65 and did not anticipate that a person may potentially live for another 30 to 40 years beyond this identified milestone. Since people were living longer, there became an obvious need to identify additional stages for older adults.

#### **IV. Hypothesis Development.**

Successful aging is a universal phenomenon, which is not uniform across the different age groups, and it differs from person to person, Level of LS indicates the subjective well-being which is associates with the health and mortality status among the elderly (Pallavi, 2015). Older people who experienced bad health tend to express low level of LS. However, having higher socio-economic status, proper family support, higher level of satisfaction with one's living environment and staying in their own home among the elderly population plays a crucial role in achieving successful aging (Jalandhar, 2015)

As per the WHO, four factors which directly influences the level of LS among the Elderly are: physical health condition, mental health condition, social relationship and environment (Pallavi, 2015). For improving LS among the elderly, it is necessary to consider factors like satisfaction in residential environment, neighborhood relationship, economic status, maintaining friendship, family relationship, physical health condition, satisfaction in marital status, job or career, and lastly, satisfaction in others aspect of life (Hang, 2010). LS is influenced by various factors like demographic, socio-economic, health, physical status,

mental status, social support, social adjustment and number of morbidities. Studies indicate that factors such as race, socioeconomic status, marital status, education, level of self-esteem, depression, may influence the level of LS. In terms of demographic factors, increase in age has a significant impact on the LS among females in comparison to males (Eur, 2004).

Few studies have recorded that neither age nor gender was positively associated to LS (Subasi, 2005). Time-varying physical health is related to changes in LS (Mroczek, 2010). Change in marital status is related to the LS path, and new widowhood is related to morale and social engagement. Women and men in formal marriages experience higher levels of LS than people in other forms of marriages (Bennett, 2005). There is a moderate effect of socioeconomic status, including income and educational level, on LS (Choi, 2012).

A study on LS amongst elderly people living in Australia, found that social, health, security of life, residence, acceptance and adjustment influences the level of LS among the elderly (Parker, 2008). In order to investigate various factors associated with LS among elderly we have partially derived the framework of the study (Neugarten, 1965). As per Life Satisfaction Index (LSI), successful ageing depends upon the general feelings of well-being among older people and positively contributes into the LS. The concept of LS is associated with various factors like demographic variable, socio-economic factors, health behavior, physical health status, cognitive health status, social support and number of morbidities among elderly. The main dimensions can be labeled subjective or psychological well-being and psychological distress. Sub dimensions of well-being are two: life satisfaction or happiness positive affect (Headey & Wearing, 1992).

## **4.1 A Basic Framework of This Study**

### **4.1.1 Difference in the level Dissatisfaction of life among socio-demographic**

There is substantial literature indicating the effect of health status, demographic characteristics, social relationships and occupations towards life satisfaction for elderly people in the community (Chou & Chi, 1999). However, there is a scarcity of recent literature regarding the life satisfaction of elderly people who lived in an institution or a long term type of care, especially in the developed countries.

The changes in government policy of elderly people's care which focus on community orientation services and smaller size type of care like nursing homes, dominated recent literature. This study attempted to identify the level of satisfaction and the relationship between life satisfaction with sociodemographic characteristics of the elderly people (60 years and above) and the elements that constitute the level of life satisfaction (Dahlan, 2010).

The statistical analysis shows that the duration living in the institute weakly influences the SWLS scores. However, one way between groups ANOVA indicated that there are no significant differences in the life satisfaction as measured with SWLS with other socio-demographic variables. The SWLS scores indicated that there are no significant differences with the norms of elderly people living in the community (Dahlan, 2010).

According to Swami and Chamorro-Premuzic (2009), this value is common amongst elderly people in the developing countries. The majority of the people are satisfied in most areas of their life, but they need to see an improvement in other areas (Diener, 1985).

According to Dahlan (2010), the elderly people who lived in the institution could have a satisfaction with life in spite of constrains, occupation and social deprivation and improvised living situations as a result of adjustment, acceptance and contentment with current life.

#### **4.1.2 Difference in the level of depression among socio-demographic.**

According to Danesh (2007), The patterns uncovered in this dataset are consistent with previously reported prevalence rates for Canada and other Western countries. The negative relation between age and depression after adjusting for some sociodemographic factors is consistent with some previous findings and contrasts with some older findings that the relation between age and depression is Ushaped.

The rate of depression among individuals living common-law is similar to that of separated and divorced individuals, not married individuals, with whom they are most often grouped in other studies.

The odds ratio of depression for men compared with women is about 0.60. The lowest and highest rates of depression are seen among people living with their married partners and divorced individuals, respectively. Prevalence of depression among people who live with common law partners is similar to rates of depression among separated and divorced individuals (Danesh, 2007). The lowest and highest rates of depression based on the level of education is seen among individuals with less than secondary school and those with "other post-secondary" education, respectively (Landeem, 2007).

#### **4.1.3 Correlation LDS and Depression.**

The relationship (such as it is) between Life Satisfaction and Positive Affect depends largely on sociability. Two facets of extraversion ? sociability and warmth ? are both related to the outcome measures, as are Henderson's (1981) availability of friends index and a six item measure of friendship satisfaction based on delighted-terrible scale items. The measure of sociability draws on a sub-set of Eysenck Personality Inventory items and confirms previous work by Emmons and Diener (1985). The eight item warmth index also measures a facet of extra version (Costa and McCrae, 1985). Positive Affect, apparently the



most independent of the four factors, is particularly closely related to three variables: youth, openness to feelings (Costa and McCrae, 1985) and recent experiences of favourable life events (Block, 1981).

One of the well-being dimensions, life satisfaction, is quite strongly (negatively) correlated with a distress dimension, depression; life satisfaction and depression are near opposites. However, there is no strong association between life satisfaction and anxiety; people can be both satisfied and anxious (Bruce Headey, 1993).

The results (Viren Swami, 2006) of this study suggest that the effects of loneliness and life dissatisfaction on depression are mediated by health. In other words, health lies on the causal pathway linking loneliness and life dissatisfaction, respectively, with depression. Even though less satisfied, and particularly lonelier, individuals are more likely to report higher levels of depression, this is only the case because both higher loneliness and life dissatisfaction are associated with poorer health. Moreover, the relationships between life dissatisfaction and loneliness on depression.

Respectively were found to be not significant, suggesting that these variables have no direct influence of depression in the present sample. These results suggest that a healthy life-style will be unlikely to be associated with depression, even in individuals who are lonely and unsatisfied with life.

#### **4.1.4 Effects of level of depression in Elderly.**

There is a negative association between socio-economic markers such as wealth or occupational status and depression, with greater depression in less affluent groups (Lorant, 2003). Affective well-being and life satisfaction are positively related to income, though some authorities argue that relative rather than absolute income is more important (Dolan, 2008).

Understanding the causes and consequences of mental health outcomes is not likely to advance if researchers continue to combine indicators of life satisfaction with positive effects, or to mix up symptoms of anxiety and depression (Bruce Headey, 1993).

For example, among inpatients and outpatients in a geriatric mood disorders unit, (Brodaty, 2001) found 52% with first onset at age 60 or older, whereas 71% of depressed older home care patients in another study were experiencing their first episode of depression (Bruce, 2002). However, studies of late life depression do not systematically report proportions of cases that are early versus late onset, and the age after which onset is called “late” varies considerably.

There is substantial consensus that older adults with late onset depression have distinctive risk factors and presentation. Those with early onset depression are more likely than those with late onset depression to have a family history of depression (Breitner, 2001), possibly implying that occurrence of disorder was genetically influenced. Those with early onset depression may also have a higher prevalence of personality disorder or elevated scores on personality traits such as neuroticism (Brodaty, 2001).

The question of what leads an older adult to become depressed is most sharply raised by late onset depression. Most scholars are now focusing on structural changes in the brain. Some have found that older adults with late onset depression are more likely to have vascular risk factors (Hickie, 2001) including history of cerebrovascular disease, although this conclusion is not always supported (Brodaty, 2001).

The term “vascular depression” was offered as a hypothesis to explain these findings, later supplanted by the term “depression-executive dysfunction syndrome of late life” in order to encompass dysfunction that may not be exclusively caused by vascular disease (Alexopoulos, 2005).

#### **4.1.5 Health LD affects increased level of depression in Elderly**

Beyond characterizing age-related trends in depressive symptoms, many authors have examined covariates to test the extent to which age-related patterns might be explained by other variables. Health status consistently predicts depressive symptoms in cross-sectional studies of older adults (e.g., Kraaij, Arensman, & Spinhoven, 2002). Longitudinal investigations, in contrast, have yielded mixed results. Although numerous investigators report that health at one-time point predicts the emergence of a clinically significant level of depressive symptoms at the next (Wallace & O'Hara, 1992), studies controlling not only for baseline depressive symptoms but also for baseline health status have not found additional longitudinal effects of change in health on depressive symptoms (Dent et al., 1999; Henderson et al., 1997). Therefore, although there is much evidence that health status is related to depressive symptoms in late life, it is not clear whether change in health is associated with change in depressive symptoms.

The relationship between health status and depressive symptoms in late life may be reciprocal (e.g., Meeks, Murrell, & Mehl, 2000). Recent research in mixed age samples shows that both depressive disorders and depressive symptoms predict later development of specific medical conditions, particularly cardiovascular disease (Musselman, & Nemeroff, 1998).

According to (Cavlack, 2005), the older women were found to have more depressive symptoms as self-reported on the BDI. Also a high BDI score lead to decreasing functional independence and mobility ability in older persons especially the older women. Although the ratio of depressive symptoms is higher in older women than in men, the known risk factors do not totally explain the difference between genders in this study pool of Turkish institutionalized elderly. This difference could be due to the cultural definitions of gender roles that have affected them throughout their lives.

Consequently, it should be taken into account that decreased physical functional status in elderly may be due to depression (Cavlak, 2005).

#### **4.2.5 Relation of spouse LS affects increased level of depression in Elderly**

The negative effect of becoming widowed is particularly strong during the first years after the event (Harlow, Goldberg, & Comstock, 1991; Mendes de Leon, Kasl, & Jacobs, 1994). The course of the psychological strain after becoming widowed follows a crisis model: Immediately after becoming widowed the effects are strongest, but they diminish with time due to coping processes. Some studies show that the levels of depression fall back to the level before the death of the partner after some years (Harlow, 1991), whereas other studies find evidence that the level of depression diminishes with time but remains on an elevated level compared with the time before widowhood (Lee, DeMaris, Bavin, & Sullivan, 2001). As women on average report a longer duration of widowhood, women on average are in an advanced state of the crisis model in which the negative effects have lost their strength or have even vanished. In addition, sample composition can have a significant effect on the results. Mortality rates are higher among widowed men compared with widowed women (Lusyne, Page, & Lievens, 2001). Additionally, mortality rates are higher among depressive persons (Mastekaasa, 1994). This selection bias cannot be controlled in cross-sectional studies and thus might lead to underestimating the levels of depression in men following widowhood. On the other hand, men are more likely to remarry after becoming widowed (Carr, 2004a) and thus take themselves out of the widowed population. However, remarriage is a rather rare event among the older population.

#### **4.2.6 Relation of children LS affects increased level of depression in Elderly.**

It is a known fact that parental attitudes have a great influence on children's and early adolescents' behavior and personal traits. Bahçivan-Saydam and Gençöz, (2005) found

that while accepting and friendly parental attitudes resulted in less problems with teenagers, strict and controlling parental attitudes increased problems with teenagers. On the other hand, teenagers with neglectful and authoritarian parents have lower social self-esteem (Martinez & Garcia, 2008). Parents continue to be controlling because they believe that children cannot develop desired behaviors on their own. On the contrary, supportive parental attitudes result in increased self-esteem in teenagers (Frank, 2010). Children who have authoritative parents compared to authoritarian, indulgent, and neglectful parents have higher self-esteem and life satisfaction, and lower depression (Milevsk, 2007). Furthermore, there is high correlation between self-esteem and life satisfaction (Kapıkıran, 2013) and self-esteem and depression (Kamkar, 2012).

#### **4.2.7 Relation of social LS affect increased level of depression**

The relationship between social interest stress, and depression has also been explored by Crandall (1984), who found that score on the Social Interest Index (Greever, 1973) were negatively related to the number of stressful experiences encountered during the following year. Humans have a profound need to connect with others and gain acceptance into social groups (Leary, 1995). People form bonds readily and organize much of their behavior around establishing and maintaining those bonds. Further, people suffer when relationships deteriorate and social bonds are severed. Although feeling disconnected from others and experiencing a lack of belonging bothers everyone, depressed people may be particularly sensitive to these painful social encounters (Allen & Badcock, 2003). Because of the importance of social experiences to people's well-being (Diener & Seligman, 2000), and to the etiology and maintenance of depression (Allen & Badcock, 2003).

For example, in laboratory studies, clinically depressed people show preferential attention to sad faces, adjectives, and emotion words (Gotlib, 2004). Further, depressed

people typically view ambiguous social interactions as negative, attribute these negative outcomes to the self, and act in accord with expectations that negative social interactions are likely and costly ( Shaw, & Emery, 1979). Evidence does, indeed, suggest that depressed people often fail in their quest to satisfy their need for belonging in relationships (Early, 1996), with potentially severe consequences (Leary, 1990). Depressed people report fewer intimate relationships, and elicit fewer positive, caring responses and more negative, rejecting responses from others (Gotlib, 1992).

### **Hypothesis**

- H1:** There will be no significant difference in the level of life Dissatisfaction among socio-demographic. (Gender, Education, Age, Marital status, Economic dependence)
- H2:** There will be no significant difference in the level of depression among socio-demographic. (Gender, Education, Age, Marital status, Economic dependence)
- H3:** LDS and depression are positively correlated with each other
- H4:** Economic LDS affects increased level of depression.
- H5:** Health LDS affects increased level of depression.
- H6:** Relation of spouse LDS affect increased level of depression
- H7:** Relationship of children LDS affect increased level of depression
- H8:** Relationship of social LDS affect increased level of depression
- H9:** Relationship of relative LSD affect increased level of depression
- H10:** The depression had mediating effects on overall satisfaction of life

## V. Methodology

### 5.1 Data Collection.

A survey of the elderly in 2014 is conducted every three years, the population aged 65 and over living in 16 residential facilities in cities and provinces as a population. The purpose of this study is to investigate the actual condition of the elderly living in household and personal information based on the nationwide survey on the living conditions of the elderly in 2014, to analyze statistical data on the effect of these variables on life satisfaction, that is to find out the relationship between depression and elderly people and to help the establishment of social policy in aged society with realistic validity and suitability.

The contents of the survey are as follows. Relations with family and spouse, form of household, relationship with parents, siblings, relatives, friends, neighbors, acquaintances Health status, health behavior, functional status and care, economic status, economic activities, leisure activities and social activities, elderly life and quality of life, living environment, cognitive function.

The contents of the questionnaire, composition and survey reflected in the process. Expert Delphi survey for universities, research institutes, and health welfare practitioners in the nation to examine the validity of the questionnaire. In the first and second preliminary survey of the completed questionnaire, the appropriateness of the total survey time and difficulties in interviewing. The final completed questionnaire was approved by Statistics Korea (11,771).

### 5.2 Variables

Independent variable	Dependent variable
Gender,	
Age	
Marital Status	
Educational Level	
Status of economic dependence	

Health life Dissatisfaction  
 Economic life Dissatisfaction  
 Spouse life Dissatisfaction  
 Relative life Dissatisfaction  
 Social activity life Dissatisfaction  
 Friend relationship life Dissatisfaction

Overall Life Satisfaction  
 Depression

### 5.3 Data Analysis Tool

Data analysis of this study used SPSS 18.0 statistical package. To analyze the demographic characteristics and characteristics of the main variables, frequency analysis and descriptive statistics respectively. In order to examine the difference characteristics of major variables by income level, T-test, crossover analysis, and one-way ANOVA. Life satisfaction by income level to investigate the incentive factors, correlation analysis between analysis variables and multiple regression analysis by income level were conducted. I am using AMOS for path analysis. Path analysis was utilized to identify the links and pathways between these factors and examine their impact on quality of life for people with depression.

**Table 1.** Percent distribution of sampled population by selected life satisfaction covariates

<b>covariates</b>	<b>Percent</b>
Health life satisfaction	
dissatisfied	36.6
strongly dissatisfied	7.8
Economic life satisfaction	
dissatisfied	41.1
strongly dissatisfied	9.2
Spouse life satisfaction	
dissatisfied	2.6
strongly dissatisfied	0.3
Relative life satisfaction	
dissatisfied	5.3
strongly dissatisfied	1.3
Social activity life satisfaction	
dissatisfied	22.8
strongly dissatisfied	2.3
Friend relationship life satisfaction	
dissatisfied	8.9



strongly dissatisfied

1.3

**Table 2.** Percent distribution of sampled population by selected Depression covariates.

<b>covariates</b>	<b>True</b>	<b>False</b>
Are you satisfied with your current life?	53.2	45.2
Have you lost activity or motivation these days?	52.8	45.6
Do you feel that you are living in vain?	26.1	72.2
Do you feel that life is boring?	41.5	56.8
Do you feel fresh in the usual feeling?	51.6	46.7
Do you feel the anxiety that an ominous thing will come to you?	24.9	73.4
Do you usually enjoy your heart?	56.4	41.9
Do you often feel desperate?	23.1	75.3
Do not want to go out and only stay at home?	20.0	78.3
Do you think your memory is worse than others?	34.0	64.3
Do you think it's fun to be alive now?	64.2	34.1
Do you think you are worthless now?	27.4	70.9
Do you have good memory?	47.4	50.9
Do you think your situation is hopeless?	33.0	65.3
Do you think you are harder than others?	24.1	74.2

## VI. Data Analysis

### 6.1 Respondent Socio-Demographics

Gender distribution is 41.7% for men and 58.3% for women. This was compared to 2011 at the time, the percentage of men decreased and the proportion of women increased slightly. For age distribution 31.7% of 65 ~ 69-year-old group, 27.1% of 70 ~ 74-year-old group, 20.6% of 75 ~ 79-year-old group, 80 ~ 84 years 12.6% of the age group, 8.0% of the age group of 85 years or older.

The proportion of older age group is slightly higher, and the proportion of age group 70-79 is lower. The ratio of having a spouse is 61.4%, and there is no spouse (single,

married, divorced, separated, separated) the rate is 38.6%. This is a higher rate of uneducated than in 2011.

In terms of education level, 9.6% of the students do not know the language, 20.9% do not read the text (decipher text), 32.0% of the elementary school, 29.8% of the middle and high schools.

The male to female ratio is the highest in the age group of 65 to 69 years (male: 36.1%, female: 28.6%), but the specific age group shows that the male to female ratio is higher than that of the female group. The percentage of those over 80 years old was higher than that of men.

The sex distribution shows that the higher the age, the higher the proportion of women, the proportion is over 60%. In the age group 85 years or older, the proportion of women is 74.4% which is much higher than 52.6% of the 65-69 age group.

Although there is no regional difference in marital status, the ratio of males to females is 58.6%, while that of females is 85.3%. In the case of the spouses, the ratio of 65-69 age groups is high at 39.5%, and the age group of 85 years old is 3.5%.

We will examine various aspects of family and social relationships that play an important role in the overall life of the elderly. The relatives have focused on having close relatives, most of whom have relatives who want to know the number of relatives who can relate. Only about half of the elderly respondents answered that they have a relative who can express their feelings. The average size is 1.1 people. On the other hand, the number of elderly people with close friends and neighbors is 62.7%, which is 1.6 on average.

According to the education level, the higher the level of education, the more the elderly people have close friends and neighbors.

Life Satisfaction with health status is low at 29.5%. As for sex, 39.3% of male elderly people were higher than 22.6% of female elderly people. This difference is very large by age

group. In the age group of 65 ~ 69 years old, the satisfaction rate is 37.2%, but in the age group over 80 years old, the ratio is only slightly above 20%. In addition, the response rate is over 50% in the age group of 75 years or older.

Comparing the satisfaction level by education level, the elderly with high education level showed a high satisfaction level of health status and a low tendency of not satisfying their satisfaction level.

Economic satisfaction is as follows. by age, the satisfaction rate was 18.5% for the age group of 65-69, 15.2% for the 70-74 age group, 13.2% for the 75-79-year-old group, 12.5% for the 80-84-year-old group and 11.6% Satisfaction rate was low. According to marital status, the elderly with spouse had 17.9% economic satisfaction and 11.1% with no spouse. as in the case of health status, there is a difference in economic status satisfaction depending on whether or not there is a spouse. This also seems to be partly due to the relatively younger age of the spouse.

## **6.2 Hypothesis Testing**

Statistical analysis was carried out in three stages: firstly; ANOVA was conducted between demographic characteristics, dissatisfaction with life, and depression. Secondly; Regression analysis was conducted to examine the effects of dissatisfaction of life such as health, economy, and social support on depression. We conducted a correlation analysis of overall dissatisfaction and depression. Finally, Path analysis was utilized to identify the links and pathways between these factors and examine their impact on dissatisfaction of life for people with depression.

In table 3 the relationships between elderly people's socio-demographic characteristics and Depression, Overall Life Satisfaction were given. Meaningful relationship between age, Marital status, Education, Economic dependence ( $p < 0.05$ ) can be observed.

According to the ANOVA analysis verified that there will be no significant difference in the level of depression among socio-demographic is rejected (H1). And there will be no significant difference in overall life satisfaction among socio-demographic is rejected (H2).

**Table 3.** The relationships between elderly people’s socio-demographic characteristics and Depression

Independent variable (Socio-demographic)		Dependent variable (depression, overall life satisfaction)			
		F	Sig	F	Sig
Age	65~69 Years	76.765	0.00	67.685	0.00
	70~74 Years				
	75~79 Years				
	80&above Years				
Marital Status	Single	32.889	0.00	77.063	0.00
	Married				
	Widowed				
	Divorced				
Education	Less than primary	228.03	0.00	152.24	0.00
	Secondary school				
	Middle school				
	High school				
	University & above				
Status of Economic dependence	Independent	45.70	0.00	124.96	0.00
	Dependent				
	Partially Dependent				

P < 0.01\*\*.

In Table 4, a positively correlation among health, economy, spouse, social activity, relative relationship, children relationship life dissatisfaction was shown elderly depression in this study. There were a positively correlation among health, economy, spouse, social activity, relative relationship, children relationship life dissatisfaction and depression of elderly.

The results of previous studies by Jang (2006), in which participants who subjectively perceived themselves as having a higher health status exhibited a higher level of life satisfaction, were also consistent with the results of this study. Additionally, this study showed a positive correlation between family support and life satisfaction among older people. LDS and depression are positively correlated with each other (H3) is accepted.

**Table 4** Inter Correlation among health, economy, spouse, social activity, relative relationship, children relationship life dissatisfaction and depression of elderly.

	<b>Depression</b>	<b>Health Dissatisfaction</b>	<b>Economy Dissatisfaction</b>	<b>Spouse Dissatisfaction</b>	<b>Children Dissatisfaction</b>	<b>Social Dissatisfaction</b>	<b>Relative Dissatisfaction</b>
<b>depression</b>							
Correlation	1	.528**	.416**	.302**	.294**	.397**	.363**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
N	10267	10267	10267	6382	10049	10267	10267
<b>Health dissatisfaction</b>							
Correlation	.528**	1	.377**	.222**	.190**	.349**	.278**
Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
N	10267	10281	10281	6390	10062	10281	10281
<b>Economic dissatisfaction</b>							
Correlation	.416**	.377**	1	.265**	.361**	.372**	.317**
Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
N	10267	10281	10281	6390	10062	10281	10281
<b>Spouse dissatisfaction</b>							
Correlation	.302**	.222**	.265**	1	.361**	.292**	.275**
Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
N	6382	6390	6390	6390	6335	6390	6390
<b>Children dissatisfaction</b>							
Correlation	.294**	.190**	.361**	.361**	1	.284**	.359**
Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
N	10049	10062	10062	6335	10062	10062	10062
<b>Social dissatisfaction</b>							
Correlation	.397**	.349**	.372**	.292**	.284**	1	.506**
Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
N	10267	10281	10281	6390	10062	10281	10281
<b>Relative dissatisfaction</b>							
Correlation	.363**	.278**	.317**	.275**	.359**	.506**	1
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
N	10267	10281	10281	6390	10062	10281	10281

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 5 below shows the regression analysis result that effects of life dissatisfaction on elderly depression are all accepted (H4~H9). The hypothesis that higher levels of depression would be associated with reduced life satisfaction was supported. These results are consistent with the finding of Simpson (1996), who reported a significant inverse relationship between depression and life satisfaction. A further finding was that a significant positive correlation was observed between satisfaction with life and social interest, suggesting that high levels of depression lead to lower level of social interest, as proposed by Zauszniewski (1995).

**Table 5** Multiple-regression analysis of Dissatisfaction of Life

<b>Model (dependent variable: depression)</b>	Unstandardized			Standardized
	Coefficients Beta	t	Sig.	Coefficients B
(Constant)	-3.987	-12.867	.000	
Health life	1.664	34.784	.000	.379
Dissatisfaction(H4)				
Economic life	.779	13.715	.000	.156
Dissatisfaction(H5)				
Spouse life	.642	9.246	.000	.101
Dissatisfaction(H6)				
Relative life	.690	9.873	.000	.665
Dissatisfaction(H7)				
Social life	.568	8.978	.000	.109
Dissatisfaction(H8)				
children life	.225	3.066	.000	.035
Dissatisfaction(H9)				

\*\*\* significant at 0.01 level(2-tailed)

This study revealed that Health Dissatisfaction of Life( $\beta=1.664$ ), Economic Dissatisfaction of Life ( $\beta=0.779$ ), Relative relationship Dissatisfaction of Life ( $\beta=0.690$ ) and Spouse Relationship Dissatisfaction of Life ( $\beta=0.642$ ), Social activity Dissatisfaction of Life ( $\beta=0.568$ ), Children Relationship of Dissatisfaction of Life ( $\beta=0.225$ ) in order of importance are the factors that affect depression. Among the factors, Health Dissatisfaction of Life found to be the most important form of primary support for depression of elderly.

The life circumstances consistent with poverty (economic hardships) shown to be risk factors for depression (Mirowsky & Ross 2003) especially for women who constitute the majority of heads of households in poverty (Dunlap, 2003). Economic hardships consistently involve concerns regarding basic necessities such as ability to pay for or obtain food, housing, and shelter related services (Danziger,2000). In some research, economic hardship is operationalized as a combination of both objective and subjective measures: not only the

inability to pay for basic needs, but as the individual's perception of inability to pay for basic needs (Hilton, 1997).

People with depression function at a lower level and have poorer well-being compared with patients with other chronic conditions such as hypertension and diabetes (Wells,1989). According to the statistics from the Department of Health of Taiwan, 14.1% of persons older than 15 have at least moderate depression (DOH, 2002). Although the treatment of depression has advanced significantly, depressed patients still suffer from persistent psychosocial and occupational impairments and, subsequently, a reduced quality of life after recovering from an acute episode (Hsiung & Pan, 2008).

Wilson and Cleary (1995) have proposed a conceptual model of health-related quality of life (HRQL) containing variables of bio- logical factors, symptoms, demographic variables, functions, environment, and general health perception.

### **6.3 The Path model**

Path analysis is a statistical technique applied to determine casualty and tests casual models which must be a casual graph. In fact, path analysis represents casualty. Path analysis, a form of applied regression analysis, is applied to test complex hypotheses in which path graph is used. Path analysis determines to what extent an independent variable directly and indirectly affect the dependent variable. Using path analysis, it is possible to measure the direct and indirect effects of the independent variables on the dependent ones. Therefore, path analysis allows us to spot the compatibility of variable's effect with one another. Path analysis provides a great deal of information as to the casual processes in a simple way. **The Maximum Likelihood method used by AMOS 16 (Arbuckle 2007) was used to test the structural equation model and, thereby, estimate the model parameters and test their significance. In the absence of latent variables, as in the model identified here, structural**

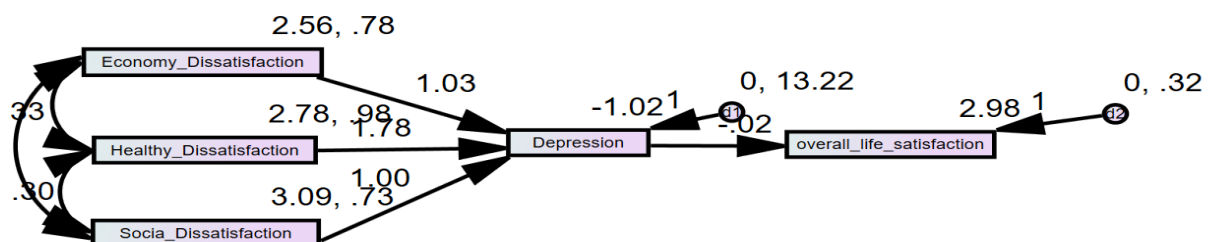
equation modeling provides the same results as path analysis; however, unlike a series of linear regression equations without using the SEM technique, the simultaneous nature of SEM-based path analysis provides the direct and indirect effects of exogenous variables on outcome variables while incorporating the intervening variable.

First, Dissatisfaction of Life (Health, Economic, Spouse, Social activity, Children, Relative) were examined as exogenous of depression. Second, the model was used to examine the potential intervening variable, depression, as an endogenous mediating variable between the influences of Dissatisfaction of Life and Overall Satisfaction of Life. Although the main focus of the study was to test mediating effect of depression on the Satisfaction of Life, literature has supported the association of the exogenous variables with Satisfaction of Life.

The path model presented in Fig 1.I was used to test the effects of each component measure of Dissatisfactions of Life, depression and measure of overall Satisfaction of life in an effort to test whether depression is a mediating variable between the measure of Dissatisfactions of Life and Overall Satisfaction of Life.

**Fig.1** Final parsimonious model

Chi-square = 4.160  
Probability level = .245



Goodness of fit statistics for the final parsimonious model indicated more consistency with the empirical data. The exact same final model will result from revision of the intermediate model as would result from the usual process of removing paths that are not fit model from initial model that did not include Souse Relationship Dissatisfaction of Life, Rela



tive relationship Dissatisfaction of Life, Children Relationship of Dissatisfaction of Life.

Improvement in the chi-square value was made in the final model (d.f. = 4,  $p = .245$ ). RMSEA value of .0, CFI value of 1.0 (Marsh & Hocevar, 1985) all indicated a best fit of the model to sample data.

The mediator role of depression on the relation between Dissatisfactions of Life and overall Satisfactions of Life especially was the major question of this study. It was found that Depression partially mediated the relationship between Dissatisfactions of Life and overall Satisfactions of Life (H10 is accepted).

Informal social support can act as a mediator variable in the relationship of depression and life satisfaction in caregivers of AD patients. Improving the informal social support networks may help in coping with care giving burden and better quality of life.( Shatha Jamil Khusaifan, 2017).

## **VII. Conclusion**

The purpose of this study is to find the factors affecting depression of elderly among demography characteristics of aged people, categorized dissatisfactions and sources of income, based on the 2014 national survey data of the actual living condition of the elderly and welfare need. We found that many factors have significant impact on the depression of the elderly, such as socio-demographic characteristics, the level of economic, social, physical, children relative dissatisfactions. Path analysis was utilized to identify the links and pathways between these factors and examine their impact on quality of life for people with depression.

This study attempted to test a model that describes the relationship between Dissatisfaction of Life and Overall Satisfaction of Life and how this link might interact with depression.

As a result of the research carried out, findings on the relationships between elderly people's socio-demographic characteristics and Depression, Overall Life Satisfaction were given. Meaningful relationship between age, Marital status, Education, Economic dependence ( $p < 0.05$ ) can be observed. according to the ANOVA analysis verified that there will be significant difference in the level of depression among socio-demographic. Especially, Depression associated with living alone, 65~69 age groups, inadequate family support, educational low level, male. LDS and depression are positively correlated with each other.

As people age, health and economic related problems increase and depression increase since health affects all aspects of Dissatisfaction of Life. Decline in physical activity and economic state with the resulting feeling of insecurity are some of main reasons for an increase in depression.

SME is the ability to identify the mediating effect of depression. Indirect effect of the exogenous variable reinforced the direct effect of depression. Depression partially mediated the relationship between Dissatisfactions of Life and overall Satisfactions of Life.

Within this context, this study should engage in rigorous examination of and solution for barriers to successful transitioning from welfare to work including Dissatisfaction of Life which affect mental health. Identification of these variable is vital.

Successful aging is a general phenomenon which is not uniform across the different age groups, and it differ from person to person.

The report from the government-funded Korea Labor Institute (2013) showed that 48.6 percent of the country's elderly were in poverty in 2011, defined as earning 50 percent or less of median household income. Switzerland came in second at 24 percent, nearly half that of South Korea's rate. Israel and Chile followed, with 20.6 percent and 20.5 percent, respectively.

South Korea had some 6.4 million senior citizens in 2014, which is about 15.1 percent of the population and 3.8 percent higher than two years ago, according to the report (the Korean Labor Institute, 2014). Of these, only 2 million were employed. An estimated 74 percent of poverty-stricken elderly Koreans lived alone.

Organization for Economic Cooperation and Development nations studied (2015), and economic woes have been seen as a contributing factor to the high suicide rates among South Korea's elderly. The OECD(2016) was formed to "promote policies that will improve the economic and social well-being of people around the world."

Considering these findings, elderly people who are excluded from society, and cannot get support they need to cope with problems. Above all, there is a need for policies that provide job opportunities for the elderly to live an economic life. It is necessary to establish national facilities that can consult the mental health as well as the physical health of the elderly.

Further research might examine what influences suicide in elderly by cultural factors. Cultural factors may influence cross-national variations in elderly suicide rate. but this has been rarely studied in the elderly. The contribution of cross-national differences in cultural factors on elderly suicide rates requires further study by formally measuring cultural factors with validated instruments.

## **VIII. Study Limitations**

There are limitations in this study include the use of eight different questionnaires which had a total of 253 questions. This number of questions might have been overwhelming for the residents and sometimes they got tired in between the interviews, which can serve as some form of bias for the study. To resolve this issue, the study subject could be schedule for two interviews of about 10~15 minutes each over a two-day period, which was not feasible

for this present study because of time constraint and some policy issues of the homes under study.

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