-

Factors related to scuccessful aging in Thimphu, Bhutan

LOBZANG DORJI

BURAPHA UNIVERSITY
2018

-

LOBZANG DORJI

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรพยาบาลศาสตรมหาบัณฑิต
สาขาวิชา-
คณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา
2561

Factors related to scuccessful aging in Thimphu, Bhutan

LOBZANG DORJI

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE MASTER OF NURSING SCIENCE
IN -
FACULTY OF NURSING
BURAPHA UNIVERSITY
2018

The Thesis of Lobzang Dorji has been approved by the examining committee to be partial fulfillment of the requirements for the Master of Nursing Science in - of Burapha University

Advisory Committee

.....Principal advisor
(Assistant Professor Dr. Pornchai Jullamate)

.....Co-advisor
(Assistant Professor Dr. Ratcharneeporn Subgranon)

Examining Committee

.....Principal examiner
(Professor Edwin Rosenberg)

.....Member
(Associate Professor Dr. Wannee Deoisres)

This Thesis has been approved by the Faculty of Nursing to be partial fulfillment of the requirements for the Master of Nursing Science in - of Burapha University

.....Dean of the Faculty of Nursing
(Associate Professor Dr. Nujjaree Chaimongkol)
Day.....Month.....,Year.....

59910043: MAJOR: -; M.N.S. (-)
KEYWORDS : SUCCESSFUL AGING/ OLDER ADULTS

LOBZANG DORJI: Factors related to scuccessful aging in Thimphu, Bhutan. ADVISORY COMMITTEE: PORNCHAI JULLAMATE, RATCHARNEEPORN SUBGRANON, 2018

Most countries have rising life expectancy and number of older persons.It is important to promote how to age successfully. This study aimed to examine predicting factors of successful aging among older adults including perceived self-efficacy, social support, educational level, perceived health status and life satisfaction, among community dwelling older adults in Thimphu Bhutan. A convenience sample of 90 older adults living in communities, Thimphu, Bhutan was recruited in the study. Data were collected from April to May, 2018. Structured questionnaires regarding demographic information, perceived self-efficacy, social supports, life satisfaction and successful aging were used to collect data. Descriptive statistics and standard multiple regression analysis were used to analyze data.

Result showed that perceived self-efficacy, social support, educational level and life satisfaction together significantly predicted successful aging, accounting for 58 % of the variance (R^2 = .58, $F_{5, 84}$ = 22.89, p < .001). Perceived self-efficacy (β = .38, p < .001), social support (β = .31, p < .001), life satisfaction (β = .25,p < .001) and educational level (β = .23, p < .05) were significant predictors in the model. However perceived health status (β = -.15, p > .05) did not showed unique contribution in successful aging.

ACKNOWLEDGEMENTS

The completion of my thesis would not have been possible without the kind and generous support from Advisors, Professors, participants of the study, family and friends. I would like to take an opportunity to express my deep gratitude and appreciation to all of them.

First and foremost, my greatest gratitude to Assistant Professor Dr. Pornchai Jullamate who had been always there for me whenever I had questions or issues related to my study, during the last two years. I always feel grateful for his kindness, thoughtfulness and encouragement which inspired me to do the best as I could. I heartedly thanked my co-advisor, Assistant Professor Dr. Rarcharneepon Subgranon, for her invaluable encouragement and kind guidance for my study. I would like to express my best thankfulness to the committee members for their valuable questions, comments and suggestions which help made the thesis much clearer, and also to Professor Edwin Rosenberg as an external examiner for his guidance and valuable advice.

My sincere gratitude goes to Dean, Faculty of Nursing, all lecturers and the staff in the Faculty of Nursing, Burapha University for providing facilities and support for my thesis requirement. I would like to thank Dzongkhag administrators, Thimphu, Bhutan for permitting to conduct the study. Special thanks are extended to all of older https://ithesis.buu.ac.th/page/#adults who voluntary participated in this study.

Eventually, I am totally indebted to my beloved family, friends and colleagues for their endless love, an immensurable supports and encouragements during at the time of study. My heartfelt thank goes to my eldest son for his enormous encouragement, support and love. I will always remember the sacrifices they made for me.

LOBZANG DORJI

TABLE OF CONTENTS

Page

CHAPTER 1
INTRODUCTION

Statements and significance of the problems

Aging is inevitable, all humans experience aging, which is characterized by gradual deterioration of the body structure and function (Van Leeuwen, Vera, & Wolkenhauer, 2010). However, life expectancy is increasing, and as a result, the population of older individuals is also increasing (Hyun, Ju, & Sok, 2012). World Health Organization [WHO] (2007) estimated, there were 600 million people aged 60 years and over in the year 2000 and will increased to 1.2 billion by 2025 and 2 billion by 2050; and 80 % of them will be living in developing countries by 2050. Significantly, the most rapid increases in the 65 years and older population are occurring in developing countries, which will see a jump of 140 percent by 2030 (Dobriansky, Suzman, & Hodes, 2007).

In 2017, it was estimated 962 million people aged 60 years and above in the world, comprising 13 per cent of the global population. The population aged 60 years and above is growing at a rate of 3 per cent per year. Currently, Europe has the highest percentage of population aged 60 years and above (25 %). Rapid ageing will occur in other parts of the world as well, around 2050 all regions in the world except Africa will have nearly a quarter or more of their populations at ages 60 years and above. The number of older persons in the world is projected to be 1.4 billion in 2030 and 2.1 billion in 2050, and could rise to 3.1 billion in 2100 United Nation [UN] 2017. With aging, there accompanies innumerable problems that not only affect an older adults, but also affect the society in general. The study conducted in Germany on older adults, from 5319,438 persons, 44,000 femoral fractures were recorded, and the contribution of people with care needed to the overall burden of femoral fractures in older people was 50 % (Rapp et al., 2012). In another study conducted by Felson et al., (1987) found the age ranges from 63-94 years (M = 73), had osteoarthritis, who visited hospital, however, there was a significantly higher proportion of women with symptomatic disease (11 % of all women versus 7 % of all men; p = .003). The age associated increase in osteoarthritis was almost entirely the result of the marked age

associated increase, the increase of age is proportionate to arthritis. Because of increase age associated disease and morbidity, an older adults land up in the hospital or nursing home, disability cause burden, most of the disabilities are caused by chronic disease, in the countries with low and middle incomes, until now, lacking with respect to dementia. Sousa et al. (2009) provide information of potentially staggering importance. By mid-century, the numbers of people aged 60 years and older in countries with low and middle incomes will increase by 224 %.

A study conducted in Singapore showed the respondents utilized more healthcare and social care resources than those with one or no chronic conditions. The total societal cost of multimorbidity equated to SGD$15,148 per person, annually, while for those with one or no chronic conditions the total annual societal costs per person were SGD$5,610 and SGD$2,806, respectively. Each additional chronic condition was associated with increased healthcare (SGD$2,265) and social care costs (SGD$3,177) (Picco et al., 2016). Globally dementia is one of the leading disease that affects older adults at the later part of the life, since they are mentally disturbed, an older adults had to admit or otherwise, someone was required in taking care of older adults at home. In the year 2015, 46.8 million people worldwide were living with dementia, much of the increase was taken place in low and middle income countries in 2015, 58 % of all people with dementia lived in low middle income countries, rising to 63 % in 2030, and 68 % in 2050. Incidence of dementia is widely acknowledged to increase greatly with advancing age. Sousa et al. (2009) showed, dementia made the largest contribution to disability in China, Cuba, Dominican Republic, Mexico, Peru, and urban India. Total estimated worldwide cost of dementia in 2015 was USD$ 818 billion, by 2018, trillion dollar and rising to USD$ 2 trillion by 2030.

The World Health Organization [WHO] (Callahan, 1973) recognized health as complete mental-social welfare, not only lacks disease. In fact, this concept involves complete physical and mental development as well as the abilities of a person. In addition to the importance of triple dimensions of health, the prevalence of contagious diseases and deaths induced by them, have caused physical health to be prioritized in most countries. The elderly are subjective to increasing threats generally due to retirement, loneliness, rejection, and stress induced by industrial societies,

which finally leads to emotional and mental isolation, In this regard, Nejati (2009) showed in his research, which was performed on the elderly living in Qom city that 48 % of old people suffers from depression, 86 % of them experience sleep disruption, 9 % had disruption in social performance and 87 % of the aged had disruption in physical performance.

Study from Nortey, Aryeetey, Aikins, Amendah, and Nonvignon (2017) showed that economic burden on family caregiving for elderly population in southern Ghana, the average monthly cost of family caregiving for the elderly was US$186.18. All family caregivers spent a total of 17,900 hours on caregiving for their care recipients within the month. Which was considered as an economic burden. Successful aging is an emerging concept representing the shift, stressing the quality of aging. The concept of successful aging has been used interchangeably with various terms such as healthy aging, productive aging, and aging well (Butler, 1988; Depp & Jeste, 2006; Peel, McClure, & Bartlett, 2005; Vaillant & Mukamal, 2001). All these terms imply that later life is no longer considered as a time characterized by illness and dependence but rather as a time of maintaining health and vitality (Martin et al., 2014). The concept of successful aging had been interpreted from diverse perspectives, and its definition has evolved through the work of various researchers over the last 50 years (Martin et al., 2014). There remains no consensus definition (Cosco, Prina, Perales, Stephan, & Brayne, 2014). Generally, successful aging is characterized by high ability and function in the physical, mental, and social domains. For instance Baltes and Baltes (1990) proposed a model of successful aging based on a theory of adaptive development and effective life management. It explained behavioral, motivational, and cognitive processes in aging, and especially, along with decreasing cognitive function, they suggested an importance of adaptation strategies through the selective optimization with compensation model in achieving Successful aging (Baltes & Baltes, 1990). Rowe and Kahn (1987) described the concept of successful aging by trying to differentiate it from ‘‘usual aging.’’ Despite this milestone for outlining the model of successful aging. Specifically, according to Rowe and Kahn (1987, 1998), there are three components that comprise successful aging: 1) avoid disease or any disability, 2) maintain high cognitive and physical function, and 3) prolong active engagement in life.

Successful aging is defined as an individual's perception of a favorable outcome in adapting to the cumulative physiologic and functional alternations associated with the passage of time, while experiencing spiritual connectedness, and a sense of meaning and purpose in life" (Flood, 2002). Young, Frick, and Phelam (2009) showed that successful aging occurs when an individual uses adaptive mechanisms and spiritual resources to balance for physical limitations and environmental challenges, to achieve a strongly successful aging. Successful aging can influence through various factors including perceived self-efficacy, social support, educational level, perceived health status and life satisfaction. However, despite the recognized importance of these factors, the relationship between them and successful aging still remains controversial (Aries-Merino, Mendoza-Ruvalcaba, Aries-Merino, Cueva-Contreras, & Aries, 2012; Kim, 2013 b).

In the phenomenal scenery of Bhutan, life expectancy had increased; in 1960 it was 32.4, 1984 it was 45.6, and 2014 it has reached 69.5 years (Ministry of health [MOH], 2017). The number of adults over 60 has increased steadily over the past decades, with over 5 percent of the population over 60, expected to increase from 4.7 % in 2005 to 11.2 % in 2045, at a population growth rate of 1.8 % per annum (Dorji, 2016) and infrastructure to cater to this population is now slowly taking form WHO (2016). Bhutan will be ranked highest lifespan among the Asia in longevity (increased of 10 years), within 25 years from 65years lifespan in 2005 to 75 years lifespan in 2030 Dlugosz and Razniak (2014).

However, there is no separate national policy for health care of elderly or ageing. The Ministry of Health does not have a separate programme for the elderly population. There is no national civil society or nongovernmental organizations providing care to the elderly population. This situation requires urgent improvement as the elderly population remains dependent for their general welfare and care, however, in the Bhutanese context, traditional Buddhist practices and principles require society to show respect and concern for the elderly. The Royal Bhutanese Government is committed to providing support and care to elderly persons who do not have adequate family support (Sandeep, Chauhan, & Siddiqui, 2013).

Under the patronage of His Majesty King Jigme Khesar Namgyal Wangchuck, Royal society of senior citizens were established on 7th January, 2011,

and officially launched coinciding with the 31st birth anniversary of His Majesty on February 21st 2011. The visionary King felt that the need for this establishment was necessary as the retiree government servant had the potential to keep themselves productively engaged and contributes in the communities.

The royal society for senior citizens served in different ways. The legal experts of the senior citizen members provides free legal assistance about general legal issues concerning seniors, the services are provided totally on the voluntarily by the senior citizens from the retired legal professionals. The counselling of the senior citizens were provided by an expert from different background, an expert and certified social workers, especially the counselling were provided on the issues of their families in resolving the elderly related problems, humiliated from the society and juniors, as respect from the juniors and young people decline, and issues related to physical and functional capabilities, and maintaining healthy practices.

Unlike other countries, there is no specific hospital, elderly home or separate arena for older adults, when the elderly gets sick, they were treated according to the nature of disease and gets admission to their respected ward, for example if elderly is suffering from the arthritis related problems, they were admitted to orthopedic ward, and its free of cost.

Thimphu is a capital city of Bhutan, it is situated in western part of Bhutan with the total population of older adults more than 8,889 National statistical Bureau [NSB], (2017), with population growth rate of 1.4 % in urban and about .9 in the rural area. The growth rates increase because of the population migration to the town and most of the older adults have more of the disease related conditions for better treatment in the hospital. In the report (Ministry of Health, 2017), 5,538 visited with arthritis related problems at Basic Health Unit, 1433 (25.8 %) were older adults, and 73(24 %) out of 304 who got admitted to hospital were older adults and out of 4,474 circulatory related diseases 2,108 (47.11 %) were older adults, which glorify that despite the increase in life expectancy of older adults in Bhutan, the disease of aging as well cohesive with ageing. The study examined factors like perceived self-efficacy, social support, educational level, perceived self-rated health status, and life satisfaction on successful aging. The variables chosen for this study was based on

empirical evidence which indicate that these variables selected have a stronger prediction with successful aging.

Perceived self-efficacy is an older adults' belief about their ability to control over the event those affect their lives. Perceived self-efficacy showed a stronger positive correlation with successful aging. An individuals with high self-efficacy beliefs persevere with a behavior, even in the absence of a positive outcome (Carter, Breena, Yarussb, & Beilbya, 2017). So even with problems associated with aging, an adult with a higher perceived self-efficacy can persevere and achieve successful aging. Self-efficacy declined with increasing age and that decline was steepest in old age (McMullin & Cairney, 2004). Self-efficacy is a target of interventions of older adults to contributes in successful aging, it predicts better physical health, perform behavior that are useful for their health and decrease the progression of disease, and lower levels of depression (Orth, Robins, &Meier, 2009).

High perceived self-efficacy contributes to happiness and satisfaction with life. The performance of positive behavior to good outcome, makes one more willing to face challenges, balance emotions, decrease stress and is one of the factors contributing in successful aging (Bandura, 1977; Frisch, 2005). Whereas low perceived self-efficacy has been associated with a lot of negative life outcomes including unhappiness, loneliness, depression, eating disorders, and worsened recovery after illness which ultimately leads to unsuccessful aging (Leary & Baumeister, 2000). Perceiving oneself as in control of one's environment is an important factor in successful aging. Perceived self- efficacy was found to be a factor significantly associate with successful aging in older adults (Cha, Seo, & Sok, 2012).

Social support is one of the core bricks that has great contribution in the line of successful aging, those can be from the family, friends and others who are close to them, it riddles to make more meaningful in creating happiness, shares difficulties during the time of life, asides of expression of love and affection, especially during old age. Such support is also in the form of Social support and aid throughout the life. The prime finding indicates that social support for older adults was an essential contribution to maintaining of successful aging (Cha et al., 2012; Kim, 2013 b ; Narang et al., 2010).

Educational level means the number of years, an older adults had studied in an institutions, and this was primary, Secondary school, High school, Bachelor, and Master degree. Education is backbone of any forms of work. Education can affect health in different ways at different stages of the life cycle. Ross & Wu (1995) showed that the younger successful aging had high correlation with education level, and evidence suggest that those who achieve a higher level of education attainment are more likely to engage in healthy behaviors and less likely to adopt unhealthy habits (Van Oort, van Lenthe, & Mackenbach, 2004). Almost all the research articles showed that; higher level of educational status had better and positive in achieving successful aging (Arias-Merino et al., 2012; Kim, 2013 a). In studies conducted by Meng and D'Arcy (2014) had contrast with education, higher level of educational level is not associated with successful aging.

Educational level of an older adult also plays an important role in achieving successful aging. Research by Cosco, Stephan, Brayne, Muniz, and CFAS (2017) found individuals with more education were significantly more likely to be in higher functioning level. Even in Bhutan, a survey done by the GNH commission, it was found that 60 % of the older adults who had formal education (classroom based) 60 % of those with high school were found to be happy, 30 % without formal education (Centre for Bhutan Studies [CBS], 2015). Van Oort et al. (2004) explained that those who achieve a higher level of education are more likely to engage in healthy behaviors, have greater problem solving skills, value systems and competence that are favorable for promoting healthy lifestyles practices which ultimately leads to attainment of successful aging.

Another important factor is life satisfaction. Numerous studies in the past have shown, life satisfaction is positively correlated to successful aging. Yamashita, Lopez, Stevens, & Keene (2017) found education, lifelong learning activities, and well-being are positively associated with successful aging. Life satisfaction and the feeling of being in control over one's life are important aspects of psychological functioning in old age and have been discussed as important indicators of successful aging (Baltes & Baltes, 1990).

Good Perceived health status is an important for older adults such as reduced risk of mortality (Wilkins, 2003) disability (Mendes de Leon, Glass, & Berkman,

2003), depression (Fiori, Antonucci, & Cortina, 2006; Glass, Mendes de Leon, Bassuk, & Berkman, 2006); better cognitive health (Engelhardt, Buber, Skirbekk, & Prskawetz, (2010). A good health, individual feels easier to be able to cope with the changes that had occurred to their body as they have aged and to deal with their aging and promote successful aging (Flood, 2005). In previous studies, perceived self-rated health status was found to be an important variable on successful aging among the male elderly (Chung, 2007; Kim, 2013 a). Similarly, Meng and D'Arcy (2014), showed that older adult with perceived better health was more likely to be successful agers. Moreover, there is no study done to confirm perceived health status as variable on successful aging in Bhutanese older adults, this study showed, it is contrast in predicting and there is no correlation with successful aging among older adults in Bhutan.

Although there are a number of studies done on successful aging, a detailed investigation of the aging population and predicting factors to successful aging in Bhutan had not been studied. Statistics shows that even though elderly population in Bhutan face problems, there is no specific legislation for older adult care in regard to attainment of successful aging. Perhaps, because there is null to scanty knowledge regarding predicting factors on successful aging in Bhutan. Therefore, it is imperative to study successful aging in Bhutan. This study examined predicting factors of successful aging in older adults, which included perceived self-efficacy, social support, perceived self-health status, educational level, and life satisfaction. Knowledge generated from this study is expected to be critical, in a way, they would contribute in broadening the knowledge of the concept of successful aging. Practically, hoping to provide strong evidence for developing interventional programs toward helping older individuals and improve their quality of later life as well as support them in achieving successful aging with normal aging changes.

Research questions

1. What is the level of successful aging among older adults living in Thimphu Bhutan?

2. To what extend perceived self-efficacy, social support, educational level, perceived health status and life satisfaction predict successful aging, among community dwelling older adults in Thimphu, Bhutan?

Research hypothesis

Predictors like perceived self-efficacy, social support, educational level, perceived health status and life satisfaction could combine to predict successful aging among community dwelling older adults in Thimphu Bhutan.

Scope of the study

The study aimed to measure the predictive ability of factor influencing successful aging among 90 community welling older adults in Thimphu, Bhutan. Data were collected during 5th April- 15th May, 2018. The variables included were perceived self-efficacy, social support, educational level, perceived health status and life satisfaction.

Conceptual framework

The conceptual framework of this study was applied from literature review whereby factors like perceived self-efficacy, social support, educational level, and perceived health status and life satisfaction had all shown stronger association with successful aging in older adults. The variables under study are also consistent with Flood's theory which focuses on the second foundation coping process, Intrapsychic factors, such as personal control, creativity, perceived self-efficacy (low level of negativity) refers to how older adults utilizes his or her inherent character traits to respond to environmental stimuli to promoting successful aging.

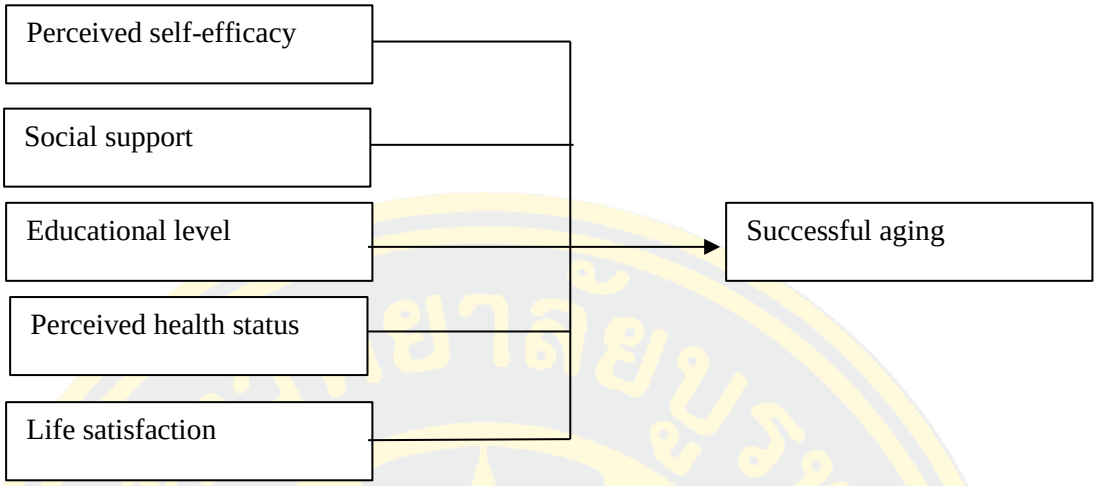

Figure 1 Conceptual framework

Operational definition

1. Older adults are defined as Bhutanese who are 60 years and above living in Thimphu Bhutan.

2. Perceived health status refers to overall perception of older adults on health, including both physical and psychological dimensions. Perceived health status was be measured by self-rated health [SRH] developed by Stanford chronic disease self-management study (1996).

3. Educational level refers to the numbers of years which older adults have studied in an institution.

4. Life-satisfaction was the degree to which an older adults positively evaluates the overall quality of his/her life as-a-whole. life satisfaction measured by using life satisfaction index for the third age [LSITA] scale short form. There were 12 questions (Barrett & Murk, 2006).

5. Social support referred to older adult's perceptions of receiving help and support from family members, friends and significant others with regard to taking care of them to achieve successful aging. Measured through multidimensional scale of perceived social support developed by Zimet, Dahlem, and Farley (1998).

6. Perceived Self-efficacy referred to an older adult's belief about their ability to control over event that affect their lives. Perceived self-efficacy was

measured by the general self-efficacy scale [GSE] developed by Schwartzer and Jerusalem (1995).

7. Successful aging referred to an older adult's perception of favorable outcome in adapting to the cumulative physiologic and functional alterations associated with the passage of time, while experiencing spiritual connectedness, and a sense of meaning or purpose in life. Successful aging was measured by successful aging inventory [SAI] developed by Troutman, Nies, Small, and Bates (2011).

CHAPTER 2
LITERATURE REVIEWS

In this chapter, relevant information and study findings were reviewed. This section is divided into four main parts as follows:

1. Overview about Bhutanese older adults.
2. Concepts of successful aging.
   - 2.1 Definition of successful aging.
   - 2.2 Theory of successful aging
   - 2.3 Components of successful aging
   - 2.4 Measurement of successful aging
3. Predicting factors of successful aging among community dwelling older adults living in Thimphu, Bhutan.
   - 3.1 Perceived self-efficacy
   - 3.2 Social support
   - 3.3 Educational level
   - 3.4 Perceived health status
   - 3.5 Life satisfaction

Overview about older adults in Bhutan

Older adult's definition criterion differs from countries to countries, due to the difference in geographical, time or social, cultural or functional markers. In the developed countries the aged applied for older adults considered 65 years and above, but in the developing countries it is considered more than or equal to 60 years of chronological age, but some countries they include 55 years (Indonesia) and above as an older adults. According to the World Health Organization [WHO] (2014 a), in a project it includes older adults as low as 50 years in African countries. As such there is no definite standard for the older adult's age, but United Nation agreed the person becomes older adults when he/ she crosses 60 years of chronological age. Most developed countries have accepted the chronological age of 65 years as a definition of "elderly" or older person, but like many westernized concepts, this does not adapt

well to the situation in Africa. While this definition is somewhat arbitrary, it is many times associated with the age at which one can begin to receive pension benefits, also the age at which health problems become more frequent and serious. At the moment, there is no standard numerical criterion, but United Nation [UN] and World Health Organization [WHO] agreed cutoff 60 years of chronological age as older adults. There is no specific standard or legislative rules of age for older in adults in Bhutan, but according to the royal civil service rules and regulation [RCSC], the civil servant who crosses 56 and 58, respectively had to resign from the services, which is considered as old.

Royal society for senior citizens [RSSC], under the patronage and command from His Majesty King Jigme Khesar Namgyel Wangchuck RSSC was established in 2011, and did baseline survey on 2012, to identify, understand and study the needs, aspiration and expectation of senior citizens which includes aged 55 years and above. But as the life expectancy in Bhutan had increased substantially, so 60 years or older was considered based on the UN and WHO.

According to the survey conducted by Royal Society for Senior Citizen (2012), 55 years and above was 101,563, of which 62 % were males and the remaining 48 % were females. 53.9 % lived in the urban arena. Whist the population 55 years and above comprised 14 % of the total population of 734,854, estimated from the labour force survey 2012. National Statistical Bureau [NSB] (2017) aging population in Bhutan tends to increase every year. Aging population of 60 years and above was 56,827 in 2016, from the total population of 768,577, and it has increased to 58,804 in 2017 out of population of 779,666. Referring to Dlugosz and Razniak (2014), Bhutan will ranked the highest in Asia, with increased of 10 years within 25 years from 65 years lifespan in 2005 to 75 years lifespan in 2030. Bhutan's life expectancy at birth in 2015 was 69.83, male's life expectancy was 69.57 years and female's was 70.11years (Social and Cultural Committee, 2017).

Commensurate from the study conducted by RSSC (2012), out of 101,563 senior citizens, 69 % of them were married, 27.3 % widowed and 2.6 % divorcees. Fascinatingly 1.1 % was unmarried besides lots of unmarried women and nuns. Highest retiree was 2004-2009. Almost 60 % of the old age population prefers to live in the rural areas than urban, 73.8 % of the senior citizens aspires to practice

spiritualism followed by 18.4 % who want to be with family, and 7.7 % aspiring to carry out business. Around 98 % had expressed their wish to avail special medical facilities if there is one such, and reported that they would wish the doctors visiting old age retired homes and villages establishment of old age nursing homes and preference while visiting in the hospitals and medical health clinics.

Bhutan is known through the concept of gross national happiness [GNH], where the gross national happiness is considered as an important, is a term coined by His Majesty the Fourth King of Bhutan, Jigme Singye Wangchuck in the year 1970s. The main concept implies sustainable development should take a holistic approach towards ideas of progress and give importance to non-economic aspects of wellbeing. The concept for this has been supported by four pillars; good governance, sustainable socio-economic development, cultural preservation, and environmental conservation.

Further these domains have been stretched to nine domains in order to create widespread understanding of GNH and to reflect the holistic range of GNH beliefs. The nine domains are; psychological wellbeing, health, education, time use, cultural diversity and resilience, good governance, community vitality, ecological diversity and resilience, and living standards.

Concepts of successful aging

Definition of successful aging

A different writer has different concepts on successful aging; formally it was depend on one's personal value system or individual social construction (Torres, 2006). The definition of the successful aging will have different ways of understanding according to the stages and events the one have encountered in the individual's life. It is quite complicated in reaching consensus, the meaning of successful aging. The differences in gender, class, race, cultures, languages, social roles, educational qualification and lots of other leads to measurement of differences of successful aging. Some researchers define it through physical functions (Strawbridge, Cohen, Shema, & Kaplan, 1996), others define it through psychological viewpoints which predominantly focus on cognitive functions, perceived control, and life satisfaction (Kim & Park, 2017). Social interaction and proactive skills such as

coping with losses, stress and enhancing external resources (Kahana & Kahana, 1996).

Apparently, the definition depends upon the researcher, different author provide different dimension on the perspective of successful aging. In additionally, Peel, Bartlett, and McClure (2004) refers as a lifelong process optimizing opportunities for improving and preserving health and physical, social and mental wellness, independence, quality of life and enhancing successful life course transitions. Some define successful aging from a single perspective, while other stretches the multiple factors that contribute to successful aging.

Congruently early definition of successful aging, life satisfaction and wellbeing were most frequently identified as alternatives to Rowe and Kahn (1987). Von Faber et al., (2001) define successful aging as a process in adapting rather than a state of being. Nimrod and Kleiber (2007) found that life satisfaction and well-being increased when participants felt they could cope sufficiently to achieve a sense of meaning and purposes by contributing to others, creating something, or learning something new.

The study of successful aging (Row & Kahn, 1987) distinguished pathological conditions associated with aging from “usual ”or normal aging, and called attention to a third category, “successful aging.” This was done based on the subset of older adults who maintained active and disease free well into their later life, criterion were developed for successful aging, that includes: low risk of disease, good physical and cognitive function, and active social engagement. Row and Kahn’s definition of successful aging not only generated researches that decreased morbidity and mortality, it also changed attitudes towards aging. However, there were issues with Rows and Kahn, the requirement of as good health, freedom from risk of disease and associated with disabilities, and maintaining productive social engagement.

The view of successful aging offered by Flood (2002, 2005) reflects nursing's unique perspective and values, including the importance of an individual's right to choose meaningful goals and priorities, based on personal and cultural values. It also represents a holistic, multidimensional viewpoint that encompasses the physical, cognitive, psychosocial, and spiritual nature of nursing's domains. Flood (2005) definition of successful aging synthesized and encompasses all four of the

nursing's domains of life, physical, functional, psychological, and spiritual, this definition and Flood's (Flood, 2005) theory resolved a number of limitations attributed to Rowe and Kahn (1987) opinion of successful aging. In accordance to Flood's successful aging is defined as an individual's perceived favorable outcome in adapting to the cumulative physiologic and functional changes associated with the passage of time, whereas experiencing spiritual connectedness and sense of meaning or purpose in life. Floods theory adds an individual's self-judgment of success, depended on personal values and priorities, as well as the universal common need to compromise with the cumulative physical, cognitive, and functional changes related with aging. Concerns and worried for health and function are encapsulated in coping strategies. Flood's (Flood, 2005) encompasses outcome in the spiritual or existential domain, represented by spiritual connectedness and a sense of meaning or purpose in life.

The main complaint regarding the Rowe and Kahn's theory of successful aging, which define successful aging point out to be and, having defined successful aging as an absence of disease and disability and exhibiting high levels of physical functioning the criteria for successful aging is attainable by best of elderly. In a statement to the Rowe and Kahn's written by Riley (1998), mentioned that their theory, arguing about the neglect social structures (environmental domain) as an important components in the process for achieving successful aging. "Successful aging involves the interplay between lives and the complementary dynamic of structural change" (Riley, 1998). In contrast, Flood's definition of successful aging seems to bargain a more comprehensive and holistic view of successful aging, that combines social scientists' concern for life satisfaction, wellbeing, purpose in the life, adaptation, and coping with medical concern's for health, and adds the spiritual domains as an integral factor in successful aging. Subsequently, many researchers have been using this theory's definition of successful aging of Flood to study successful aging in older adults (Cozort, 2008;).

Sometimes successful aging coined with the healthy aging, Hansen Kyle (2005) pointed out that Healthy aging has been defined from physiological, psychological, societal, and personal perspectives of an older adult. Older adults'

definition of successful aging is multidimensional, encompassing physical, functional, psychological, and social health (Phelan, Anderson, Lacroix, & Larson, 2004).

Theory of successful aging

Rowe and Kahn's model of successful aging.

According to the Rowe and Kahn (1987), they argued, the conceptual differentiation between "usual" and "successful" aging, two branches on normal aging. While acknowledging the importance of differentiating pathological changes from the changes attributable to chronological aging, the authors even argued that this dichotomization of people into disease versus normal, pathologic and non-pathologic respectively, which indicated three limitations, which genuinely implies non-disease state is normal aging and does not require any form of modification; and even assumes that non-disease group is without risk of disease and disability; and more decisively, it neglects the substantial heterogeneity with age groups (Rowe & Kahn,1987). Whereas another subclass that included for modification are pathologic conditions.

In parallel, Rowe and Kahn suggest that many ages' related declines are the consequence of an accumulation of modifiable environmental risk factors that includes diet, exercise, personal habits and psychological environment, which is known to be extrinsic to aging process. In Bhutanese context the diet they consume is very different, most of the elderly they drink butter tea with salt, uncooked meat, chewing betel nut, high carbohydrates and confine to religious (meditation), ultimately reducing exercise. In differentiating among persons in the non-disease group, author proposed the term" usual aging ", in indicating older adults who are functioning well, but still possess risk of disease and disability (Rowe & Kahn, 1998).

A multidimensional model of successful aging that supported by their work with the MacArthur Foundation Research Network on successful aging. Rowe and Kahn's model of successful aging consists of the following three components: low probability of disease and disease related disability, including the absence of risk factors; high cognitive and physical functional capacity; and active engagement in life, including maintenance of interpersonal relations and productive activities (Rowe & Kahn, 1998). An absence of disease and disability makes it easier to maintain mental and physical function, and maintenance of mental and physical function in

turn enables active engagement with life. Rowe & Kahn argued that older adults can be seen as successful aging consists of inevitable decline to pursue. In total, the model challenged the view that aging consists of inevitable decline, besides proposed that age associated losses in function may be result of modifiable extrinsic factors (Rowe & Kahn, 1998). Numerous authors have criticized Rowe and Kahn's model of successful aging model, the reason being not including spirituality and religion. (Crowther, Parker, Achenbaum, Larimore, & Koenig, 2002; Sadler & Biggs, 2006). This implies that religion/spirituality dimension of successful aging is more a sufficient condition than a necessary condition Koenig, George, & Titus (2004).

Religiousness and spirituality consistently predicted greater social support, fewer depressive symptoms, better cognitive function, and greater cooperativeness Koenig et al. (2004).Patients categorizing themselves as neither spiritual nor religious tended to have worse self-rated and observer-rated health and greater medical co-morbidity Koenig et al. (2004). In some cases, religious patients expressed higher levels of social support and physically disabled patients were more likely to be religious (Payman, George, & Ryburn, 2008) in their studies, three out of every eight patients were "intrinsically" religious. Ouwehand, de Ridder, & Bensing (2007) proposed that proactive coping may be important for successful aging, since it results in a prolonged availability of resources for optimization and compensation processes and a delay in disengagement from important goals.

Evidence have shown that reaching advanced old age without impairment is extremely difficult, the centenarians today represent the extreme limits of the life span, and even if many of them live in good clinical conditions and are autonomous, they are not able to maintain a productive social or working activity (Motta et al., 2005). According to the research conducted by Weir, Meisner, & Baker (2010) on the Canadian seniors (N = 14,749). Age was a significant predictor of disease related disability and impaired physical functioning, but age had little impact on engagement. Despite health-related changes, suggested that the majority of older Canadians are maintaining connections with their community. Studies done by McLaughlin, Connell, Heeringa, and Roberts (2009) portrayed with 16 % of 65-74 years old reported as successful aging as compared to a mere 1.6 % of 80 years old and older, in line with their studies few older adults meet Rowe and Kahn's definition of successful

aging, although the percentage varies by factors such as age, education, and income (McLaughlin et al, 2009).

Mid-range theory of successful aging (Flood's theory of successful aging)

Pertinently, Rowe and Kahn (1987, 1998) models of successful aging emphasized, the requirement as good health, freedom for risk of disease and associated with disabilities, and maintaining productive social engagement. They argued that good health was one of the most critical to achieve successful aging for an older adult. Flood emphasized the approaches capture of successful aging from a multidimensional perspective with consideration given to an individual's appraisal of aging.

Considerably, new theory is fully on the premise that aging successfully involves one's mind, body and spirit. Successful aging is defined as an individual's perceived favorable outcome in an adapting to the cumulative physiologic and functional changes associated with the passage of time, besides experiencing spiritual connectedness and a sense of meaning or purpose in life (Flood, 2002). This concept was conceptualized from the Roy Adaptation model, in consensus idea extracted from the Tornstam's sociological theory of gerotranscendence and sources of successful aging.

Overall the construction of successful aging meaning can be understood in simplest way, that's adaptation and transcendence, which is proposed by Flood (2005), these are the two factors that influencing successful aging, these become more objective, while later model gives more importance to subjective and in perceiving (Flood, 2005). Ultimately making an individual in assessing how one is aging successfully. According to Roy and Andrews (1999) adaptation refers to "the process and outcome where by thinking and feeling persons as individuals or in groups, use conscious awareness and choice to create human and environmental integration" the theory of the adapting person recognizes the unique role of the innate and acquired coping mechanism.

Adaptation through the regulator or cognator is processes that can affect the person's negatively or positively and produce a challenge to the adaptive system in maintaining and enhancing the well-being of the self. Besides that the four domains

are included physiologic/physical, role function, interdependence, self-concept/ group identity. Baltes and Baltes (1990) viewed of adaptation was derived from life span development theory, especially developed for older adults. The author belief adaptation is the positive outcome of coping effectively with both the inevitable challenges and losses of aging, and gains from wisdom and experiences, as a process to successful aging from the perspective of Blates and Baltes (1990) the goals of older adults, they select the strategies that enhance for achieving goals, and substitution for new goals when necessary.

Another concept for successful aging related to Flood's theory is transcendence. This theory describes both the experience of growing old and the characteristics of a normal and positive old age, stating that human development is a life-long process that continues into old age and that, when optimized, ends in a new perspective (Wadensten, 2007), this theory helps to facilitates the possibility of structuring care for older people in addition to guiding it.

Multiple theorists have written about the overall concept of transcendence and agree that it is an inherent aspect of development maturity and nonlinear, dynamic process that changes the perspective of older adults on life within multiple domains (Maslow, 1971; Tornstam, 1989). Transcendence is accompanied by a shift in perspective that increasingly values a sense of meaning or purposes in life; self-acceptance; decreased fear of death; connectedness to self, others, and to the sacred; altruism, and generatively (living on through one's contributions to and influence on the next generation). McCarthy and Bockweg (2013) suggested transcendence may provide a theoretical foundation for development of potentially cost-effective, efficacious interventions to foster a sense of meaning in life, well-being, and life satisfaction. Based on the viewpoints of multiple theorists, transcendence has been defined as an inherent, late-life developmental potential toward a wider worldview, beyond everyday realities and limitations, which result in broad prospective on self, others, the sacred, and the nature of life (McCarthy & Bockweg, 2013).

Roy's (1997) has come to the conclusion mentioning that the main purpose of the adaptive system are survival, growth, reproduction, mastery, and personal and environmental transformation, whereas in Flood (2005) mastery theory, survival , and growth are achieved through the use of the foundational coping process, the goal of

personal and environmental transformation are attained. To experience gerotranscendence, satisfactory integration of the outputs of each foundational coping process must be presented in aging process, the factual step towards the successful aging; this makes a sense in the life for older adults, indicating successful aging.

Successful aging is one of the goals for the entire older adult's transition irrespective of race, ethnicity and qualification. Successful aging has become one of the strategies to increase self-confident, life satisfaction, low complication of chronic disease, low morbidity, and longevity. To achieve older adults in successful aging, a complex within the person as coping process (Roy & Andrews, 1999). Four components of the foundation coping processes of Flood (2005) theory include functional performance mechanisms, intrapsychic factors, gerotranscendent and spirituality. Coping processes describe the ways that the person responds to the changing environment Flood (2005), simultaneously this shows exchange of activity and characteristic leading to successful aging. Expression can be understood by purpose in life, greater life satisfaction, which differ in each individual depend on several factors, as discussed, including interactions between physical , emotional, mental and spiritual all of which are important dimensions (Touchy & jett, 2017).

An aging population will have some clear social implications such as changing the support ratios with resulting effects on the resources of the country and individuals but some are more speculative Tinker (2002). Additionally, several theories of successful aging exist. (Baltes & Baltes, 1990; Bryant, Coorbett, & kutnen, 2001; Crowther et al., 2002; woong, 2000; Thorstam ,1997). However, none of these theories provides a through explanation or description of the mental, physical, and spiritual aspects of aging, besides that the theories are conceptualized on objectively and does not take account the older adult's perception of their aging.

Components of successful aging

According to the Flood (2005) successful aging has been characterized as having involvement of four components;

1. Functional performance mechanisms are counted as an individual's use of awareness and choices as an adaptive response to cumulative physiologic and psychological losses with subsequent functional deficits occurring as the results of aging. Kozar-westman, Troutman-Jordan, and Nies (2013) intercepted that even with

assisted living in a communities with the physically challenged, good coping mechanism had contributed for successful aging. The components describe a mechanism that encompasses the way the individual respond to the cumulative physiologic and functional changes that occurs as a consequence of passage of the time. Indicators of functional performance mechanisms are output responses of the health promotion activities, physical health, and physical mobility. Each of these output responses are manifestation of the human adaptive responses of functional performance mechanisms. The elderly with diabetes will make them aware of complication from the disease and compelled them to perform some sort of exercise, and focus on benefits from the exercise, ultimately vivify their thought and feeling.

2. Intrapsychic factors are the internal understanding and how these strategies are utilized in responding to environmental stimuli; normally these factors are inheriting character. The output responses that are indicative of Intrapsychic factors include creativity, low levels of negativity, and personal control. These output responses are manifestations of the human adaptive response. Using the example of cancer as input stimuli, output of the intrapsychic factors coping process might be developing one's own nutrient-rich recipes (creativity), maintaining a sense of optimism and ventilating feeling of anger in an appropriate setting (low levels of negativity), and enrolling in an educational support group (personal control).

3. Spirituality is a person's view and behavior that convey a sense of relatedness to a greater power of being, something that is greater than oneself, the feeling the thoughts, experiences, behaviors arising from the search for the sacred. Output responses that demonstrate spirituality include religiosity and spiritual perspective. For example the person with cancer, output responses that indicate the spiritual coping process are personal and intercessory prayer (religiosity) and a deep awareness of the role of spirituality in one's life (spiritual perspective). Output process can influence each other, in turn, affecting the person.

4. Gerotranscendence is a shift in meta-perspective, from a materialistic and pragmatic view of the world to a more cosmic and transcendent one, in the process of transition. The gerotranscendence explain that it is not only older people who can have transcending experiences. So gerotranscendence refers to transcendental experiences that require or are more like in old age (e.g. Lower death anxiety, more

wisdom). Gerotranscendence is more of the complex, where the one require more of the coping process, so it depends on the foundational coping process. These happen when there is major shift in the person's global view, where the person compares with the one's place with the world and in relation to others Tornstam (1997). The values of individual were different when they were young as compared to the old age. Output responses that reflect gerotranscendence include decreased death anxiety, engagement in meaningful activities, changes in the relationships, self-acceptance, and wisdom. Gerotranscendence is a developmental process as one become older, in which the individual gradually experiences a new understanding of the fundamental existential questions, often experiencing a feeling of cosmic communion with the universe and a redefinition of the self and relationship to others (Tornstam, 1997).

In successful aging, the integration of the useful traits with in the foundational coping process in balancing is an initial adaptive mechanism of gerotranscendence. In gerotranscendence, there are more creative people and lower level of negative affectivity, greater and better control pursued more effective adaptation of functional performance mechanisms through the participation in health promoting activities and maintenance of physical mobility. In general physical there is reciprocation between physical health and Intrapsychic factors. Deeper spirituality can be product of the more creativity, less negative affectivity, and greater personal control, greater spirituality perspective and more religious can influence Intrapsychic factors and effectiveness of adaptation of functional performance mechanisms (Flood, 2005). The diagram below shows the relationship among the four foundation coping process which proceeds to successful aging.

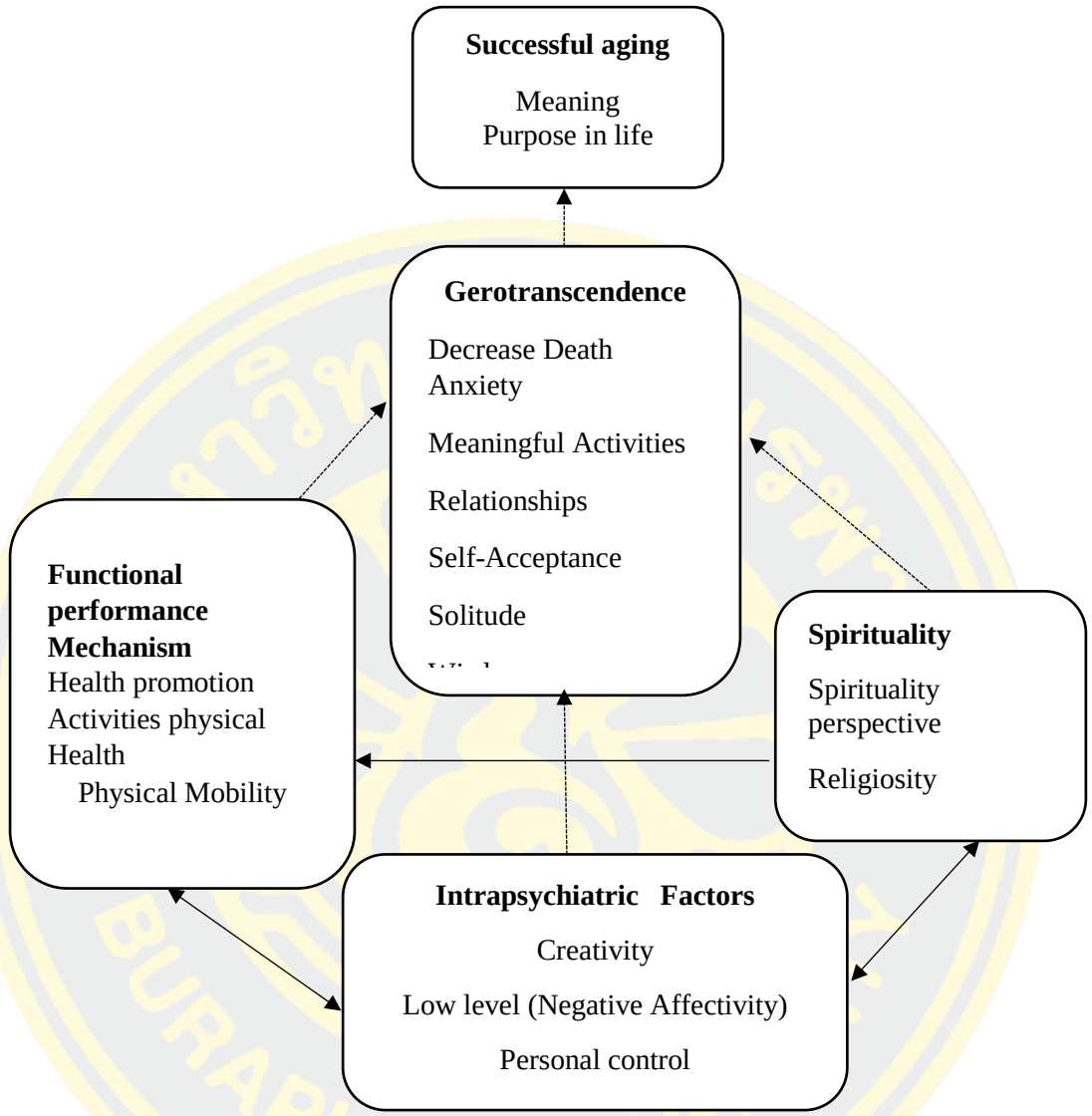

Figure 2: Flood's theory of successful aging (Flood, 2005**)**

Measurement of successful aging

Different author has used different method in measuring the successful aging. Firstly, successful aging was measured through physical, psychological and social aspects. This scale was developed by Kim, Shin, Choi, & Kang, (2006) for physical and psychological aspects; and the scale used by Kim and Shin (2005) for the aspect of social support were revised and used to measure the degree of successful aging among the older adults. The instrument consisting of 19 questions using a five point scale. The possible score range was from 19-95. It was indicated that the higher

the score of the respondents better the degree of successful aging, and the reliability of this instrument was Cronbach's alpha = 0.89.

Secondly successful aging was measured with Kim (2008), which consisted of 28 items, with 9 questions on autonomous life, 6 questions on self-completion, 5 questions on active participation in life, 5 questions on satisfaction with children, 3 questions on self-acceptance, and 3 questions on the acceptance of others (Kim, 2008). Items were rated on 5 point Likert scale (From 1 = completely disagree, 5= completely agree). The possible mean score was from 1 to 5, with the reliability of this instrument was Cronbach's alpha = 0.93.

In nursing research, both this instruments were assessed and were found and acceptable as a measurement for the research. Besides that, these instruments were not used for the following reason, firstly the instrument were developed based on the theory of Rowe & Kahn model of successful aging, where the older adults were required for taking precaution in remaining disease free and work to achieve and hold disease free status. Secondly the original instruments were Korean version, which seems to be barrier for researcher to translate, to maintain content validity.

Apparently for this study, the successful aging Inventory was used to measure successful aging. This instrument was developed by Troutman, Nies, Small, and Bates (2011) based on Flood (2005) theory of successful aging, that consists of 20 items, with 20 items questionnaire for surveying the individual's own values, priorities, and goals, in physical, functional, psychological, and spiritual domains. The reason for selecting this instrument is it has reliability about 0.8, besides having short, so that the respondents will have less time consuming, in addition, it is easy to understand with older adults. This instrument has been used in various countries in assessing successful aging (Cozort, 2008; Trieu, Jullamate, & Piphatvanitcha , 2016). This is the first time the aging instrument was used in Bhutan. This instrument has attempted to capture each of the dimensions of the successful aging theory.

For instance, exampling "I am overall satisfied with my life right now" is an indicative of life satisfaction, which has been frequently linked with successful aging. Contrasting with one item like "I have been able to cope with the changes that have occurred to my body as I gave aged" this is an indicative of coping (Intrapsychic factors) and are aged related physical. The successful aging inventory has been

greatly using in most of the countries, and it has potential to be a useful method of tracking older adults over all progress and improvement in response to health promotion policies. The items are easy and in brief, beautifully structured and numbered from 0 to 4 (hardly ever/ strongly disagree = strongly disagree = 0, sometimes/ somewhat disagree = 3, almost always/ strongly agree = 4), (with higher values indicating greater values of stronger responses).The results were indicated with respondent's agree and disagree according to their statement applies to them. In a nutshell Successful Aging Inventory ranges from 0 till 80, higher the scores are suggestive of more successful aging and vice versa. According to Troutman et al (2011) the reliability marked at 0.86 of Cronbach's alpha coefficient.

Predicting factors of successful aging among community dwelling older adults

Perceived self-efficacy According to Bandura (1997), self- efficacy is defined as a person's belief about their ability to organize and execute courses of action necessary to achieve a goal. The four aforementioned factors successful aging of older Korean (Cha et al., 2012) older adults can achieve by receiving the correct and necessary support during older age, relying on one's confidence in one's own abilities as an older adult, acquiring a sense of self-worth, expanding one's achievements, and attaining self-satisfaction with one's life. (self-esteem, self-achievement, interpersonal relationships, and self-efficacy) were confirmed to be the major predictors of successful aging; and it was found that 69.2 % of an older adult's level of successful aging can be explained by them in their study. Whist McMullin and Cairney (2004) denoted, once the person gets older with the age, the self-efficacy decline spontaneously. Gilbert, Hagerty, and Taggert (2012) found that successful ageing were revealed to; taking care of self, positive attitude and meaningful activity and elderly persons living independently are more healthy than elderly persons living in a dependent situation. Low self-efficacy has been associated with lots of negative life outcomes including unhappiness, loneliness, depression, eating disorders, and worsened recovery after illnesses, leading to poor successful aging (Leary & Baumeister, 2000)

Self-efficacy is a target of interventions of older adults to contribute to the successful aging, this can predict better physical health, perform behaviors that are

useful for their health and decrease the progression of disease, lower levels of depression (Orth et al., 2009). According to Bandura (1977) high perceived self-efficacy contributes to happiness and satisfied with life, perform positive behaviors to good outcome, makes one more willing to face challenges, and balance emotional, decrease stress and is one of the factors contributes successful aging. Women have lower levels of self-esteem than do men. Social class does not influence levels of self-esteem for young men or women but does so for those in middle age and older age groups (McMullin and Cairney, 2004). According to the study done by McCarthy and Bockweg (2013), analysis suggested transcendence may provide a theoretical foundation for development of potentially cost-effective, efficacious interventions to foster a sense of meaning in life, well-being, and life satisfaction. Another study done by Tovel and Carmel (2014) showed that, the believe that one's action have an impact on their experience and environment allows for a self-sustaining optimistic view on life that no matter what the circumstance something can be done to effect that ultimate outcome, the result indicated that elderly people have the ability to shape their quality of life in the presence of decline in health and functioning by their appropriate coping resources and coping patterns. Another study done by Kim (2013 b) was the purpose to examine the degree of successful aging and identify the factors that influence it among Korean male elders, Pearson's correlation coefficients and multiple regression analysis were performed in order to identify relationships among variables, and reveal significant predictors of successful aging. Finding found that respondents were 181 Korean male elderly of 65-87 years old, the average age of them was 71 years. The mean score of successful aging among male elders was 3.15 *SD* .45, the mean score for self-efficacy was 3.36, higher than the median level of self-efficacy. The relationship between self- efficacy and successful aging was strong and positive (r = .65.p < .001) (Kim, 2013 b)

Social support

Social support is the physical and emotional comfort given to older adults by their family, friends, co-workers and others. It knows that we are part of a community of people who love and care for us, and value and think well of us. We all need people we can depend on during both the good times and the bad. Maintaining a healthy social support network is hard work and something that requires ongoing effort over

time. (Cutrona, 1996) stated that social support as “responsiveness to another’s needs and more specifically as an act, that communicate caring; that validate the others worth, feelings or actions; or that facilitate adaptive coping with problems through the provision of information, assistance or tangible resources.” Social support is one of the core components of successful aging, which can be understood as society providing support. Gow, Pattie, Whiteman, Whalley, and Deary (2007) conducted study consisting of 550 men and women with mean age of 79.1, where it was reported as a poor cognitive abilities, lower life satisfaction or higher level of loneliness or feeling alone, when there is less or minimum social support. Riegel, Dickson, Kuhn, Page, & Worrall-Carter, (2010) found that social support from family, friends as well as provider health care is one of the most components which are needed for successful self-care, which is regarded as necessary in achieving successful aging in older adults.

According to study conducted by Seeman, Lusignolo, Albert, & Berkman (2001), indicated that greater emotional support from a network of social relationships was associated with better cognitive functioning in their cohort of initially high-functioning older men and women. Rural elderly's successful aging requires establishment of social support system such as health medical service supply and social activities by being connected with social communities (Cha et al., 2012).

Educational level

Education plays an important role in the field of successful aging, many literature supports that good education had positive relation in successful aging (Kim & Park, 2017). Arias-Merimo et al. (2012) studied to estimate the prevalence of successful aging in the elder in western Mexico as defined by Rowe and Kahn and analyze its variability by age, sex, education, marital status and pension. Age, gender, education, marital status and pension were included in an analysis. Aged was categorized as 60 -74 years and 75 and older. Education was categorized as less than high school and secondary or higher education level. The mean age was 72.41(*SD* = 8.47) years, the majority of participants were women (62.5 %). In education, 20.4% were illiterate, 57 % had less than secondary education, and only 22.6 % more than high school.

Participants with lower education had only 55 % of successful aging compared to those with higher education, OR = .55 (.45 to .66, CI 95 %), according to

this studies, it is suggested that the higher level of education have significance of successful aging, and there were no difference according to whether receiving pension or not which has impact on successful aging among older adults (Arias-Merino et al., 2012).

The study conducted in elderly in Korea, Kim (2013 b) a cross-sectional study affecting successful aging among older male, aged 65-87 years old. The educational levels were categorized as elementary, middle high school and college and above, in this study the educational levels were positively significant with successful aging. Those who completed high school and lower level portrayed high level than those who had college or above level. Whilst Meng and D'Arcy (2014), studies result showed that high school educational level was not associated with successful aging.

Since there is contrast between the educational levels with successful aging, and there is no study done in Bhutan, the result of this study will figure out and solve the problem and make transparent to understand by readers.

Perceived health status

Perceived health is a subjective measure of overall health. Individual's self-assessment of their health may include aspects that are difficult to capture clinically, such as incipient disease, disease severity, physiological and psychological reserves, and social function. Studies have demonstrated that this is a reliable and valid measure, associated with functional decline, morbidity and mortality. As well, perceived health is often more effective than clinical measures for predicting help-seeking behaviors and health service use (Fleishman & Zuvekas, 2007).

Good perception of health status is very important for older adults such as reduced risk of mortality (Wilkins, 2003), disability (Mendes et al., 2003), depression (Glass et al., 2006; Fiori et al., 2006), better cognitive health (Engelhard et al., 2010).

A study conducted in Korea, the elderly in 2013 by Kim, a total population of 181 age ranging from 65-87 years, with motive to identify the factors prediction the degree of successful aging among older adults in Korea. On this study the average age was 71 years, the average score of successful aging among male elders was 3.51 ± .45. The mean value of their perceived health status was 3.10, higher than then medial

value of perceived health status. The degree of perceived health status was correlated with the level of successful aging, but not very strong (r = .267, $p < .001$).

Another study conducted by Meng and D' Acry (2014) demonstrated that older adults with better self-perceived health status were more likely to be successful agers than those with poor self-perceived health 5.26 %, fair self-perceived health 13.92 %, good perceived health 43.30 % But in the context of Bhutan there is no evidence that support that this variable in supporting in achieving successful aging. Therefore, this study will confirm perceived health status as variable predictor on successful aging in Thimphu, Bhutan.

Life satisfaction

Life satisfaction is a subjective expression of well-being and successful aging. Subjective well-being is a major determinant of health outcomes in older adults. Several activities were related to happiness, including social activities, participating in social groups for older adults and sports or games, more solitary activities and productive activities (Menec, 2003). Life satisfaction in older adults with reduced self-care capacity is determined by several factors, with social, physical, mental and financial aspects probably interacting with each other; especially feeling lonely, degree of self-care capacity, poor overall health, feeling worried and poor financial resources in relation to needs (Borg, Hallberg, & Blomqvist, 2006). Respondents self-rated health and satisfaction was generally good but few had all six Rowe and Kahn dimensions positive, the conventional definition of successful aging. All individual positive successful aging dimensions were associated with better self-rated health and satisfaction. This was consistent across age, gender, manual/ non manual occupations, and personality. The prevalence of good self-rated health and satisfaction increased with increasing numbers of positive successful aging dimensions (Whitley, Popham, & Benzeval, 2016).

In addition, subjective well-being, as measured by the Life satisfaction scale, is predicted by depression, loneliness, personality traits, recent participation in physical activity and self-reported exhaustion. The mental and emotional status of older individuals, as well as their engagement in physical activity, is as important as physical functionality when it comes to life satisfaction as a measure of well-being Mhaolain et al. (2012), Older adults with good life-satisfaction have better

successful aging. Tate, Lah, and Cuddy (2003) statistically found that greater value of life satisfaction on mental, physical, and social activity as they age.

Finally, again returning to successful aging the positive relation between cosmic transcendence and satisfaction with present life in this 60 and above, the study found that cosmic transcendence is positively related to life satisfaction in old age, but not among younger subjects (Krause, 2003).

Conclusion

In summary, successful aging is regarded as multidimensional, encompassing physical, functional, social, psychological, mental health and spiritual. Successful aging is one of the most talked issued of the present century; Fertility is low in many nations, older population has over taken birth rate, ultimately increasing older adult's population. Congruently this happened when an individual adaptive mechanism increases, spiritual connectedness, and physical limitations decline. The Rowe and Kahn model provides an easily reproducible objective measure of successful aging that is associated with subjective self-rated health and satisfaction, irrespective of age, gender, Socio-economic status, and personality. Many successful aging definitions focus on absence of disease and disability but do not necessarily reflect older people's priorities. Side by side, Flood (2002) defined as an individual's perception of a favorable outcome in adapting to the cumulative physiologic and functional alteration in relation with passage of time. Rowe and Kahn (1998), clearly pointed out that the three factors that are mainly constitutes for achieving successful aging, like avoidance of disease and disability, maintenance of high cognitive and physical function, and active engagement in life.

Various successful aging measures have been proposed but no consensus has been reached and researchers have criticized for not representing the views and priorities of older people, but in Bhutan, there was no study conducted to enforce other's statement, although there are many studies on successful aging done globally.

This will be the first study conducted by nurse in Bhutan, successful aging and predictors i.e. Perceived pelf-efficacy, social support, educational level, perceive health status and life satisfaction. Older adults in Bhutan is on the verge of explosion. There are lots of evidence in older adult's population explosion, in many countries supported by literature. So this study will clarify and makes sense, and with this

study, older adults in Bhutan can have preparedness for achieving successful aging, by promoting successful aging programs, lower morbidity, mortality, and improve longevity, consequently extending chronological age, health and wellbeing.

CHAPTER 3
RESEARCH METHODOLOGY

This chapter presents the research methodology including research design, population and sample, setting of the study, research instruments, validity and reliability of an instruments, ethical consideration, data collection procedures and data analysis.

Research design

A predictive correlational design was applied to examine the influence of perceived self-efficacy, social support, educational level, perceived health status, life satisfaction on successful ageing.

Population and sample

Population

The population for this study was an older adults who were living in the community, Thimphu, Bhutan.

Sample

Sample was recruited through convenient sampling technique with the following inclusion criteria:

1. Be 60 years old and over.
2. No cognitive impairment as investigated by 6 CIT
3. Living in the community, Thimphu Bhutan.
4. An older adults who spoke and understand Dzongkha.

Sample size

The Sample size were calculated using Tabachnick and Fidell (2001) method. According to this method, a total of 90 participants were required for the study (N> 50+8m, where m is the number of independent variables). There are 5 independent variables in this study

Sample technique

Convenient sampling technique was used for this study. Thimphu has eight areas (sub-division) with total population of 57,454 and 7,798 were comprised above the age of 60 years (Centre for Bhutan Studies, 2010).

The participants were selected from the community from their home, 90 participants were recruited by following Tabachnick and Fidell (2001) method, the researcher collected the data from their home after screening with 6CIT, and the participants who did not qualify for the research were not included.

Setting of the study

Data collection procedure

Data collection was conducted in the following step

1. Researcher submitted the proposal to Burapha University, under Faculty of Nursing for ethical approval to Institute of Review Board. After approval, Graduate office sent the letter to Research and Ethical Board Health, Ministry of Health, Thimphu, Bhutan for data collection.
2. REBH sent letter to district administrative office to get permission to collect data.
3. The researcher got permission for data collection from the district administrative office, explained about the procedure, method and reason for studying.
4. The researcher contacted participants at home, who were ≥ 60 years and older.
5. Researcher visited participants at home.
6. Researcher introduced to the participants, and explained about the research objective, ethical issues and protection about the human right issues and withdrawing from the studies. The participants those who expressed their willingness were screened with six item cognitive impairment test and asked about the health status on that day of data collection. Those who met the criteria, were asked to sign the consent form for participation. An individual participant spent 3-5 minutes for screening with six item cognitive impairment test.
7. The researcher explained and administered the questionnaire using interview method in Dzongkha language, which took about 40-50minutes for

total questions, from 9am to 5pm.

8. The researcher continued collecting the required sample for the study until requirement was met, after that the data were coded and entered into computer spreadsheet and prepared for the data analysis procedure by the researcher using SPSS 16 version.

Research instruments

Screening instrument

The six-item cognitive impairment test [6CIT] was a brief cognitive screening tool that was administered to an older people in 2 - 3 min. The 6CIT had shown good psychometric properties (sensitivity and specificity) when used to identify cognitive impairment and is considered particularly suitable for screening milder forms of cognitive impairment. The six item cognitive impairment test was used as screening tool in assessing cognitive status of the participants for inclusion. This was a brief and simple test of cognition, which correlates reasonably well. Compared with MMSE it performed well as a screening instrument for dementia, which made it more appropriate test for primary test for primary care usage. This had six questions, ranging the score from 0 - 10 points. 0 -7 indicative for normal, 8 - 9 mild cognitive impairment and 10 - 28 significant cognitive impairment.

Data collection instruments

1. Demographic questionnaire

Demographic questionnaire was constructed by researcher. It consists of gender, age, marital status, educational level, living with, individual income in a month, and co-morbidity (illness).

2. The general self-efficacy scale [GSE]

This scale was developed by Schwanrtzer and Jerusalem (1995), it consisted of 10 items and measured the belief that one can perform tasks, or cope with a variety of difficult demands in life and was rated on four points rating scale ranging from ‘not at all true’ scored as ‘1’ to ‘exactly true’ scored’ as ‘4’. Scores of the GSE ranges are from 10-40, highest score indicating high efficacy. Cronbach’s alphas scored at .90.

3. The multidimensional scale of perceived social support [MSPSS]

Social support was measured using MSPSS, which was developed by Zimet et al. (1988). Basically the instrument was used to measure perceived social support from the following three sources; family, friends and significant others. An instrument consisted of 12 items measuring on three subscale:1) significant others subscale (item 1, 2, 5, 10), 2) family subscale (item 3, 4, 8, 11), 3) Friend subscale (item 6, 7, 9, and 12). Each item was rated on a 7 point Likert scale (from 1 = very strongly disagree, to 7 = very strongly agree). Internal consistency coefficients for the three subscales were .69 for significant others; .78 for family and .76 for friends (Cheng & Chan, 2004).

4. Perceived health status

Self-Rated Health [SRH] was used to measure perceived health status of older adults. This instrument was developed by Stanford chronic disease self-management study, and consisted of 1 item with 1-5 Likert scale asking participants to rate their general health as 1) poor, (2) fair, (3) good, (4) very good, (5) excellent. A higher score indicates higher health. Test reliability was .92, (Lorig, 1996).

5. Life satisfaction index for the third age—short form [LSITA-SF].

This is an updated version and briefer scale based on the theoretical framework of Neugarten, Havighurts, and Tobin (1961). This instrument had 12 items. The reliability of the LSITA-SF scale was .90 with satisfactory content, construct and criterion validity. This instrument had 12 items, ticked what was best felt by them. There was no right or wrong answers and their statement was important. Calculated the total scores for the twelve items to establish the life satisfaction score. This short version of the life satisfaction in the third age [LSITA-SF] measured only the overall construct of life satisfaction. The scoring started from strongly disagree (1) to strongly agree (6), for item 2, 4, 5 and 6 it stars from strongly disagree, disagree, disagree somewhat, agree and strongly agree respectively, whilst for items 1, 3, and 7 - 12 its opposite, it started from strongly agree to strongly disagree.

6. Successful aging inventory [SAI]

This instrument was developed by Troutman et al., (2011) based on Flood (2005) theory, it consisted of 20 items, brief, positively worded statements expressing single ideas or behaviors suggestive of successful aging. Items were rated on a 4 point Likert scale (from 0 = hardly ever/ strongly disagree, to almost always/

strongly agree = 4). The reliability of this instrument with the Cronbach's alpha coefficient .86 Troutman et al. (2011), higher the score greater the indication of successful aging.

Translations process

All original instruments in English were translated into Dzongkha applying the back-translation method (Cha, Kim, & Erlen, 2007). This method was useful for ordering effectiveness and appropriateness of the questionnaires, when used for Bhutanese older adults. The translation procedures were as follows:

1. The original questionnaires were translated from English to Dzongkha language independently by two bilingual translators who also teach in schools.
2. After translation from two lingual translators, two Dzongkha versions were compared by the researchers.
3. The Dzongkha version combined from two translations were translated back into English by bilingual person who has no information about questionnaires.
4. Finally, the back-translated English version were compared with original versions by researcher, major advisor and researcher who developed the instrument for language accuracy and comparability of the contents, cultures and meaning between the English back translated and English original versions.

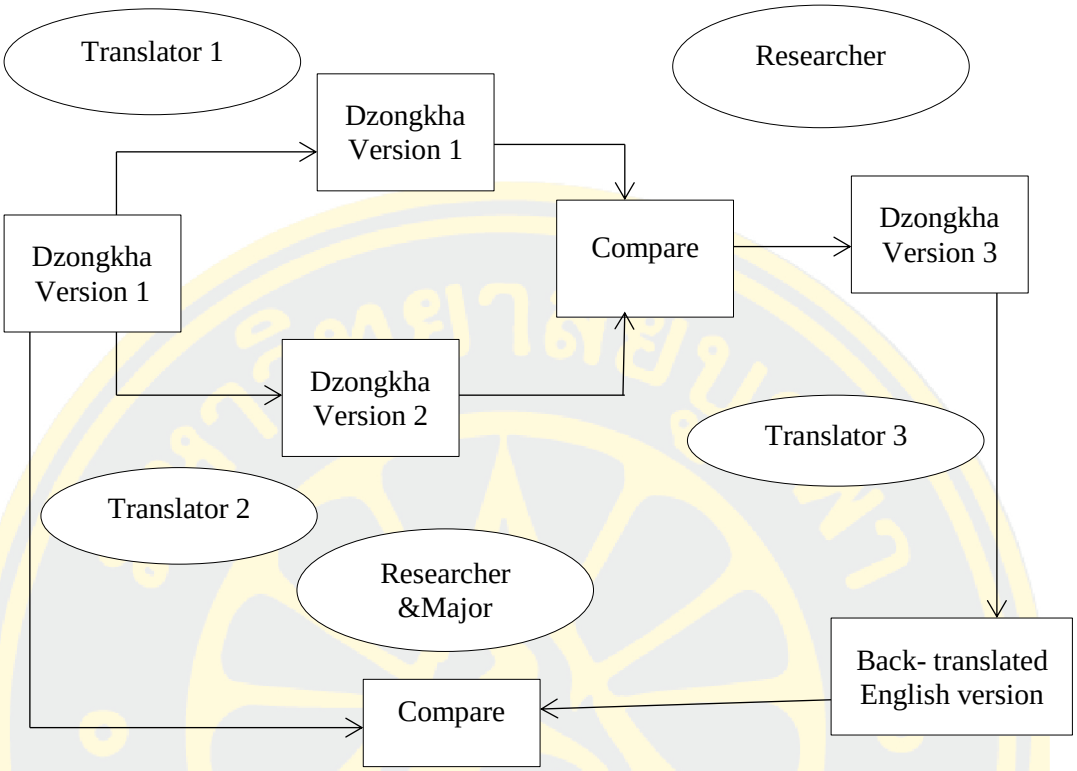

Figure 4 Instrument translation process (Cha et al., 2007)

Validity and reliability of the instruments

Validity: The original version of an instruments, including general self-efficacy scale, multidimensional scale of perceive social support, life satisfaction for third age short form and self-rated were used. Most instruments were assessed to determine if their validity was acceptable for measurement in nursing research. Additionally, the instrument were translated into Bhutanese language in order to be properly used with the Bhutanese samples. The process of back translation by Cha et al. (2007) was used to ensure the content validity of the questionnaires before administration to the samples.

Reliability: The Dzongkha translated version of an instruments (GSE, MSPSS, LSITA-SF and SAI) were tested by pilot test for internal consistency by Cronbach's alpha coefficient. The reliability was tested on 30 cases of older adults in Thimphu, Bhutan with the similar characteristics of the samples. The Cronbach's alpha for GSE, MSPSS, LISTA and SAI were .90, .90, .70 and .70 respectively.

Ethical consideration

The research proposal was approved by the IRB (IRB code no. 07-02-2561, date of approval February 26th, 2018), Faculty of nursing, Burapha University and the Research Ethical Board, Ministry of Health, Bhutan (IRB code no. 2018/18). The research procedure was conducted adhering to the proposal. The researcher explained clearly about research purpose and involvement procedure. Involvement in this study did not harm any participants. All participants volunteered to participate in this study and they could withdraw at any time without prejudice. Each participants was tracked with a number on the questionnaire and data file. Every form and data was kept under confidential and only researcher had access to the data.

Data analysis

The collected data was analyzed using SPSS statistics 16 statistical software program. The significance level of statistical test was set at $\alpha = .05$. Both descriptive and correlation statistics were used for data analysis. Researcher followed the sequential.

1. The data was tested for normality and assumptions of Pearson's product moment correlational coefficient including histogram, scatterplots, and linearity. The data met the assumptions. (See in appendix f)

2. Descriptive statistics including frequency, percentage, mean (*M*), and standard deviation *(SD*) was used to describe the demographic information and other study variables.

3. Standard multiple regression was used to determine the prediction among the variables.

CHAPTER 4
RESULTS

This study reveals predictive factors of successful aging among community dwelling older adults living in Thimphu Bhutan. This chapter presents the results of the study including;

Part 1 Description of sample characteristics of perceived self-efficacy, social support, educational level, perceived health status and life satisfaction.

Part 2 Description of level of successful aging.

Part 3 Predicting factors of successful aging.

Part 1 Description of sample characteristics

This study investigated descriptive statistics to examine the frequency, percentage, mean, standard deviations, and range of demographic characteristics of an older adult's perceived self-efficacy, social support, educational level, perceived health status, life satisfaction and successful aging among community dwelling older adults in Thimphu Bhutan.

Table 1 Description of sample by demographic characteristics (n = 90)

Characteristics	*n*	%
Gender		
Female	53	58.9
Male	37	41.1
Religion		
Buddhism	90	100
Age (years)		
60-69	47	52.2
70-79	29	32.2
80-89	13	14.4

Table 1 (Continued)

Characteristics	*n*	%
> 90	1	1.1
M= 70.43, *SD* = 7.527, Range 60 to 92 years		
Education level (Years)		
No formal education (0 years)	46	51.1
Primary school (1-5 years)	16	17.8
Secondary school (6-9 years)	9	10
High school (10-12 years)	5	5.6
Bachelor degree (15 years)	6	6.7
Master degree (18 years)	8	8.9
Marital status		
Single	6	6.7
Married	51	56.7
Divorced	1	1.1
Widowed	32	35.6
Living with		
Alone	14	15.6
Spouse	10	11.1
Family	65	72.2
Co-morbidity (present illness)		
No disease	45	50
Hypertension	29	32.2
COPD	4	4.4
Diabetes	6	6.7
Hypertension and diabetes	1	1.1
Others	5	5.6
Income (Nu per month, 1 USD = 68 Nu)		
No income	75	83.3

Table 1 (Continued)

Characteristics	*n*	%
< Nu 5000 per month	1	1.1
5000-10,000 Nu	6	6.7
10,001-20,000 Nu	8	8.9

From the table 1, the data showed that most of samples were female (58.9 %), over all participants were Buddhist religion (100 %), half of the participant's age were ranging 60-69 years old with average age of 70.43 years (*SD* = 7.53) accounted for 52.2 %, followed by middle old (70-79 years) accounted for 32.2 %. Half of the participants did not had formal education (51.1%), half of them were married (50.7 %). The majority of samples lived with their family (72.2 %). Half of participants did not had any disease (50 %). Hypertension was the most common comorbid disease, accounted 32.2 % and most of the participants (83.3 %) had no income and were dependent on their family.

Table 2 Description of the study variables (*n* = 90)

Variables	**Possible score range**	**Actual range**	***M***	***SD***
Perceived self-efficacy	10-40	10-40	31.58	8.49
Social support	12- 84	12-84	74.87	12.46
Educational level	0-18	0-18	1.18	1.63
Perceived health status	1-5	1-5	2.59	.75

Table 2 (Continued)

Variables	Possible score range	Actual range	*M*	*SD*
Life satisfaction	12-72	16-68	47.07	8.56
Successful aging	0-80	27-80	69.78	11.72

According to the table 2, the mean score of perceived self-efficacy was 31.58 (*SD* =8.49). The mean score for social support was 74.87 (*SD* =12.46), educational level mean 1.18 (*SD* = 1.63) and the life satisfaction mean score was 47.07 (*SD* = 8.56).

Part 2 Description of level of successful aging

Scoring level of successful aging with frequency, percentage, level and ranges.

Table 3 Scoring level, frequency, percentage with mean and standard deviation.

Level	*n*	%	Scoring of successful aging
High	82	91.1	56 - 80
Moderate	8	8.9	28 - 55
Low	0	00	0 - 27
M = 69.78, *SD* = 11.715			

Table 3 showed that the majority of samples were at high level of successful aging accounting for 91.1% while 8.9 % of samples were at moderate level of successful aging with the mean score was 69.78 (*SD* = 11.715).

Table 4 Correlation coefficients between perceived self-efficacy, social support, life satisfaction, educational level, perceived health status, and successful aging (*n* = 90)

Variables	1	2	3	4	5	6
Successful aging	-					
Perceived self-efficacy	.62***	-				
Social support	.49***	.42***	-			
Life satisfaction	.39***	.24**	.12	-		
Educational level	.42***	.38***	.13***	.14	-	
Perceived health status	.06	.22	.19	.19	.10	-

*** $p < 0.001$, ** $p < 0.05$

The table 4 showed that perceived self-efficacy (r = .62), social support (r = .49), life satisfaction (r = .39), and education level (r = .42) significantly correlated with successful aging ($p < 0.001$) while perceived health status did not significantly correlated with successful aging.

Part 3 Predicting factors of successful aging

Table 5 Predicting factors of successful aging, among community dwelling older adults in Thimphu, Bhutan (n = 90)

Independent variable	B	*β*	
Self-efficacy	.53	.38***	
Social support	.29	.31***	Intercepted =19.53*
Educational level	1.66	. 23*	R^2 = .58, $F_{(5, 84)}$ = 22.89***

Table 5 (Continued)

Independent variable	B	*β*	
Life satisfaction	.34	.25**	

Perceived health status	-.24	-.15

Note. DV = Successful aging, *$p < .05$. ** $p < .001$, *** $p < .000$. B = unstandardized beta coefficient, β = standardized beta coefficient.

Multiple regression analysis showed perceived self-efficacy, social support, educational level and life satisfaction significantly explained successful aging accounting 58 % of the variance in successful aging ($R^2 = .58$, $F_{(5, 84)} = 22.89$, $p < .000$), ordered from strongest to lowest; perceived self-efficacy (β =.53, $p < .001$), life satisfaction (β = .26, $p < .001$), social support (β =.29, $p < .001$), and educational level (β =.23, $p < .05$) as shown above.

Thus, predicting equation was successful aging = $19.54+.53(_{\text{self-efficacy}}) + .29(_{\text{Social support}}) + .34(_{\text{Life satisfaction}}) + 1.66(_{\text{Educational level}}) -.24(_{\text{Perceived health status}})$.

CHAPTER 5
CONCLUSION AND DISCUSSION

This chapter presents the summary and discussion of the study findings. The implication of the findings for nursing, limitation of the study, and recommendation for future research are addressed. The study aimed to examine the level of successful aging and predictors of successful aging in Thimphu Bhutan.

Summary of the findings

A sample of Ninety older adults living in Thimphu, Bhutan was recruited, from 5th April 2018 to 15th may 2018. The data were obtained from researcher administer questionnaires (interviewed method). The demographic data form of older adults were collected using an instruments developed by researcher. Successful aging inventory scale was used to evaluate successful aging among older adults, other measurement that has been used in this study were GSES, MSPSS, SRH, to assess older adults' perceived self-efficacy, social support and perceived health status respectively. The reliability of an instruments were tested in 30 older adults, with similar characteristics at Jigme Dorji Wangchuck memorial chorten, Thimphu, Bhutan.

Participation was voluntarily in this study, after passing six cognitive impairment test (6 CIT). The samples were selected using convenient sampling technique, data were collected through questionnaires mentioned above and analyzed using descriptive statistics including means, standard deviation, percentage, frequency, correlation coefficient and multiple regression.

Most of the participants were female (58.9 %), all the participants were Buddhist religion (100 %), half of participants were young older adults, age ranging 60-69 years old (52.2 %) with M = 70.43 (SD = 7.53). 51.1 % of the participants had no formal education, 50.7 % of them were married. Majority of samples were living with their family accounted with 72.2 %. Half of them had no disease (50 %) and maximum of the participants (83.3 %) had no income, 8.9 % earn between

10,000 - 20,000, 6.7 % between 5000 - 10,000 and 1.1 % earning less than 5000 Nultrum per month, (1 USD = 69 Nultrum), medical expenses for Bhutanese are bound by government of Bhutan. The mean score of perceived self-efficacy was 31.32 (*SD* = 1.28). The mean score for social support was 74.87 (*SD* = 7.975). The life satisfaction score was 45.91 (*SD* = 8.651).

Discussion

The hypothesis of this study was factors like perceived self-efficacy, social support, educational level, perceived health status and life satisfaction will predict successful aging among community dwelling older adults living in Thimphu, Bhutan. Perceived self-efficacy was statistically significant in predicting successful aging as measured by successful aging inventory among older adults. The result in this study also showed correlation with self-efficacy to successful aging (r =.62; p = <.000), with the standardized coefficients prediction of (β = .38, p < 0.000). This could be explain by theory, according to the theory of successful aging, the more perceived self-efficacy meant that the greater the personal control, creativity, confident, an individual had more knowledge, more experience to cope with the changes that had occurred to their bodies, they have potentialities to deal with their aging as they aged.

The more perceived self-efficacy the better the changes of coming up with the solutions to the problems besides having creative thoughts and innovative (Flood, 2005). Half of the older adults in Bhutan were young older adults. In this young older adult's level, they have more ability in doing their activity independently this is supported by Frisch (2005), because high perceived self-efficacy contributes to happiness and satisfied with life, positive behaviors, makes one more willing to face challenges, and balance emotional and decrease stress. This variable is consistent with the study conducted in Vietnam (r =.23; p < .000) (Trieu et al., 2016), and was consistent with Cha et al., (2012) correlation and in predicting perceived self-efficacy with (r = .51, p < .00, (β = 0.21, p < .05).

The results were similar to an outcome of previous studies by Cha et al.(2012) and Kim (2013 a), which was clear dimension on attribution for successful aging in elderly. In addition, low perceived self-efficacy may lead to giving up such

behaviors once challenging difficulties arise (Pender, Murdagh, & Pearson, 2011). Therefore, high perceived self-efficacy is the crucial factor, determining whether an older adults can get over difficulties in order to adhere to successful aging among elderly.

In most of the studies it has found that social support was statistically significant as measured by multidimensional scale of perceived social support in influencing and had positive correlation with successful aging among older adults. In this study it has showed (r = .49; p < .001), standardized beta coefficient (β = .31, p < .001), 72.2 % of the participants were living with their family, which increases their bonding ultimately contributing in achieving successful aging. It is obvious that the older people living with family receive great caring by their family, culturally in Bhutanese context, they followed filial piety where the younger generation respect their older adults. Besides that the neighbor help the elderly, whenever they are in need, even escorting to medical treatment and performing certain household chores. Family is an important role for social support in older adults life, older adults is equipped with confident, life goals, high motivation and lifelong experiences. These are supported by Cha et al. (2012), Narang et al. (2010), and Kim (2013 b), who had intercepted and explained that social support was significantly related and can predict successful aging among older adults.

While the older adults continue to age and navigate life's transitions, maintaining a social support network may be more important than older adults recognized in today's society. "responsiveness to another's needs and more specifically as an act that communicate caring; that validate the other's worth, feeling actions; that facilitate adaptive coping with problems through the provision of information, assistance or tangible resources " consistently the study had similar finding on successful aging inventory mean score was 69.78 (SD = 11.72); SAI scores ranged from 0 - 80. Higher levels of social support were positively correlated with more successful aging, as indicated by the positive pearson correlation between successful aging inventory and Lubben social ntwork scale scores (r = .22, p < .001 (Howie, Troutman-Jordan, & Newman, 2014). Lee, Lan, and Yen, (2011) also had similar findings, social support accounting (β =.62, p < .000).

Additionally, social support influences the older adults in motivation for successful aging related to their self-confidence, life satisfaction, well-being, and satisfaction with the ability to achieve personal valued goals. Low morbidity, mortality, longevity and is likely one of the mechanism that has a direct impact on changing health promoting behavior and outcome and achieving successful aging (Flood, 2005), even family support had a positive direct effect on both the elderly sense of well-being ($\beta = 0.459$, $p < .001$), (Thanakwang & Soonthorndhada, 2008).

Educational level was statistically significant in predicting and had positive correlation with successful aging among older adults. It is known to be prime quality that is required for achieving goals, in this study it showed positive relation with successful aging ($r = .42$; $p < .001$), and could predict successful aging among older adults, scoring beta standardized coefficients ($\beta = .23$, $p < .05$, $M = 1.18$ ($SD = 1.62$), about 50 % of samples had different educational level. Contrasting with this study Meng and D' Arcy (2014) showed that higher educational level was not associated with successful aging. The study had 51.1 % participants with no formal education, 52 % of participant's age ranges 60-69, and 50 % were without disease.

Low educational level was associated with high rates of infectious disease, self-reported self-health, shorter survivor when sick, and shorter life expectancy, beneficially positive association between education and health is well establish, well educated people experience better health than the poorly educated, as indicated high level of self-reported health and physical functioning and low levels of morbidity, mortality, and disability (Ross, & Wu, 1995). Apparently the studies showed significant that participants with lower educational level had lesser successful aging as compared with higher educational level, which glorify that higher level of successful aging is associated with educational level.

The results of the study showed that the perceived health status does not have positive prediction for successful aging among older adults in community dwelling in Thimphu, Bhutan, There was no correlations between the perceived health status and successful aging ($r = .06$, $p > .05$). The standardized coefficient beta of perceive health status was -.15, $p > 0.05$, which does not predict successful aging. It could be because half of the participants were young old, living with family 72.2 %, other constituting factors could be because 51 % of the older adults were not educated

and consequently half of the older adults were not having comorbidity disease. In contrast it could be explained that good perceive health status is very important for an individual such as reduced risk of mortal (Wilkiins, 2003), disability (Mendes de Leon et al., 2003). There is shift in metaperspective, from a materialistic and rationalist perspective to a more mature and existential one that have transcending experiences that require or are more likely in old age (e.g low death anxiety, more wisdom). Congruently as age increases, health status becomes poorer, there is negative relationship between health condition and age $p < .001$,and (Centre for Bhutan Studies, 2015). Contrast to this study by Strawbridge, Wallhagen, and Cohen (2002), the percentage of rating themselves as aging successfully was 50 %, although absence of chronic conditions and maintaining functional difficulties still rated themselves as aging successfully, self-rated successful aging resulted in sharper contrast for well-being.

Life satisfaction was statistically significant in predicting and they had positive correlation with successful aging among older adults. Life satisfaction of an older adult in this study was correlations (r =.39; p = < .001), and prediction for successful aging (β = .25, p < .05). This result clearly indicated, life satisfaction can predict successful aging. Life satisfaction can be achieved when an older adults had adequate satisfaction over the passage of time, this can be manipulated by the gender, income, social support and health status of an older adults. When older adults have satisfied with life, they can accept the death, they practice more religion, perform exercise to channelized their health, understand the residual effect of the diet, they will possess low negativity and they will have personal control over the scenario, ultimately leading to successful aging. Congruently, the low level of life satisfaction cannot predict successful aging, subjective wellbeing in later life may be perceived as a building block process similar to Maslow's self-actualization hierarchy (Koltko-Rivera, 2006), the subjective well-being requires the fulfillment of lower needs (life satisfaction) before an individual can reach the higher level needs of self-actualization (successful aging). It is considered as one of the components that has to do with attitude, though and feeling, about an individual. Life satisfaction is one's evaluation of life as a whole, rather than the feelings and emotions that are experienced in the moment. May be most of the older adults were farmer and live with their family 72.2

%, the older adult's self-actualization, that make confident and self-control surrounding their life, especially with supported by family genuinely build their satisfaction in their life. Life satisfaction has been positively contributed in predicting in successful aging, better the score, higher the level of successful aging. Consistently Fisher (1995), found majority of respondents (75 %) were identified life satisfaction leading to successful aging (55 %), another study by (Thanakwang & Soonthorndhada, 2008) intercepted, elderly sense of life satisfaction had a strong direct influence ($\beta = .650$, $p < .001$).

The successful aging level was 91.1 %, mean score of successful aging $M = 69.78$ and ($SD = 11.71$), half of the samples were healthy, without disease, contributing 50 % of the total samples, an absence of disease and disability makes it easier to maintain mental and physical function, and maintenance of mental and physical function in turn enables active engagement with life ultimately leading to successful aging, the result showed 52.2 % young older adults, which is the result of having successful aging, a shift in meta-perspective, from a materialistic and pragmatic view of the world to a more cosmic and transcendent one, in the process of transition, most of the older adults were married 56.7 %, when the older adults live with spouse , they could express their feelings to each other and support each other's talk and reach better consensus, 100 % of the samples were Buddhist religion, which enforced person's view and behavior that convey a sense of relatedness to a greater power of being, something that is greater than oneself, the feelings, the thoughts, experiences, behaviors arising from the search for the sacred, as it has shown in the studies conducted by Trieu et al. (2016), age is one factor related to successful aging (Arias-Merino et al., 2012) with increasing age, people are less successful aging because of numerous age-related changes such as neuromuscular and cardiac homeostatic mechanism, physical frailty, immobility and reduced functional capacity and contribution of the disease (WHO, 2007) and the study found 51.1 % of the samples were not educated.

Successful aging in Bhutan

This is first kind of the study conducted by Gerontological nurse on successful aging in Bhutan, the findings were consistent with the other studies, with the variables perceived self-efficacy, social support, educational level and life

satisfaction can predict successful aging in Bhutan, but need to study more on the perceived health status of Bhutanese elderly, which was not significant in this study. Conclusively, I can say that there is high successful aging in Thimphu Bhutan, and need to stress more on elderly care, as I have come across, there was massive explosion of senior citizens in Bhutan, the life expectancy had soared, aged related degenerative changes has encountered besides land lock and secluded from the world.

Implications

1. Nurses and health care can focus on perceived self-efficacy, social support, educational level and life satisfaction, while providing cares in enhancing successful aging in older adults. Further, sound curriculum for the students' nurses on various predictive factors across multiple domains could provide a better understanding of how these factors can lead to successful aging. This would help them to provide appropriate care and guidance to achieve proper successful aging in Bhutan

2. Nursing teachers can apply predictive factors of successful aging into his/her teaching that leads nursing students to better understanding about factors related to successful aging.

Recommendation

1. Nursing intervention regarding perceived self-efficacy, life satisfaction and social support should be designed and researched in order to promote and enhance successful aging on older adults.

2. Research on perceived health status is recommended, why it is not significant in older adults in Bhutan.

3. Researchers may apply perceived self-efficacy, social support, educational level, life satisfaction and perceived health status into future research; to conduct quasi-experimental research by including these related factors to enhance their successful aging.

4. It should be repeatedly study this topic in other different communities and areas in Bhutan so that the samples together more representative and generalization of the results is more acceptable.

5. Further research could explore other predictive factors like age, marital status, living with, and present illness domains that are not covered in this research.

Limitation

Since the data was collected from only one district Thimphu Bhutan, finding may have its limitations in representativeness in generalizability.

REFERENCES

Arias-Merino, E. D., Mendoza-Ruvalcaba, N. M., Arias-Merino, M. J., Cueva Contreras, J., & Vazquez Arias, C. (2012). Prevalence of successful aging in the elderly in Western Mexico. *Current Gerontology and Geriatrics Research*, 2012, 1-6. Retrieved from https://www.hindawi.com/ journals/ cggr/ 2012/ 460249/. doi: 10.1155/2012/460249

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. *Perspectives from the Behavioral Sciences*, *1*(1), 1-34.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191-215.

Barrett, A. J., & Murk, P. J. (2006). *Life satisfaction Index for the third age (LSITA): A measurement of successful aging*. Retrieved from file: ///C:/Users/ Windows10/Downloads/Documents/Barrett_&_Murk_Life%20 Satisfaction.pdf

Borg, C., Hallberg, I. R., & Blomqvist, K. (2006). Life satisfaction among older people (65+) with reduced self care capacity: The relationship to social, health and financial aspects. *Journal of Clinical Nursing*, *15*(5), 607-618.

Bryant, L. L., Corbett, K. K., & Kutner, J. S. (2001). In their own words: A model of healthy aging. *Social Science & Medicine*, *53*(7), 927-941.

Butler, J. (1988). Performative acts and gender constitution: An essay in phenomenology and feminist theory. *Theatre Journal*, *40*(4), 519-531.

Callahan, D. (1973). The WHO definition of'health'. *Hastings Center Studies*: *1*(3) 77-87.

Carter, A., Breen, L., Yaruss, J. S., & Beilby, J. (2017). Self-efficacy and quality of life in adults who stutter. *Journal of Fluency Disorders*, *54*(14-23).

Centre for Bhutan Studies.[CBS] (2010). *Gross national happiness*. Retrieved from http://www.nsb.gov.bt/publication/download.php?id=85

Centre for Bhutan Studies.[CBS](2015). *Gross national happiness*. Retrieved from http://www.grossnationalhappiness.com/2017/01/2015-gnh-survey-report/

Centre for Bhutan Studies.[CBS] (2016). *Gross national happiness*. Retrieved from http//www.nsb.gov.bt/publication/files/pub3cb4010sp.pdf

Cha, E. S., Kim, K. H., & Erlen, J. A. (2007). Translation of scales in cross cultural research: Issues and techniques. *Journal of Advanced Nursing*, *58*(4), 386-395.

Cha, N. H., Seo, J. E., & Sok, S. R. (2012). Factors influencing the successful aging of older Korean adults. *Contemporary Nurse*, *41*(1), 78-87.

Chauhan, P., & Siddiqui, M. A. (2013). Demographic aging in SAARC countries. *International Journal of Advanced Research in Management and Social Sciences*, *2*(9), 125-139.

Cheng, S. T., & Chan, A. C. (2004). The multidimensional scale of perceived social support: Dimensionality and age and gender differences in adolescents. *Personality and Individual Differences*, *37*(7), 1359-1369.

Chung, S. D. (2007). A comparative study on the successful aging for Korean elderly women and elderly men. *Journal of the Korean Gerontological Society*, *27*(4), 829-845.

Cosco, T. D., Prina, A. M., Perales, J., Stephan, B. C., & Brayne, C. (2014). Operational definitions of successful aging:A systematic review. *International Psychogeriatrics*, *26*(3), 373-381.

Cosco, T. D., Stephan, B. C., Brayne, C., Muniz, G., & CFAS, M. (2017). Education and successful aging Ttajectories: A longitudinal population-based latent variable modelling analysis. *Canadian Journal on Aging*, *36*(4), 427-434.

Cozort, R. W. (2008). *Revising the gerotranscendence scale for use with older adults in the southern United States and establishing psychometric properties of the revised gerotranscendence scale (Doctoral dissertation)*. Retrieved from https://libres.uncg.edu/ir/uncg/f/Cozort_uncg_0154D_10037.pdf

Crowther, M. R., Parker, M. W., Achenbaum, W. A., Larimore, W. L., & Koenig, H. G. (2002). Rowe and Kahn's model of successful aging revisited: Positive spirituality the forgotten factor. *The Gerontologist*, *42*(5), 613-620.

Cutrona, C. E. (1996). Social support as a determinant of marital quality. In G. R. Pierce (Ed.), *Handbook of social support and the family* (pp. 173-194).. Boston, MA: Springe

Department of Economic and Social Affairs. (2015). *World population prospects: The 2015 revision.* Retrieved from https://esa.un.org/Unpd/wpp/ Publications/Files/Key_Findings_wpp_2015.pdf

Depp, C. A., & Jeste, D. V. (2006). Definitions and predictors of successful aging: A comprehensive review of larger quantitative studies. *The American Journal of Geriatric Psychiatry, 14*(1), 6-20.

Długosz, Z., & Raźniak, P. (2014). Risk of population aging in Asia. *Procedia-Social and Behavioral Sciences, 120*, 36-45.

Dobriansky, P. J., Suzman, R. M., & Hodes, R. J. (2007). *Why populations aging matters: A global perspectives.* Retrieved from file:///C:/Users/ Windows10/Downloads/Documents/WPAM_3.pdf

Dorji, N. (2016). *Adverse life experiences and quality of life among senior citizens of Bhutan*, Doctoral dissertation, Adult Nursing, Queensland University of Technology.

Engelhardt, H., Buber, I., Skirbekk, V., & Prskawetz, A. (2010). Social involvement, behavioural risks and cognitive functioning among older people. *Ageing & Society*, *30*(5), 779-809.

Felson, D. T., Naimark, A., Anderson, J., Kazis, L., Castelli, W., & Meenan, R. F. (1987). The prevalence of knee osteoarthritis in the elderly: The Framingham osteoarthritis study. *Arthritis & Rheumatology*, *30*(8), 914-918.

Fiori, K. L., Antonucci, T. C., & Cortina, K. S. (2006). Social network typologies and mental health among older adults. *Journals of Gerontology: Psychological Sciences, 61*(1), 25-32.

Fisher, B. J. (1995). Successful aging, life satisfaction, and generativity in later life. *The International Journal of Aging and Human Development, 41*(3), 239-250.

Flood, M. (2002). Successful aging: A concept analysis. *Journal of Theory Construction and Testing*, *6*(2), 105-109.

Flood, M. (2005). A mid-range nursing theory of successful aging. *Journal of Theory Construction & Testing*, *9*(2), 35-39.

Frisch, M. B. (2005). *Quality of life therapy.* New Jersey: John Wiley & sons. Retrieved from https://sites.baylor.edu/ michael_b_frisch/ files/ 2014/ 06/ Frisch-2016-1d1isw0.pdf

Fleishman, J. A., & Zuvekas, S. H. (2007). Global self-rated mental health: Associations with other mental health measures and with role functioning. *Medical Care*, *45*(7), 602-609.

Gilbert, C., Hagerty, D., & Taggert, H. M. (2012). Exploring factors related to healthy ageing. *Self-Care Dependent Care Nursing*, *19*(1), 20-25.

Glass, T. A., Mendes De Leon, C. F. M., Bassuk, S. S., & Berkman, L. F. (2006). Social engagement and depressive symptoms in late life: Longitudinal findings. *Journal of Aging and Health*, *18*(4), 604-628.

Gow, A. J., Pattie, A., Whiteman, M. C., Whalley, L. J., & Deary, I. J. (2007). Social support and successful aging: Investigating the relationships between lifetime cognitive change and life satisfaction. *Journal of Individual Differences*, *28*(3), 103-115.

Hansen Kyle, L. (2005). A concept analysis of healthy aging. *Nursing Forum, 40* (2), 45-57).

Howie, L. O., Troutman-Jordan, M., & Newman, A. M. (2014). Social support and successful aging in assisted living residents. *Educational gerontology*, *40*(1), 61-70.

Hyun Cha, N., Ju Seo, E., & Sok, S. R. (2012). Factors influencing the successful aging of older Korean adults. *Contemporary Nurse*, *41*(1), 78-87.

Jefferies, K., & Gale, T. M. (2013). 6-CIT: Six-item cognitive impairment test. In A. J. Larner (Ed.), *Cognitive screening instruments* (pp. 209-218). London: Springer.

Kahana, E., & Kahana, B. (1996). Conceptual and empirical advances in understanding aging well through proactive adaptation. In V. Bengtson (Ed.), *Adulthood and aging: Research on continuities and discontinuities* (pp.18-41). New York: Springer.

Kim, D. B. (2008). The study on the development of the Korean elderly's successful aging scale. *Korean Jounal of Social Welfare*, *60*(1), 211-231.

Kim, E. J. (2013 a). Accessing factor structure and construct validity of the successful aging inventory. *Journal of Korean Academy of Nursing*, *43*(4), 568-578.

Kim, H. K. (2013 b). Factors affecting successful aging among male elders in Korea. *Journal of Convergence Information Technology*, *8*(14), 341-350.

Kim, M. H., & Shin, K. R. (2005). The study on the development of the successful aging scale for Korean elderly. *Journal of the Korea Gerontological Society*, *25*(2), 35-52.

Kim, M. H., Shin, K. R., Choi, H. K., & Kang, M. S. (2006). The factor of successful aging types in Korean elderly. *Journal of the korean Gerontological Society*, *26*(1), 91-104.

Kim, S. H., & Park, S. (2017). A meta-analysis of the correlates of successful aging in older adults. *Research on aging*, *39*(5), 657-677.

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *The Canadian Journal of Psychiatry*, *54*(5), 283-291.

Koenig, H. G., George, L. K., & Titus, P. (2004). Religion, spirituality, and health in medically ill hospitalized older patients. *Journal of the American Geriatrics Society*, *52*(4), 554-562.

Koltko-Rivera, M. E. (2006). Rediscovering the later version of Maslow's hierarchy of needs: Self-transcendence and opportunities for theory, research, and unification. *Review of General Psychology*, *10*(4), 302.

Kozar Westman, M., Troutman Jordan, M., & Nies, M. A. (2013). Successful aging among assisted living community older adults. *Journal of Nursing Scholarship*, *45*(3), 238-246.

Krause, N. (2003). Religious meaning and subjective well-being in late life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *58*(3), S160-S170.

Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. *Advances in Experimental Social Psychology*, *32*, 1-62.

Lee, P-L., Lan, W., & Yen, T-W. (2011). Aging successfully: A four-factor model. *Educational Gerontology*, *37*(3), 210-227.

Lorig, K. (1996). Chronic disease self-management: A model for tertiary prevention. *American Behavioral Scientist*, *39*(6), 676-683.

Martin, P., Kelly, N., Kahana, B., Kahana, E., Willcox, B. J., Willcox, D. C., & Poon, L. W. (2014). Defining successful aging: A tangible or elusive concept. *The Gerontologist*, *55*(1), 14-25.

Maslow, A. H. (1971). *The farther reaches of human nature*. New York: Arkana/Penguin Books.

McCarthy, V. L., Ling, J., & Carini, R. M. (2013). The role of self-transcendence: A missing variable in the pursuit of successful aging. *Research in gerontological nursing*, *6*(3), 178-186.

McCarthy, V. L., & Bockweg, A. (2013). The role of transcendence in a holistic view of successful aging: A concept analysis and model of transcendence in maturation and aging. *Journal of Holistic Nursing*, *31*(2), 84-92.

McLaughlin, S. J., Connell, C. M., Heeringa, S. G., Li, L. W., & Roberts, J. S. (2009). Successful aging in the United States: Prevalence estimates from a national sample of older adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *65*(2), 216-226.

McMullin, J. A., & Cairney, J. (2004). Self-esteem and the intersection of age, class, and gender. *Journal of aging studies*, *18*(1), 75-90.

Mendes de Leon, C. F., Glass, T. A., & Berkman, L. F. (2003). Social engagement and disability in a community population of older adults. *American Journal of Epidemiology*, *157*(7), 633-642.

Menec, V. H. (2003). The relation between everyday activities and successful aging: A 6-year longitudinal study. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *58*(2), S74-S82.

Meng, X., & D'arcy, C. (2014). Successful aging in Canada: Prevalence and predictors from a population-based sample of older adults. *Gerontology*, *60*(1), 65-72.

Mhaolain, A. M. N., Gallagher, D., Connell, H. O., Chin, A. V., Bruce, I., Hamilton, F.,Teehee,E.,Coen, R.,Coakley,D.,Cunningham. C.,Walsh, J. B, & Lawor B. (2012). Subjective well-being amongst community-dwelling elders: What determines satisfaction with life? Findings from the Dublin Healthy Aging Study. *International psychogeriatrics*, *24*(2), 316-323.

Ministry of Health. (2017). *Annual Health Bulletin*, Thimphu: KMT printing.

Motta, M., Bennati, E., Ferlito, L., Malaguarnera, M., Motta, L., & Italian Multicenter Study on Centenarians. (2005). Successful aging in centenarians: Myths and reality. *Archives of gerontology and geriatrics*, *40*(3), 241-251.

Narang, P., El-Refai, M., Parlapalli, R., Danilov, L., Manda, S., Kaur, G., & Lippmann, S. (2010). Antipsychotic drugs: Sudden cardiac death among elderly patients. *Psychiatry*, *7*(10), 25-29.

National Statistics Bureau [NSB]. (2017). *Statistical yearbook of Bhutan 2017*. Retrieved from http://www.nsb.gov.bt/publication/publications.php?id=3

Nejati, V. (2009). Assessing the health status of elderly people in the province of Qom (2007). *The Journal of Qazvin University of Medical Sciences*, *13*(1), 67-73.

Neugarten, B. L., Havighurst, R. J., & Tobin, S. S. (1961). The measurement of life satisfaction. *Journal of Gerontology, 16,134-143*.

Nimrod, G., & Kleiber, D. A. (2007). Reconsidering change and continuity in later life: Toward an innovation theory of successful aging. *The International Journal of Aging and Human Development*, *65*(1), 1-22.

Nortey, S. T., Aryeetey, G. C., Aikins, M., Amendah, D., & Nonvignon, J. (2017). Economic burden of family caregiving for elderly population in southern Ghana: The case of a peri-urban district. *International Journal for Equity in Health*, *16*(1), 16.

Orth, U., Robins, R. W., & Meier, L. L. (2009). Disentangling the effects of low self-esteem and stressful events on depression: Findings from three longitudinal studies. *Journal of Personality and Social Psychology*, *97*(2), 307-321.

Ouwehand, C., de Ridder, D. T., & Bensing, J. M. (2007). A review of successful aging models: Proposing proactive coping as an important additional strategy. *Clinical Psychology Review*, *27*(8), 873-884.

Payman, V., George, K., & Ryburn, B. (2008). Religiosity of depressed elderly inpatients. *International Journal of Geriatric Psychiatry*, *23*(1), 16-21.

Peel, N., Bartlett, H., & McClure, R. (2004). Healthy ageing: How is it defined and measured?.*Australasian Journal on Ageing*, *23*(3), 115-119.

Peel, N. M., McClure, R. J., & Bartlett, H. P. (2005). Behavioral determinants of healthy aging. *American Journal of Preventive Medicine*, *28*(3), 298-304.

Pender, N. J.,Murdagh, C., & Parson, M. A.(2011) Health promotion in Nursing Practice(6th edition).New Jersey:Pearson Prentice Hall.

Phelan, E. A., Anderson, L. A., Lacroix, A. Z., & Larson, E. B. (2004). Older adults' views of "successful aging"—How do they compare with researchers' definitions? *Journal of the American Geriatrics Society*, *52*(2), 211-216.

Picco, L., Achilla, E., Abdin, E., Chong, S. A., Vaingankar, J. A., McCrone, P., & Prince, M. (2016). Economic burden of multimorbidity among older adults: Impact on healthcare and societal costs. *BMC health services research*, *16*(1), 173-185.

Rapp, K., Becker, C., Cameron, I. D., Klenk, J., Kleiner, A., Bleibler, F., & Büchele, G. (2012). Femoral fracture rates in people with and without disability. *Age and Ageing*, *41*(5), 653-658.

Riegel, B., Dickson, V. V., Kuhn, L., Page, K., & Worrall-Carter, L. (2010). Gender-specific barriers and facilitators to heart failure self-care: A mixed methods study. *International Journal of Nursing Studies*, *47*(7), 888-895.

Riley, M. W. (1998). Letters to the editor. *Gerontologist*, *38*(1), 15. Retrieved from https://academic.oup.com/gerontologist/article/38/2/151/710819

Ross, C. E., & Wu, C. L. (1995). The links between education and health. *American Sociological Review*, *60*(5), 719-745.

Rowe, J. W., & Kahn, R. L. (1987). Human aging: Usual and successful. *Science*, *237*(4811), 143-149.

Rowe, J. W., & Kahn, R. L. (1998). Successful aging. *The Gerontologist*, *37*(4), 433-440.

Roy, C. (1997). Future of the Roy model: Challenge to redefine adaptation. *Nursing Science Quarterly*, *10*(1), 42-48.

Roy, C., & Andrews, H. A. (1999). *The Roy adaptation model*. (3rd Ed.). New Jersey: Prentice Hall.

Royal society for senior citizens [RSSC]. (2012). *Baseline survey for the royal society for senior citizens.* Retrieved fromhttp://www.undp.org/content/Bhutan/en/home/library/poverty/2013BaselineSurvey.html

Sadler, E., & Biggs, S. (2006). Exploring the links between spirituality and successful ageing. *Journal of Social Work Practice*, *20*(3), 267-280.

Schwarzer, R., & Jerusalem, M. (1995). Optimistic self-beliefs as a resource factor in coping with stress. In *Extreme stress and communities: Impact and intervention* (pp. 159-177). Dordrecht: Springer.

Seeman, T. E., Berkman, L. F., Charpentier, P. A., Blazer, D. G., Albert, M. S., & Tinetti, M. E. (1995). Behavioral and psychosocial predictors of physical performance: MacArthur studies of successful aging. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, *50*(4), 177-183.

Seeman, T. E., Lusignolo, T. M., Albert, M., & Berkman, L. (2001). Social relationships, social support, and patterns of cognitive aging in healthy, high-functioning older adults: MacArthur studies of successful aging. *Health psychology*, *20*(4), 243-55.

Social and Cultural Committee. (2017). *National assembly of Bhutan.* Retrieved from http://www.nab.gov.bt/en/content/apa-social-cultural-committee-2017.

Sousa, R. M., Ferri, C. P., Acosta, D., Albanese, E., Guerra, M., Huang, Y, & Rodriguez, M. C. (2009). Contribution of chronic diseases to disability in elderly people in countries with low and middle incomes: A 10/66 dementia research group population-based survey. *The Lancet*, *374*(9704), 1821-1830.

Strawbridge, W. J., Cohen, R. D., Shema, S. J., & Kaplan, G. A. (1996). Successful aging: Predictors and associated activities. *American Journal of Epidemiology*, *144*(2), 135-141.

Strawbridge, W. J., Wallhagen, M. I., & Cohen, R. D. (2002). Successful aging and well-being: Self-rated compared with Rowe and Kahn. *The Gerontologist*, *42*(6), 727-733.

Tabachnick, B. G., & Fidell, L. S. (2001). Multiple regression. *Using multivariate statistics*, *3*, 709-811.

Tate, R. B., Lah, L., & Cuddy, T. E. (2003). Definition of successful aging by elderly Canadian males: The Manitoba follow-up study. *The Gerontologist*, *43*(5), 735-744.

Thanakwang, K., & Soonthorndhada, K. (2008). Family relations and health-promoting behavior among older people in Nan Province. *Medical journal of the Medical Association of Thailand*, *91*(7), 1102-1108.

Tinker, A. (2002). The social implications of an ageing population. *Mechanisms of Ageing and Development*, *123*(7), 729-735

Tornstam, L. (1989). Gerotranscendence: A reformulation of the disengagement theory. *Aging Clinical and Experimental Research*, *1*(1), 55-63.

Tornstam, L. (1997). Gerotranscendence: The contemplative dimension of aging. *Journal of aging studies*, *11*(2), 143-154.

Torres, S. (2006). Different ways of understanding the construct of successful aging: Iranian immigrants speak about what aging well means to them. *Journal of Cross-Cultural Gerontology*, *21*(1-2), 1-23

Touhy, T., & Jett, K. (2017). *Ebersole and Hess gerontological nursing and healthy aging*. Philadelphia: Mosby Elsevier.

Tovel, H., & Carmel, S. (2014). Maintaining successful aging: The role of coping patterns and resources. *Journal of Happiness Studies*, *15*(2), 255-270.

Trieu, N. T. T., Jullamate, P., & Piphatvanitcha, N. (2015). Factor related to successful aging among older adults in Danang, Vietnam. *Journal of Nursing and Health Sciences*, *10* (3), 38-45

Troutman, M., Nies, M. A., Small, S., & Bates, A. (2011). The development and testing of an instrument to measure successful aging. *Research in gerontological nursing*, *4*(3), 221-232.

United Nation [UN], (2017). *World population ageing*: New York: Department of Economic and Social Affairs.

Vaillant, G. E., & Mukamal, K. (2001). Successful aging. *American Journal of Psychiatry*, *158*(6), 839-847.

Van Leeuwen, I. M., Vera, J., & Wolkenhauer, O. (2010). Dynamic energy budget approaches for modelling organismal ageing. *Philosophical Transactions of the Royal Society*, *365*(1557), 3443-3454.

Van Oort, F. V., van Lenthe, F. J., & Mackenbach, J. P. (2004). Cooccurrence of lifestyle risk factors and the explanation of education inequalities in mortality: Results from the GLOBE study. *Preventive Medicine, 39*(6), 1126-1134.

Von Faber, M., Bootsma–van der Wiel, A., van Exel, E., Gussekloo, J., Lagaay, A. M., van Dongen, E, & Westendorp, R. G. (2001). Successful aging in the oldest old: Who can be characterized as successfully aged? *Archives of Internal Medicine, 161*(22), 2694-2700.

Wadensten, B. (2007). The theory of gerotranscendence as applied to gerontological nursing–Part I. *International Journal of Older People Nursing*, *2*(4), 289-294.

Weir, P. L., Meisner, B. A., & Baker, J. (2010). Successful aging across the years: Does one model fit everyone? *Journal of Health Psychology*, *15*(5), 680-687.

Whitley, E., Popham, F., & Benzeval, M. (2016). Comparison of the Rowe-Kahn model of successful aging with self-rated health and life satisfaction: The west of Scotland twenty-07 prospective cohort study. *The Gerontologist, 56*(6), 1082-1092.

Wilkins, K. (2003). Social support and mortality in seniors. *Health Reports, 14*(3), 21-34.

World Health Organization [WHO] (2007). *Global age-friendly cities: A guide*. Geneva: Swizerland World Health Organization.

World Health Organization [WHO] (2014 a). *Definition of an older adults or elderly person*. Retrieved from: http://.who.int/healthinfo/syrvey/ageingdefnolder/en

World Health Organization [WHO] (2014 b). *Report on aging and health*. Retrieved from: http://www.who.int/ageing/events/world-report-2015-launch/en/

World Health Organization. [WHO] (2015). *World health statistics 2015*. Geneva: World Health Organization.

World Health Organization [WHO] (2016). *World health statistics 2016: Monitoring health for the SDGs sustainable development goals*. Geneva: Switzerland: World Health Organization.

Yamashita, T., Lopez, E. B., Stevens, J., & Keene, J. R. (2017). Types of learning activities and life satisfaction among older adults in urban community-based lifelong learning programs. *Activities, Adaptation & Aging*, *41*(3), 239-257.

Young, Y., Frick, K. D., & Phelan, E. A. (2009). Can successful aging and chronic illness coexist in the same individual? A multidimensional concept of successful aging. *Journal of the American Medical Directors Association*, *10*(2), 87-92

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, *52*(1), 30-41.

REFERENCES

มหาวิทยาลัยบูรพา
BURAPHA UNIVERSITY

BIOGRAPHY

NAME	Lobzang Dorji
DATE OF BIRTH	10 February 1975
PLACE OF BIRTH	Bhutan
EDUCATION	Bachelor of Nursing, Dhaka University, Bangladesh. Master in Nursing, Burapha University, Thailand
HOME ADDRESS	Vill : Yangnyer, Gewog : Yangnyer. Dist : Trashi gang, Bhutan
INSTITUTIONS ATTENDED	Diploma in Nursing, Bhutan, Bachelor in Nursing, Bangladesh.