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Christina S. Dintica, Bc.

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Betreut von / Supervisor:	Mag. PhD, Olga Markic
Mitbetreut von / Co-Supervisor:	PhD, Debora Rizzuto

CURRICULUM VITAE- CRISTINA S. DINTICA

Name: Cristina S. Dintica

Address: Aging Research Center (ARC), NVS, Karolinska Institutet- Stockholm University

Gävlegatan 15, 113 30, Stockholm

Tel: (+46) 739758077 Fax: (+46) 8 6906889 Email: christina.dintica@ki.se

CURRENT POSITION

2016-2020 PhD Student, Aging Research Center, Department of

Neurobiology, Care Science and Society, Karolinska Institute

EDUCATION

2014-2016

Middle European Master's in Cognitive Science, University of Vienna, thesis: "Factors affecting time perception across ages", Supervisor: Prof. Olga Markic.

2010-2014

Bachelor's degree in Psychology MA(Hons), thesis: "Exploring autistic traits and perception of personality from biological

motion", supervisor: Prof. Frank E. Pollick

WORK EXPERIENCE

2016 (March-May)

Research assistant at the Aging Research Center (ARC), Karolinska Institute

2015-2016 (Oct- Feb)

Research assistant at University of Ljubljana,

Department of Neurology, project: "White matter and cognitive decline

in healthy elderly and Parkinson's patients.", Diffusion MRI analysis and network analysis

2015 (Feb-Aug)

Research assistant at SCAN-unit, University of Vienna, project: "How age modulates behavioural and neural responses underlying empathy for touch"

2013 (Jun-Aug)

Research Associate, funded by Wellcome Trust

Vacation Scholarship, at the Institute of Neuroscience and Psychology, University of Glasgow, project: "Modelling a comprehensive mapping of culture-specific facial expression signals for social interaction and emotion communication" with Dr Rachael E. Jack.

2012-2013 (Oct-Jun)

Research assistant at Institute of Neuroscience and Psychology, University of Glasgow, project: "Cultural differences in emotional facial expressions."

CONFERENCES AND PRESENTATIONS

2016 (Oct 16-18)

Participation as student organizer 9th International Congress on vascular dementia, Ljubljana

2015 (Oct 5-13)

Participation and oral presentation: "Forgetfulness in Old Age: A Pro-social Trait?" Information Society Multi-conference, (Cognitive Science), Ljubljana

2015 (Jun 17-19)

Participation and poster presentation: "Does Age Modulate Neural Networks Underlying Empathy For Pleasant and Unpleasant Touch?"

Middle European Interdisciplinary Conference in Cognitive Science, Ljubljana 18/06/2015

2014 (March 22)

Participation and oral presentation: "Exploring autistic traits and perception of personality from biological motion", BPS Scottish Branch Undergraduate Conference, Edinburgh

GRANTS

2015-2016 (Oct -Jan)

Erasmus Plus Grant

2013 (Jun-Aug)

Wellcome Trust - Biomedical Vacation Scholarship, for project: "Modelling a comprehensive mapping of culture-specific facial expression signals for social interaction and emotion communication"

“*It is a mistake to regard age as a downhill grade toward dissolution. The reverse is true. As one grows older, one climbs with surprising strides.*”
-George Sand

To my brave grandmother Maria Şom.

Contents

Abstract

Life satisfaction in old age has generated several theories in philosophy and psychology. The most prominent is the *successful aging* theory, proclaiming that aging successfully entails maintaining a busy, physically active and independent life, in addition to avoiding chronic diseases. *Harmonious aging* is a newly formulated theory derived from East Asian philosophy, stressing the importance of balancing negative and positive life circumstances, and to be socially connected in old age. The aim of this thesis was to compare the two theories in how older people evaluate life satisfaction.

Data was acquired from an established database in the Swedish National study on Aging and Care (SNAC)- Kungsholmen in Stockholm (n=1975, age= 60-104), through interviews, self-reported questionnaires and medical examinations. Life satisfaction was measured with the Life Satisfaction Index-A (LSI-A). The hypothesis was that *harmonious aging* factors (social network and activity, subjective health and feeling harmonious), rather than *successful aging* factors (number of chronic diseases, physical activity, exercise and independence) are associated with higher LSI-A score. The hypothesis was investigated using logistic regression analysis.

The results are in support of the hypothesis in that high scores in *harmonious aging* factors were significantly (p<0.001) associated with higher odds of having an LSI-A score of medium (≥ 7 <14) and high (≥14) LSI-A score compared to a low score (<7). Successful aging factors were not significantly associated with LSI-A score.

The conclusion is that compared to the *successful aging* theory, *harmonious aging* is a more valid theory of life satisfaction evaluation in old age, as it puts more focus on factors which old people find important to their well-being.

Introduction

Being happy and satisfied with life is something, which most, if not all people wish to achieve. While at first glance it may seem easy to describe what satisfaction with life entails and which basic criteria might be involved, it is not as straightforward as it may seem. In the research field of life satisfaction in philosophy and psychology there are different ideas and concepts, which on some levels agree and on others do not. In old age, these criteria and definitions might change due to changes in circumstances common to the autumn of life. The aging of populations has become a worldwide phenomenon. With older age, comes a higher prevalence of chronic disorders, such as vascular diseases, diabetes, cancer and dementia.[1] Thus, an individual may live longer, but the time lived with disease is also increasing.

In the aging research field this is made more complicated by different views of what it means to age well. Different disciplines in the aging research community focus on different aspects of life that are necessary to age well, creating different definitions of a satisfactory life and well being in old age. The most prevalent concept of ageing well in the western world is *successful ageing*,[2] which in short holds that certain aspects of life need to be optimized and others minimized in order to be satisfied with life. These specific aspects vary depending on the discipline, i.e. social, behavioral or medical disciplines. Their most common feature is to maintain a high level of functionality and activity (social, cognitive and physical) for as long as possible, while remaining free of chronic diseases. Arguably, this goes against the very nature of aging, which leads to decline in such aspects of life.

However, several studies have shown empirical evidence of no age-related decline in life satisfaction in old age.[3-7] The lack of a negative age effect on life satisfaction has been referred to as a "paradox".[8] The paradox is that while the chances for negative life circumstances increase in old age such as disease, loss of functionality and independence, life satisfaction does not seem to decrease, as one would predict from the *successful aging* perspective. This suggests that the *successful ageing* approach may not reflect the way older people actually evaluate their life satisfaction.

The scope of this thesis is to challenge the *successful aging* approach, by contrasting it to an alternative evaluative approach of life satisfaction, the theory of *harmonious*

ageing.[9] This novel theory has roots in Eastern Asian tradition and spirituality, and in short maintains that harmony between negative and positive aspects of life, and social integration are the most important constituents for life satisfaction in old age.

The first chapter is dedicated to a brief history of how happiness and life-satisfaction have been conceptualised in different times and cultures. The second chapter discusses the contemporary theories of the 21st century of life satisfaction, highlighting the most prevalent of these, *whole life satisfaction* theory. The third chapter focuses of frameworks of aging well, contrasting the western concept of *successful aging* to the East Asian inspired *harmonious aging* concept.

The empirical part of this thesis investigates whether the *successful aging* or the *harmonious aging* framework best reflects the way older Swedish adults evaluate their life satisfaction. This is important to investigate for several reasons. Firstly, the underlying assumption of *successful aging* theories is that if the criteria are not met, a person is "unsuccessful". This puts a lot of personal responsibility on the individual to achieve success in aspects which may be out of their reach, for example getting diagnosed with an age-related disease or maintain the same physical ability one had 10 years ago. It is therefore important to challenge this view, as it is unhealthy and unrealistic to strive for and denies the natural progression of decline.

Secondly, *successful aging* theories hold that life-satisfaction is not possible without having high functionality and independence. *Harmonious aging* theory posits that it is the balance between negative and positive that is the key to life satisfaction. According to this theory, disability or illness can be balanced out by good social integration and relations and an accepting and positive life view, to reach a harmonious state of satisfaction. This is essential information for researchers in the social, behavioural as well as the medical sciences because illness and disability, while preventable to certain extent, is still a very real everyday situation for many elderly people. Thus, if such circumstances can be balanced by good social relations and positive outlook, it indicates where resources and efforts should be directed in care planning, support and engagement for the aging community.

CHAPTER 1.

Historical & cultural theories of life satisfaction

1.1 Life-satisfaction and happiness in antiquity

Life satisfaction and leading a good life has been a matter of query for philosophers and psychologists and has been either an explicit or implicit goal for humans to achieve throughout history. There are a plethora of theories an accounts how this should be approached and which ways and values in life will aid you in reaching a state of happiness and life satisfaction. The earliest recorded accounts of discourses in this matter comes from the ancient world, more specifically ancient Greece. Aristuppus (435-366 BCE) was of the persuasion that in order to achieve happiness, one must give in and relish in life's sensory pleasures and avoid pain whenever possible.[10] The notion of ethical hedonism was later carried forward by Epicurus (342-270 BCE), who claimed that it is a moral obligation to maximize of pleasure and minimize of pain.[10]

Philosophers and historians have most comprehensively studied the construct of happiness. Most of these analyses concur that the idea of happiness in antiquity revolved on good luck and fortune, while nowadays North Americans see happiness as something which they can control and which can be actively attained.[11] Lu (2001) for instance, analyzed the reputable classic Liji, also known as the Classic of Rites, composed c.a. 5th-1st century B.C. during the Han dynasty in China and noted that “fu” was used to express “fortunate, lucky, smooth and free of obstacles”.[12] Likewise, historian McMahon (2006)[13] noted that the first record of the use Greek term eudaimonia, translated as happiness in English,[14] was by the poet Hesiod in the his work *Work and Days*, referring to is as “Happy and lucky the man”. The meaning of eudaimon (adjective form of eudaimonia) is of eu (good) and daimon (god, spirit, demon), leading to the conclusion that the notions of luck and divinity are the forces behind happiness in this context.[13] Therefore it seems that in ancient Greece, happiness was thought of as something out of human control, governed by luck and the graces of the gods. McMahon (2006) concludes that happiness was seen as something that happens to us.[13] Contrary to the popular view of poets of the time, Socrates asserted that happiness was partially within the individual's control.[13] In Plato’s work *The Symposium*, Socrates contends that the teaching of desire is pivotal as leading to

happiness.[14] In other words, Socrates was of the opinion that children should be educated to see the beauty in nature and people, so that they will value knowledge and wisdom and as such find happiness in a proper manner. A similar opinion of happiness is also evident in Aristotle's Nichomachean Ethics,[14] where Aristotle highlights the difference between happiness and feeling amused, and posits that happiness is found in a thoughtful and philosophical life. Aristotle agrees with the Socratic perspective of happiness, in that it is more in our control, compared to other Greek thinkers of that time. However, Aristotle also emphasizes factors such as having good friends, health, and resources as key to contributing to happiness.[14] Thus, the ancient view of happiness includes fortune, luck, and being blessed by the gods, which were greatly dependent on external factors. This frail, external perception of happiness was prevalent for centuries.

So the question to consider here is when did the concept of happiness change from beyond our control, from external to internal and for what reasons? McMahon (2006), argues that this process was gradual, but the turning point was the Enlightenment era.[13] Pessimism toward pursuit of happiness loomed in middle ages, as is evident in St. Augustine's City of God: "the earthly quest for happiness is doomed", true happiness is "unattainable in our present life". In the 13th century, St. Thomas Aquinas asserted that happiness is found through "the 'theological virtues' of charity, hope, and faith".[13] This marked a change from happiness being something which only select intellectually gifted could achieve to a "divine gift" which anyone could achieve. In the 16th century Martin Luther went further in this direction by suggesting that "Christians should be merry..."To experience the world as a "pleasure garden for the soul".[13]

1.2 North American Happiness

North America and more specifically, the United States is an interesting case to study in terms of how the notion of happiness developed. It can be concluded from the Enlightenment era of the 18th century that a shift occurred in attitude from the religious "How can I be saved?" to the more worldly and individually focused "How can I be happy?".[13] This was most prominent in formation of the United States where Thomas Jefferson's 1776 *Declaration of Independence*, where the pursuit of happiness as well as

life and liberty were put down as unalienable rights. The importance of an active pursuit of happiness is very different from the former luck and divine concept of happiness. Jefferson was of the belief that an individual's happiness should come from being a model citizen, as opposed to the pursuit of personal material wealth. However, this began to shift alongside the rapid industrialization process and economic growth at the end of the 19th century, to happiness as something individually attainable in the United States.[15]

1.3 Collectivism vs. Individualism

The United States is the most extreme example of an individualistic society where the focus lies mostly on the individual. Collectivist societies such as East Asia, often have an external sense of control.[16] Hence, collectivistic cultures are more likely to have the view of happiness based on luck and externally determined rather than individualistic cultures. Interestingly, ecological factors such as climate and pathogen prevalence have also been found to influence how the concept of happiness is shaped and its usage.[17] Malthus, (1809) suggested that happiness concepts built on luck and fortune are more likely based in harsher climates where survival depends more on external factors.[18] Therefore, the farther away from the equator a society was, the instance of having a perception of happiness based on luck would increase. The reason for this may be that the farther away from the equator, the harsher the climate, which can make finding food and shelter more difficult, thus more dependent perhaps on luck.

In the case of the United States, as it became more economically prosperous, the luck-based concepts of happiness became less frequent. The reason why the luck-based definition became out of date, may be due to the fact that people could afford a better standard of living than previously experienced, the perception of having control over one's life increased as a by-product and made luck seem less relevant as contributing to personal happiness.[19] The implication of cultural differences and changes in time of the concept of happiness are important. One of these is that if the concept differs, when researching happiness in one culture, the results may not be applicable for all cultures, hence affecting generalization. For instance, in a happiness questionnaire, Germans, Russians, Japanese, Norwegians, might answer according to how lucky they have been feeling while

Americans, Spanish, Argentine, Ecuadorians, Indians, and Kenyans would answer based on their happiness feelings lately. This would cause the results to mean very different things and therefore would not be of any scientific validity.[20]

1.4 The balance of good and bad

Some focus in happiness research has recently been put on some of the negative aspects of pursuing happiness.[21] The findings reveal that worldwide, there seems to be a kind of "aversion" to happiness on different scales and for different reasons. Holden (2009) argues that aversion to happiness might be due to the fearing the loss of gained happiness more than enjoying its value.[21] Centuries earlier, Epicurus (c. 341-271 B.C.E) posited that extreme happiness should not be pursued due to that it may lead to a never ending quest for those intense pleasures which will lead to pain and suffering.[22] Taoism is rather a common belief system in East Asia, a region which is known to be of a collectivist nature.[23] A prominent feature of Taoism is that all things tend to reverse.[24] Thus, happiness or fortune, is thought to always lead to the reverse, i.e. unhappiness. For instance, in South Korea the general perception is that if a person is happy now, the chance of them being unhappy later on in life are higher and vice versa.[25]

There has been evidence showing that individuals in individualistic societies are under a powerful pressure to gain and display personal happiness, while for East Asians this pressure is directed towards a sense of belonging, in other words, to take part in social harmony.[26] In such collectivist cultures, the perception noted is that personal happiness can be devastating in achieving the main objective, i.e. social harmony.[27]

There have been attempts to quantify aversion to happiness in collectivistic cultures by two studies as a 'fear of happiness' psychological concept. This concept consists of five items that examines agreement with statements of happiness as leading to negative outcomes or not. The items are "I prefer not to be too joyful, because usually joy is followed by sadness", "I believe the more cheerful and happy I am, the more I should expect bad things to occur in my life", "Disasters often follow good fortune", "Having lots of joy and fun causes bad things to happen", and "Excessive joy has some bad

consequences".[28] Joshanloo and colleagues reported that the fear of happiness scale has predictive validity, at both individual and cultural levels in several collectivist cultures across Africa, Asia, and Eastern Europe. The fear of happiness seems to be present on a spectrum in all the cultures that were studied.[28] A similar study was conducted in an individualistic culture, The United Kingdom. Gilbert et al. (2012) created a 9-item scale of fear of happiness, inspired by remarks Gilbert experienced from patients during therapy sessions.[29] The researchers reported significant levels of fear of happiness even in this highly individualistic culture. In addition, Gilbert and colleagues observed the fear of happiness concept to correlate significantly with aspects related to mental health such as depression hatred of self and feeling safe.[29] Thus, this type of research has relevant application to clinical settings and may contribute to potential improvements in clinical practice.

Another reason that some cultures are averse to happiness is due to the perception of happy people as being of lesser depth and intelligence. Therefore, it may seem that cheerful and happy people are less concerned with the hardships in the world and more preoccupied with superficial things either for the reason of not caring, or due to not being able to comprehend more serious issues such as that of religion or politics.[19] In addition, there is a popular belief among artists and writers that happiness hinders creativity and thus fear that it would distract them and block their inspirations.[30] This quote by Edvard Munch, a painter famous for *The Scream*, who struggled with depression, referring to his sufferings "They are part of me and my art. They are indistinguishable from me, and it would destroy my art. I want to keep those sufferings."[31] An explanation for such a negative view of happiness related to creativity is that happiness is considered less interesting than suffering and serious contemplation.

It is evident that aversion or "fear of happiness" is traceable in both collectivist and individualist cultures, but what are the reasons for this aversion? Research points to many people being averse to happiness due to the belief that it will bring negative things to their lives, such as unhappiness, suffering, and even death. These consequences are frequently perceived proportionally as more negative than the positivity of happiness.[32] Therefore it seems reasonable to say that people on average feel more comfortable to be in a neutral

state, or in a *balance* of good and bad.

In the next chapter, the most prominent of current theories of life satisfaction, will be presented and discussed, highlighting *Whole life satisfaction theories* which has received the most attention during the 21st century.

CHAPTER 2.

Current life satisfaction theories

As is evident, in the history of happiness and life-satisfaction theories, there are many different perspectives on what it means to have a happy life. The past theories that have been discussed previously, have suggested that a life free of pain or having minimal pain is essential to a happy life and others have said that a virtuous life is the key, among others. Concepts such as happiness partly depend on normative values and are relative to the time and context in which you live. Therefore, we now move on to more contemporary theories, part of which will be the basis of this thesis. In the past two decades, the most popular framework of happiness has been *Whole life satisfaction* (WLS).[33] In this framework, satisfaction with your life as a whole is equivalent to currently being happy with life circumstances as well as evaluating the past in a favorable manner.

However, the everyday term of happiness has many meanings depending in which context it is being used. It can be used to refer to an individual's phenomenological state and encompass states such as joy, euphoria, satisfaction etc. In this way, happiness refers to a mood state that a person is in at the time.[33]

Another way to view happiness is as a longer-term concept, where it spans longer periods as compared to a temporary state of mind. This kind of happiness arguably has different characteristics as compared to the sensation of happiness in a moment. An example would be a ballerina, who for a decade trains very hard to become a prima ballerina. This is no doubt a very difficult and tiresome process on a daily basis, however looking back on this decade, it may have been the most joyous period of her life, doing what she is passionate about. Feldman (2002) argues that people indeed feel unhappy for most of their happiest period of their lives. This kind of happiness is often referred to as global happiness.[34]

A third way happiness has been conceptualized by philosophers is to live a good life (Feldman, 2008).[34] This implies a certain prudential value in that it supposes a high level of well-being, hence it is also referred to as 'eudaimonic happiness' or 'prudential happiness'.[35] Intuitively, it is possible to feel happiness in the first two ways without

necessary having high well-being. An example is that historically well-being has been increasing and yet levels of happiness seems to have not changed substantially.[36]
What is then required for happiness in the long term? It seems it is not a collection of momentary euphoric or joyous moments, nor objectively having a high level of wellbeing. According to WLS theories this is due to that long term happiness involves a subjective judgement on how well things are going in their life.[34]

This subjective judgement is based on goals that a person has for their life. The idea is that even if the goals may change during the course of life, they have common principles, which serve as an evaluative basis. This evaluation concerns past goals as well as future goals and thus the plans we make to achieve our life goals are referred to "ideal life-plans".[34] The judgement of how our life corresponds to our ideal life-plan is therefore at the heart of WLS theories.

2.1 *Cognitive Whole Life Satisfaction theory (CWLS)*

One example of a WLS theory is CWLS. Versions of the CWLS have been put forward by Kekes (1982)[37], Thomas (1968)[38], and von Wright (1963),[39] in which an evaluation could be as follows: person M, is satisfied with her life to the degree n and at a time t under the following conditions:[34]

a) M has lived a certain life up to time t

b) at time t, M has an ideal life-plan for her life,

c) at time t, M has a somewhat detailed idea of how her life has gone thus far, and

d) at time t, M evaluates to what degree n her actual life corresponds to her ideal life-plan.

This form of evaluation implies that life satisfaction involves being in a cognitive state that compares how well their life matches their ideal life plan. In other words, this theory claims that a person cannot be satisfied with their life unless they believe that there is a high level of agreement between their life and their ideal life. The cognitive component of this version of the WLS constitutes the global evaluation as well as of certain conditions that are important in your life and whether this are met or not. These components might be family life, career, relationships etc. and may have different weights. However, taking all these into account, the conclusion of this evaluation should be the belief that life is going well.[40]

2.2 *Affective Whole Life Satisfaction theory (AWLS)*

It has been argued by some philosophers that CWLS does not truly correspond with how people evaluate their lives because it intellectualizes the process as being a case of having or not having a certain set of logical assessments and a resulting belief.[41] This point is brought up by Haybron (2007), where the argument is that the feeling one has about one's life is more relevant than what one believes about one's life and that being satisfied with one's life is an affective rather than cognitive state. As this affective state derived from the perception they have of their lives, this affective state is different from temporary or situational feelings of happiness. While it is necessary that a cognitive assessment of some kind, be it implicit or explicit take place to have such a perception, this view states that these assessments are not the state of life-satisfaction per se.

In his theory of happiness Władysław Tatarkiewicz stated that happiness equates "satisfaction with one's life as a whole".[42] In his opinion, to be happy you must be completely satisfied with the present life, the past life and future prospect of life.[42] Elizabeth Telfer holds a slightly different view, in that one should be satisfied with life as a whole as well that there is nothing one would like to change a or wants to get and the only wish is to keep things as they are.[43] Other scholars believe that life-satisfaction should involve both the cognitive evaluation of how life corresponds to the ideal life, as well as a positive affective state associated with this evaluation, which is the basis of the *Hybrid whole life satisfaction theory.* [44]

The instrument that will be used in this study to measure life-satisfaction, the Life Satisfaction Index A,[45] is based on concepts from WLS theories. It incorporates items evaluating mood affect, the congruence between desired and achieved life goals, zest for life and self-perception.

In the following chapter, the discussion will move to theories of aging. Specifically, the theory of *successful aging*, which is the framework upon which most western aging and gerontology research is based on, and *harmonious aging*, a newly formulated framework which is built upon Eastern Asian philosophy.

CHAPTER 3.

Successful and Harmonious Ageing concepts

3.1 *The successful aging theory*

Successful aging is one of the most popular frameworks in contemporary gerontology which can be traced to the 1950's and was later conceptualised by John Rowe and Robert Kahn.[2,46-48] In the first issue of the Gerontologist, Robert Havighurst (1961) defined the term successful aging as constituting life satisfaction in the form of "the greatest good for the greatest number".[49] Havighurst and his colleagues regarded this being a theoretical framework as well as having the potential to be practically implemented. In addition, it could be adapted to activity theories as well as disengagement theories, which at the time were two competing retirement models.

What was new and appealing about the successful aging theory was its positive alternative to the classical model of aging, focused mostly on decline and disability. Successful aging was characterised as highly satisfied, active, independent, and most importantly, noncompliant to the traditional trajectory of aging associated decline.[49] In this way it can be said that in the gerontology field the successful aging framework combined anti-ageing promotion with empirical research. In the United States postwar a lot of emphasis was put on late life individual adjustment and adaptability to the circumstances of aging.

Rowe and Kahn then developed a medical version of the successful aging framework where successful aging is distinguished from the normal trajectory of aging.[46-48] Normal aging is seen as having higher risk of pathology and the successful agers as having lower risk of pathology and to be above average for their age in function. This version was then extended to include lifestyle factors as well as cognitive function. Thus, Rowe and Kahn put forward a model that used indicators of physical, cognitive, and lifestyle factors to assess disease and disability. The model assumes that having the right lifestyle can lead to aging successfully and this was practically defined as (a) preventing disease and disability, (b) upholding physical and cognitive function, and (c) social engagement.[48] In Rowe's view, the "new gerontology" acknowledges that successful aging necessitates in addition to disease-free aging a "full engagement in life, including productive activities and

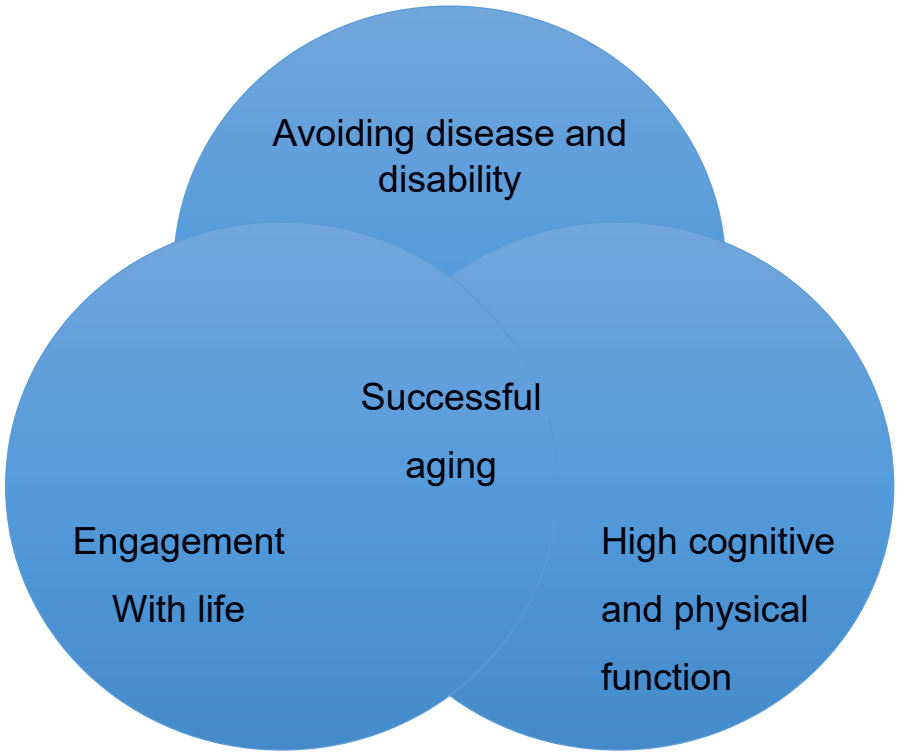


Figure 1. *The Rowe and Kahn Model of Successful Aging (1998) includes three criteria: low probability of disease and disability, high physical and cognitive functioning, and active life engagement. According to the model, an older adult who meets all three of these criteria is aging successfully.*

interpersonal relations".[46] The allure of the successful aging concept is that it offers a more positive evaluation of aging in terms of success rather than the standard decline hypothesis. However, there is a side of the successful aging theory that is troublesome. In this "new gerontology" the responsibility is entirely on the individual to make sure to lead and maintain the right lifestyle, which should in effect increase functionality and prevent debilitation.

The successful aging theory has produced a number of measures, lifestyle recommendations and involvement in policy making, promoting anti-aging campaigns not to mention being at the forefront as the most used paradigm in gerontology research. Researchers in the field have produced a number of terms for discussion among which are "productive aging," "positive aging," "optimal aging," "effective aging," "independent aging," and "healthy aging".[50] In addition, a vast amount of resources have been put into

promoting books, conferences, journals, funding schemes, and research programs and institutional groups. However, despite this effort, Carol Ryff's (1982) comment three decades ago- "like goodness, truth, and other human ideals, successful aging may appeal more than it illuminates" may still hold some truth to it.[51] The end of this chapter will discuss a more detailed account of the reasons for supporting this notion.

Nowadays, contemporary successful aging concept can be found in different disciplines such as the *medical sciences, social sciences, and behavioural sciences, and cultural-gerontological sciences*. The different perspectives in these disciplines will be discussed below.

In the medical sciences, overall health and functionality is the indicator of successful aging, with the ultimate goal being to end life with no illness or disability.[52-54] Therefore in this model, longevity of life and physical health are the main outcomes assessed when determining successful aging with the aim to delay or prevent the onset of chronic diseases by means of medical advances.[54] In his public health view Fries (1990) theories of *compression of morbidity* maintains that successful ageing involves the optimization of year of life lived without physical, psychological, and social burdens or "*morbidities*", which are common in old age.[52]

A surge of emphasis has been put in recent years on the association and importance of lifestyle factors and physical and mental health that have been heavily promoted. Katz (1983) developed a measure for this purpose called a*ctivities of daily living* (ADL) to predict the number of years left of living with good functionality, which now are a common measure in aging related studies assessing well-being and health.[53] An example is Avlund et al. (2000) who found that maintaining strenuous activity around the home predicts the level of independence, as well as cognitive decline later on.[55] The level of physical activity can also been a reflection of fatigue or tiredness. Avlund (2001) found that tiredness in daily activities is a predictor of the risk of being hospitalized and in need of home-based care after five years.[56]

In the social sciences, the definition of successful aging is more focused on the collective outcomes rather than individual. Thus, aging is viewed as the dynamic processes between individuals and society. Featherman (1990), a social scientist expressed in his theories of development that successful aging constitutes the optimal exchange between the

growing person and the growing society over the lifespan, more in old age.[57] In the sociological perspective, the focus lies in how to create a successful aging society and how both society and the individual can benefit from this process.[57]

An example is to use the collected wisdom of older generation in a productive manner, which in turn serves to elevate their self-esteem and to feel valued in society. The risk is that when older people are seen as a burden to society of which younger generations must carry, it creates stigmatisation of aging.[57] Featherman (1990) argues that the definition of successful aging may differ across cultures and time, however it is the process itself of transaction between the individual and society which creates this definition: *"In the transactional view, successful aging is defined at the point of intersection between the developing person and the changing societal context"*.[57] In practice the measures of importance in this perspective are:

a) An individual's adaptive ability to be pro-active rather than re-active, when seeking to be part of stimulation, or experiences.

b) The society's adaptive problem-solving abilities, such as offering life-span opportunities for growth and productivity.

A great deal of effort in aging research has been put on which adaptive capabilities and strategies are important for the aging individual to possess in the face of loss and bereavement, while much less has been geared towards which adaptive skills a society needs to deal with such needs.[57]

In psychology, aging successfully is evaluated by an individual's ability to cope with life circumstances and accounting for individual differences in such abilities. In this perspective, successful aging is associated with having values to strive after and for this values to be adapted to changing social circumstances.[58] Fisher (1995) interviewed old people about what they regard to be important factors in successful aging and life satisfaction and found that self-esteem, meaning in life, a sense of future and social interaction where among the most important.[58] Other studies have investigated what older people deem to characterise successful aging.[58-60] The most common themes in these studies were:

- *Self-acceptance and perceived well-being*
- *Capacity for self-management / autonomy*

- *Interaction with others / social emotional ties*
- *Sense of purpose / outlook on life*
- *Engagement with the outside world / personal growth*

A popular model of development in psychology is the Selection, Optimisation and Compensation model (SOC) conceptualised by gerontologists Baltes & Baltes (1990).[61] When applied to aging, the older individual has to cope with decline in physical ability, sickness and social bereavement and challenges choose the goals (selection) they wish to achieve and to find different ways to reach these goals in the face of challenge (compensation). The challenges and ways of adapting may differ across individuals and their life circumstances. In this model "optimisation" refers to the opportunity for personal development which lies between the stages of selection and compensation.[61] In other words, the SOC model defines successful aging as the capability to achieve goals despite having challenges associated with the aging process and life circumstances.

In occupational science, the importance of occupational activity is seen as essential to humans at all stages of life, including old age. Therefore, this field argues that successful aging involves staying occupied and productive as long as possible. Earlier studies[62, 63] investigating the importance of occupation for older people found that participants in both studies expressed a wish to stay occupied and that this influences their well-being. Jackson (1996) argued that this is due to the fact that staying occupied gives a sense of control over your own life and that this feeling is what mediates the sense of well-being.[62] One of the other important themes in both of these studies was that occupational activity serves to maintain social relations and stimulation. Among younger old (55-66), Hao (2008) found that both full-time employment and volunteering had positive effects in psychological well-being.[64] Those doing both activities of both had a slower rate of decline in mental health mental health compared to those with only one such activity. Matz-costa et al. (2014) reported that individuals involved in work or volunteer activities who were high in engagement reported greater psychological well-being than those who were not involved, whereas those who were low or medium in engagement reported lower well-being than those not involved.[65] Hasselkus (2002) argues that the importance of daily occupation lies in that it is a way to express your *identity*, which remains important in old age as well.[66] More so after retirement, staying occupied and active may serve to provide a sense of

continuity of identity and personal growth. Similar positive results of productive activity have been found in relation to functional health.[67]

3.2 *Criticism against the successful aging theory*

There has been criticism directed towards the successful aging concept, among which the most prominent are two sociologists from Norway and Sweden Daatland (2000)[68], Torres (1999)[69] and a Danish geronto-psychologist Fromholdt (1998).[70] In their opinion, successful ageing fosters a view of aging as competition where it is up to the individual to strive for a successful old age. Specifically, Torres (1999) asserts that successful ageing often implies postponing the ageing process, staying highly active and productive, making plans for the future, and living independently.[69] In addition, successful ageing is often associated with being younger than your biological age.

Cross-cultural gerontologists prefer the terms aging with dignity or style rather than referring to success. In this approach, it has been noted that older adults need to feel that they live in a society that values the culture and values of their generation.[69] If not, the risk is that they feel marginalised and unable to connect with the present state of society. One study taking place in the USA found stark differences among white and Hispanic older adults in how they conceptualise "possible self" in the future.[71] White older adults were more concerned with independence and fear of loss in physical functioning, while Hispanic older people were more concerned with maintaining good family bonds and spending time with people they love.[71] Thus, the successful aging framework fails to take into account the minority's perspective of what it means for them to have a good life in old age.

In their earlier studies, Fisher (1995) and Torres (1999) emphasised the importance to understand what circumstances of life are preferable and considered ideal in their given study population, which should drive the research question and approach.[58,68] One such early study - and one of the largest scale cross-cultural collaborations is the project AGE led by Keith et al. (1994).[72] It involved seven anthropologists working in seven different countries for more than a decade, collecting data with the guiding question*: "where is it best to grow old?*". The most impressive finding was the extent to which successful ageing was contingent upon cultural context. One example is that the North American perception of successful ageing was reliant on being self-sufficient and being able to live

independently. In contrast, people in Hong Kong did not value self-sufficiency in old age, instead their families' ability to care for their needs was seen as aging successfully.[72]

3.3 *The harmonious aging theory*

As is evident, there is no lack of aging theories spanning many disciplines, such as the pathological theory, activity theory, disengagement theory, continuity theory, developmental theory, masquerade theory, and the SOC theory as mentioned previously.[73] The trouble with the multitude of theories is that they give different explanations and interpretations to the same phenomena. Achenbaum (2009) argues that due to these differences it is imperative for a shift to occur toward a more dialectic approach.[74]

As has been discussed, successful aging is the main conceptual framework in aging related studies, which has been widely applied cross-culturally regardless of its Western roots. Inspired by the words "the student of aging needs to be not only a psychologist and a sociologist but also a philosopher"[75], Liang & Luo (2012) have put forward a more inclusive discourse drawing from the authors' philosophy and cross-cultural backgrounds.[9] Liang & Luo (2012) name this new framework harmonious aging, which aims to encourage intellectual discourse on what it means to age and to include cultural differences in the context of global aging.[9]

The overall goal of the authors' is for this shift in discourse to highlight the problems associated with the successful aging concept and to move away from them. The authors point out four main problems with successful aging.[9] The first one is the ageist nature by not acknowledging the natural inevitable physiological effects of aging and promoting a "forever young" ideal. This dissonance could potentially cause feelings of inadequacy and negative self-image that in turn disturbs the harmony between mind and body (Luo & Liang, 2012). The second problem is that successful aging is driven by quantifiable activity and the so called "busy ethic"[76], not taking into account the subjective quality of such activity, which is crucial to life satisfaction. The third point the authors make is that there are major capitalist and consumerist drives in the successful aging concept which have not received enough attention and its findings are often in promoting certain "lifestyles" and anti-aging remedies.[77,78] This may lead to that older people feel that aging is something

optional which can be postponed or even cured. Fourth, and as mentioned previously, the successful aging concept is derived from Western culture, with the United States in the forefront and thus its recommendations are not suitable for all cultures. Furthermore, success implies accomplishment which is not something all people desire, their focus might lie elsewhere, especially in old age. Lastly success, by default, categorizes those who do not achieve it as failures, discriminating between those who have aged successfully and those who have not.[79]

On the basis on this criticism, Luo & Liang (2012) set out to move away from the concept of successful aging to a more inclusive construct that takes into account the multileveled phenomena of aging based on the concept of harmony.[9] This concept comes from Eastern philosophy, and describes the balance between two opposites, rather than homogeneity. The idea of harmony can be found in all schools of philosophy in China.[80] The dynamic balance of harmony concerns all areas of life including that of the mind, body and outside social relationships. It encompasses both stability and chance across time and space, governed by Harmony and change are driven by the two opposite yet interdependent forces — Yin and Yang (figue 2).

In East Asian traditions of Confucianism, Taoism and Buddhism, the approach to all things in life is always from a holistic perspective.[27] Harmony as a subset of these traditions, naturally follows in the holistic view which stresses the importance of maintaining the wholeness of the world as well as the uniqueness of its entities. The idea is that using harmony as a basis for framework of aging, it will take into account both as the authors put it "structural forces and individual agency".[9] In other words, it would allow for the individual's own meaning of growing old taken within the context of his/her geographical location, social network, culture and time.

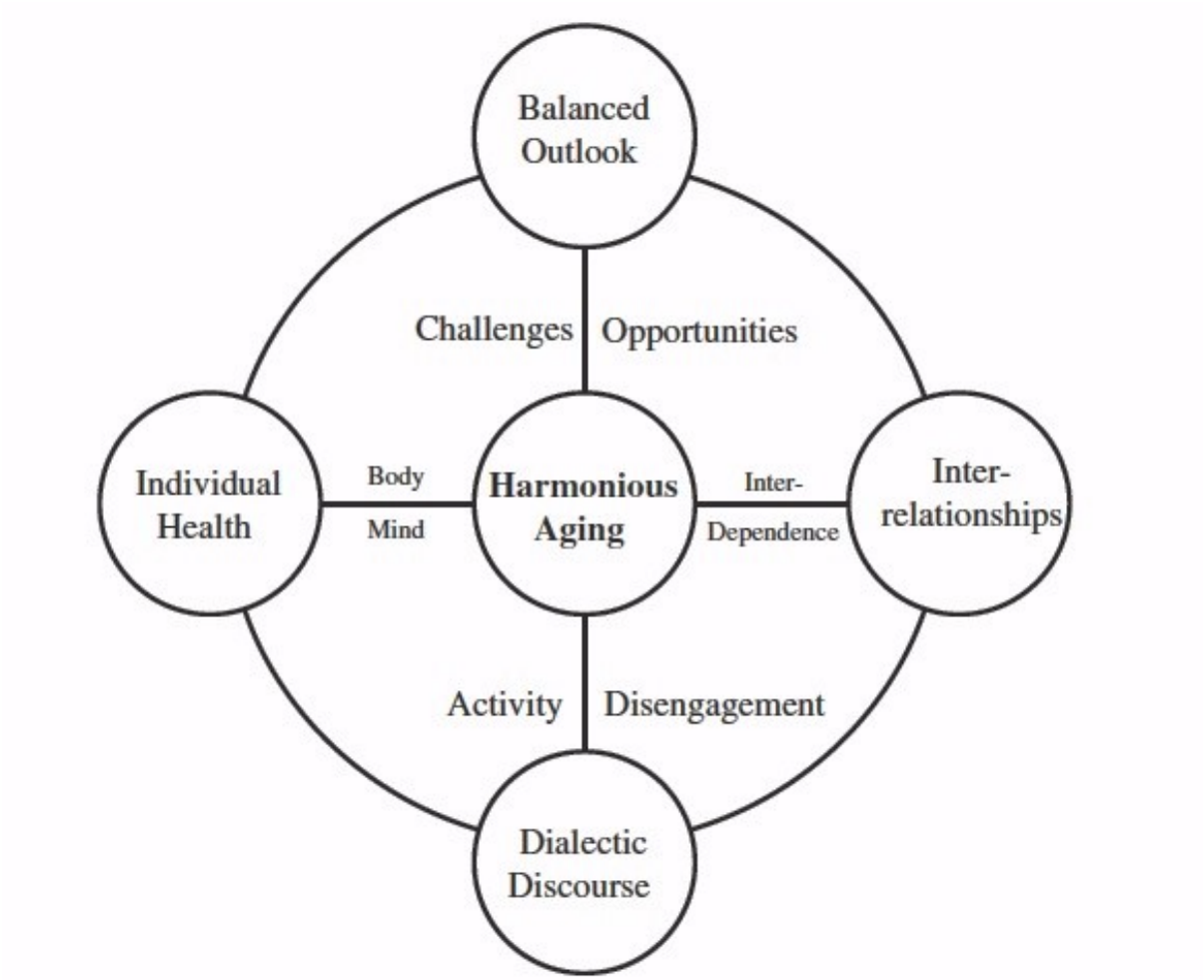


Figure 2. *Conceptual model of harmonious aging, taken from Liang & Luo (2012). This new framework focuses on balance rather that uniformity with the aims to acknowledge the challenges of aging rather than denying or rejecting them, as well as the positive developments of aging. The focus is to find an equilibrium between body and mind, and as well as emphasizing the interdependent nature of human beings.*

The way a person can age harmoniously is by having a balance between their individual situation and the outside world, the changes they face and continuity, shortcomings and wealth and so on. This balance is based on differences and therefore lies on an individual spectrum, which is a less normative concept than the Western concept of successful aging, implying certain standard, which have to be met. An example of this comes from a birth cohort born in the 1950's in China, to whom harmonious aging meant to have found a balance between own identity, generational identity, leisure time and the needs of the family as well as facing challenges with their minds at peace.[81]

3.4 *Harmony: maintaining the mind-body connection*

One of the goals of harmonious aging is to bridge the gap in between the body and mind that characterizes successful aging. In Taoism, the harmony between mind and body is seen as crucial, which is in contrast to the capitalist based notion of fighting the sings of aging. According to Taoism, "the true laws of nature" (fu lao) should be an integral process in aging, where the physical changes of the body should be accepted as part of life.[9] Successful aging pressures could give rise to self-denial and resentment of growing old, while Taoist tradition emphasizes the importance of self-acceptance by maintaining the strong bond between mind and body.

3.5 *Harmony: the importance of relationships and intergenerational awareness*

As mentioned earlier, East Asian elderly people conceptualize harmony in life through their social relationships, in contrast to Western cultures, which focuses more on the ability to stay independent. In other words, East Asians are more concerned with their role in the collective and interdependence. "In East Asia happiness is likely to be constructed as a state that is contingent on social harmony and, thus, on a balance among different selves in a relationship".[27]

The emphasis on independence in the Western cultures may contribute to a generational gap and ageist attitudes. Biggs (2008) attempts to bridges this gap through his framework of intergenerational harmony.[82] Biggs' (2008) concept of "generational intelligence," describes the "the degree to which one becomes conscious of self as part of a generation, a relative ability to put one's self in the position of other generations and an ability to act with awareness of one's generational circumstances".[82] In aging, one faces identity problems and shifts in age related social status, however Briggs (2008) argues that the differences between older and younger generations should be acknowledged but should not stand in the way of social inclusion "Where there is a high degree of harmony between the external, social worlds that impinge on the surfaces of identity, and the internal, depth elements of the personal.[83]

Recently, the intergenerational support has regained importance in the U.S. as it has

been shown that it has implications in well-being in old age. This makes a lot of sense as most frail older adults in the U.S. are in fact cared for by their children.[84] In addition, there has been an increased initiative to set up more Home- and Community-Based Services (HCBS) for older adults, which shows that generational interdependence has regained importance in the West.[85] These developments indicate the appropriateness in moving from a individualistic aging framework of successful aging toward the more all-encompassing theoretical concept of harmonious aging.

3.6 *Harmony: the balance between opportunities and hardships*

North American life-satisfaction centers around personal success and achievement, while as stated before in East Asian tradition, the social network and balance between good and bad life circumstances are more important for life satisfaction.[27] Being in tune with the natural progression of aging could allow for a more harmonious approach to the challenges one might face in old age. One recent study in urban China showed that maintaining a balanced state of mind in the face of challenges can contribute to more resilience toward life after retirement and more life satisfaction.[81] There have also been several studies in the United States pointing to a similar process of finding a balance between challenges in society and personal strengths. An example is Magilvy et al. (2000) who showed that rural Hispanic older adults are able get around language, culture and economic obstacles in getting medical care through resources and support from their relatives and community, as well as using their spirituality as a way to maintain good health.[86] An older study conducted on the African American population by Black (1999) pointed out that older African American women deal with poverty by maintaining a highly spiritual life and a strong relationship with God.[87]

The meaning of growing old is partly based on social and cultural norms. In Western societies, aging has come to have a negative connotation where older people are seen as frail and dependent on others. The aim of harmonious aging is to take inspiration from cultures in which aging is a balance of both change (e.g. health challenges) and continuity (e.g. deepened spirituality), where the individual can create their own interpretation of what life means to them in any given time and space. Moreover, harmonious aging takes into account that the experience of growing old comes with gender differences, which again are

shaped by social norms. Women for instance, usually have more extended social networks as compared to men, which may give them a greater support system. However social responsibilities and maintaining relationships may also give rise to social pressure and expectations.[88]

By taking the harmonious approach to research in aging, it is more possible to take into account both the positive and the negative and how the individual balances this on a spectrum of experiences. This allows for a more well-rounded perception, while at the same time acknowledging individual differences that arises from culture, ethnicity, socio-economic status, gender, and age.

4. Aim and Hypothesis

4.1 *Aim*

The aim of this study is to examine the components of the *successful aging* and *harmonious aging* theories and find out which one better reflects how older people evaluate their life in old age. Specifically, whether harmonious concepts are reflected in components, which influence life-satisfaction in old age in comparison to concepts in successful aging. The components that are seen as important in harmonious aging are social bonds and social support, as well as one's own subjective view of health challenges as well as having a peaceful mindset. In contrast, in successful aging, having a good health, maintaining independence and staying active is what is seen as the most important towards life satisfaction in old age. Thus, the aim is to see which model better fit the experience of growing old in Sweden.

4.2 *Hypothesis*

The hypothesis for this study is that harmonious aging components (social network, subjective wellbeing, and peaceful mindset) are associated with higher odds of greater life satisfaction (LSI-A score) in old age than successful aging components (number of diseases, independence and staying active).

5. METHODS

5.1 *Design*

This is a cross-sectional study, and the data were gathered by an established database from the Swedish National study on Aging and Care (SNAC)-Kungsholmen.

5.2 *Study population.*

The SNAC-K population Study is a part of the Swedish National Study of Aging and Care that targets the 60 and older years old population.[89] SNAC-K is an ongoing longitudinal population-based study aimed to improve health and care of elderly person. The SNAC-K population included a sample of 3363 persons who were aged ≥60 years, and were living at home or in institutions in central Stockholm. All the subjects underwent a clinical examination at baseline (between May 2001 and June 2004). The sample was randomly selected by stratifying for age group and time interval (in years) of future follow-up assessment. The younger cohort (aged 60-78) is examined every six years while the older cohort (aged ≥78) is seen every three years. Follow-ups are scheduled every 3 to 6 years, depending upon subjects' age group. We excluded participants with dementia (*n*= 325), depression (*n*=253), and missing MMSE score or a score below 24, which indicates cognitive impairment (*n*= 69), as well as those with missing or incomplete LSI-A score (*n*=744), leaving 1975 for the analysis.

5.3 *Data collection*

Baseline data for the SNAC-K study was collected through interviews, clinical examinations and laboratory testing. The staff included nurses, psychologists and physicians who were all trained for data collection. In addition to socio-demographics, the core protocols of data collection included an extensive assessment of lifespan medical, social and psychological aspects. Data on medical history and current medical conditions are derived from the clinical examinations and from the Swedish inpatient register system.

Demographic factors

Information on age, sex, education and occupation were recorded during the nurse interview. Age was analyzed as a categorical variable with four categories: 60-66 years, 72-78 years, 81-87 years, and 90+ years. Social economic status is evaluated using two different variables: education (years of schooling) and occupation. For education, three educational levels were used such as elementary, high school and university level of education. Occupation were categorized into three groups (according to classifications determined by Statistics, Sweden): 1) blue collar workers: no trained skill, goods producing; no trained skill, service-producing; trained skill, goods-producing; trained skill, service-producing; 2) white collar workers: junior office worker, less than 2 years education after elementary school; junior office worker, ≥ 2 - < 3 years after elementary school; office worker, ≥ 3 - < 6 years after elementary school; senior office worker, ≥ 6 years after elementary school; and 3) entrepreneurs: entrepreneurs; academic professions; and farm owners.

Assessment of life satisfaction

The Life Satisfaction Index A (LSI-A) was designed to measure five component dimensions of life satisfaction; zest, resolution and fortitude, congruence between desired and achieved goals, positive self-concept, and mood tone. This scale is the most commonly used scale to measure life satisfaction in older adults and was originally constructed by Neugarten, Havighurst, and Tobin (1961), developed with the purpose to portray life satisfaction in old age. The LSI-A, has of 20 items, of which 12 are positive and 8 negative.[45] The LSI-A is based on a specific theoretical characterization of life satisfaction, and several studies have investigated its factor structure. For instance, Liang (1984) found three first order factors (Mood Tone, Zest, and Congruence between hopes and reality) and one second-order factor signifying subjective well-being in general.[90] Shmotkin (1991) found three factors in the LSI-A of Zest, Mood Tone, and Congruence.[91] Taking a time perspective, it assumes that congruence deals with judgement directed the past; mood tone and zest contain elements of present life and future orientation.

Assessment of Harmony

Feeling harmonious was assessed through the question "How often in the past 4 weeks have you felt calm and harmonious?". The participants could answer never/seldom, some of the time, frequent.

Definition of cognitive impairment

Cognitive functioning was measured with the mini-mental State Examination (MMSE), which is a test of global cognitive functioning with scores ranged from 0-30, and 30 represents the best performance.[92] Sensitivity and specificity analysis reported MMSE to have excellent psychometric properties. Dementia was diagnosed based on the Diagnostic and Statistical Manual Mental Disorders, Fourth edition (DSM-IV) criteria.

Assessment of physical function and performance

Participant physical function was measured by their Activity of Daily Living (ADL) through self-administered questionnaires. The ADL function included dressing, hygiene and bathing/showering. The disability was coded by number of each item the participants were unable to perform. For current analysis, ADL categories were: 0= Independent (no disability), 1= Dependent (one or more disabilities).

Assessment of multimorbidity

A disease was first classified as chronic if one or more of the following characteristics are present: 1. it is permanent, 2. it is caused by non-reversible pathological alteration, 3. it requires rehabilitation, or 4. it requires a long period of care. Each subject was classified as affected by a chronic disorder when diagnosed by the examining physician, or detected in the computerized Stockholm Inpatient Register. Diagnoses are made by the SNAC-K physicians based on the clinical examination, medical history, laboratory data, and current drug use. The names and dosages of the drugs are registered according to the Anatomical Therapeutic Chemical classification system. ICD-10 for classifying diseases, and standard criteria, such as DSM-IV criteria for dementia, are used. Multimorbidity was defined as any co-occurrence of two or more diseases in the same individual, whether coincidental or not (Van den Akker 1996).[93]

Assessment of physical exercise

Was obtained through self-administered questionnaire based on frequency and intensity of physical exercise after the nurse interview. The intensity of physical exercise was divided into two levels; light exercises (street or park walking, short bike rides, light aerobic exercises or gym classes and golf) and moderate to intense exercises (brisk walking, jogging, heavy gardening, long bike rides, intense aerobic or gym classes, skating, skiing, swimming or similar activities). The frequency included: everyday, several times a week, more than or less than two or three times a month. For this study the participant's physical exercise were categorized in to three categories (i) inadequate= inactive/never, (ii) participating in moderate physical exercise several times per week; (iii) participating in more vigorous activities several times per week.

Assessment of physical and social activity

Data on leisure activities was collected from participants during face to face interviews carried out by trained nurses during the baseline phase of the study. Participants were inquired about activities and/or organisations which they regularly engage in. They were asked about how many activities/organisations they engaged in and their nature and frequency of participation. The activities were then categorised as mainly physical or mainly social following the classification used in previous studies. The frequency of participation in these activities were reported as daily, weekly, monthly, or annually. Using this information, frequency was further categorised as no participation, daily to weekly participation, and monthly participation. Examples of activities or participation in organisation considered mainly physical included swimming, walking, and gymnastics. Examples of social activities were attending the theatre, concerts, art exhibitions, traveling, playing games, or participating in social groups or organisations.

Assessment of social network

Through interviews with trained nurses, the participants were asked about their civil status, living arrangements, family relations and social relations. The frequency of contact with social relations and family members were recorded as well as the participant's satisfaction with these relations. The recorded answers were categorised into three social network

categories; rich, moderate, and limited or poor. Those who had a rich social network were those who were married, did not live alone, had children that were in daily or weekly contact with them and had a satisfactory relationship with their children, and had friends or relatives with whom they had weekly satisfactory contact with. In the moderate social network category were those who had two of the three criteria. The category with a limited or poor social network included those who had any one or none of the three categories.

Assessment of subjective health

Subjective health was measured through the question "How do you consider your health to be?" The participants could answer poor; good or very good.

5.4 *Statistical analysis*

The characteristics of participants with no, partial and complete tooth loss were compared using *chi*-square tests for categorical variables, one-way ANOVA for continuous variables. Multinomial logistic regression analyses were conducted to estimate the odds ratio (OR) and 95% confidence interval (CI) of LSI-A score in relation to demographic factors, subjective health, number of chronic diseases social network, social activity, physical exercise, and physical activity, after adjustment for potential confounders. Age, sex, education, occupation, and civil status were considered as potential confounders when applicable. STATA 12 software was used for all analyses.

5.5 *Ethical considerations*

Data collection of each study was approved by the Ethical Committee at Karolinska Institutet or the Regional Ethical Review Committee (Dnrs: KI 01-114; 04-929/3; Ö 26-2007; 2010/447-31/2; 2009/595-32 (register data) for the SNAC-K.

6. Results

6.1 *Population characteristics*

For analysis purposes, the LSI-A score was split into tertiles to allow for comparison between groups of low, moderate and high LSI-A score. Table 1 shows the population characteristics by LSI-A tertiles. The percentage of people in T1 (LSI-A (< 7) was 11.8%, 47.9% in T2 (LSI-A ≥ 7 <14) and 40.4% in T3 (LSI-A >14). Individuals in T3 (highest LSI-A score) are younger, more likely to be male, have higher education, more likely to be white collar workers and to be married (figure 2 and 3). In addition, higher LSI-A score is significantly associated with moderate physical exercise, engagement in activities with physical components, less diseases, better subjective health, higher social network and social activity, and more frequent feelings of harmony in the past 4 weeks (table 1). There was no significant difference in LSI-A score by sex (table 1 and figure 2). Due to the low number of participants with physical disability, it was not included in any further analysis.

6.2 *The effect of demographic characteristics on life satisfaction.*

To formally test the effect of demographic characteristics (age, sex, education, civil status and occupation) on LSI-A score, multinomial logistic regression analyses were conducted to estimate the odds ratio (OR) and 95% confidence interval (CI) of LSI-A score in different demographic groups. Table 2 shows that there was significantly lower odds of having high LSI-A with increasing age category. Sex and type of occupation were not significantly associated with odds of LSI. Higher education was significantly associated with higher LSI-A score, compared to elementary education. Being divorced, a widower or single was associated with significantly lower odds of high LSI-A.

6.3 *The effect of multimorbidity and subjective health on life satisfaction.*

Table 3 shows the effect (OR and 95 % CI) of multimorbidity (number of chronic diseases) and subjective health on the odds of LSI-A score. There was no significant effect of multimorbidity on the LSI score. However, for subjective health, having good or very good subjective health was associated with higher odds of higher LSI-A score, in comparison to poor subjective health (table 3).

Table 1. Characteristics of the study population by LSI-A in tertiles (*n*= 1,975)

	LSI score tertiles			
Characteristics	T1 *n*= 233, (11.80%)	T2 *n*= 945, (47.85%)	T3 *n*=797, (40.35%)	*p* value
Age groups				
60-70	76 (32.62)	370 (39.15)	488 (61.23)	
70-80	68 (29.18)	326 (34.50)	232 (29.11)	<0.001
80-90	61 (26.18)	178 (18.60)	67 (8.41)	
90+	28 (12.02)	71 (7.51)	10 (1.25)	
Gender				
Men	78 (33.48)	360 (38.10)	349 (43.79)	<0.050
Women	155 (66.52)	585 (61.90)	448 (56.21)	
Education				
Elementary	56 (24.03)	136 (14.39)	57 (7.15)	
High school	118 (50.64)	493 (52.17)	361 (45.29)	<0.001
University	59 (25.32)	316 (33.44)	379 (47.5)	
Occupation				
Blue collar	66 (28.33)	197 (20.89)	106 (13.30)	
White collar	153 (65.67)	654 (69.35)	590 (74.03)	<0.001
Entrepreneurs	14 (6.01)	92 (9.76)	101 (12.67)	
Civil status				
Married	59 (25.32)	419 (44.34)	519 (65.12)	
Widow/er	69 (29.61)	233 (24.66)	96 (12.05)	<0.001
Unmarried	62 (26.61)	144 (15.24)	63 (7.90)	

Divorced	39 (16.74)	126 (13.33)	95 (11.92)	
Partner, living separately	4 (1.72)	22 (2.33)	23 (2.89)	
Physical exercise				
Inactive	82 (35.19)	222 (23.49)	121 (15.18)	
Moderate	127 (54.51)	517 (54.71)	417 (52.32)	<0.001
Vigorous	24 (10.30)	206 (21.80)	259 (32.50)	
Physical activity				
Never/Seldom	63 (29.17)	179 (19.67)	97 (12.52)	<0.001
Sometimes	128 (59.26)	527 (57.91)	422 (54.45)	
Frequent	25 (11.57)	204 (22.42)	256 (33.03)	
Physical function				
Dependent	10 (4.29)	14 (1.48)	5 (0.63)	<0.010
Independent	223 (95.71)	931 (98.52)	792 (99.37)	
Multimorbidity				
No chronic disease	28 (12.02)	227 (32.50)	259 (26.03)	
One chronic disease	56 (24.03)	286 (33.63)	268 (30.89)	<0.001
Two or more chronic diseases	149 (63.95)	432 (45.71)	270 (43.09)	
Subjective health				
Poor	151 (66.23)	290 (30.95)	74 (9.31)	
Good	60 (26.33)	337 (35.73)	229 (28.81)	<0.001
Very good	17 (7.46)	310 (33.08)	492 (61.89)	
Social network				
Low	151 (66.81)	337 (34.85)	130 (16.35)	
Moderate	56 (24.78)	328 (34.89)	285 (35.85)	<0.001

Intense	19 (8.41)	275 (29.26)	380 (47.80)	
Social activity				
Never/Seldom	154 (73.68)	568 (62.90)	415(53.93)	
Sometimes	46 (22.01)	204 (22.59)	207 (26.81)	<0.001
Frequent	9 (4.31)	131 (14.51)	149 (19.30)	
Feeling harmonious				
Past 4 weeks				
Never/Seldom	58 (25.11)	56 (5.98)	10 (1.26)	
Sometimes	129 (55.84)	394 (42.09)	148 (18.64)	<0.001
Frequent	44 (19.05)	486 (51.92)	636 (80.10)	

Figure 2. LSI-A score distribution by sex and age group.

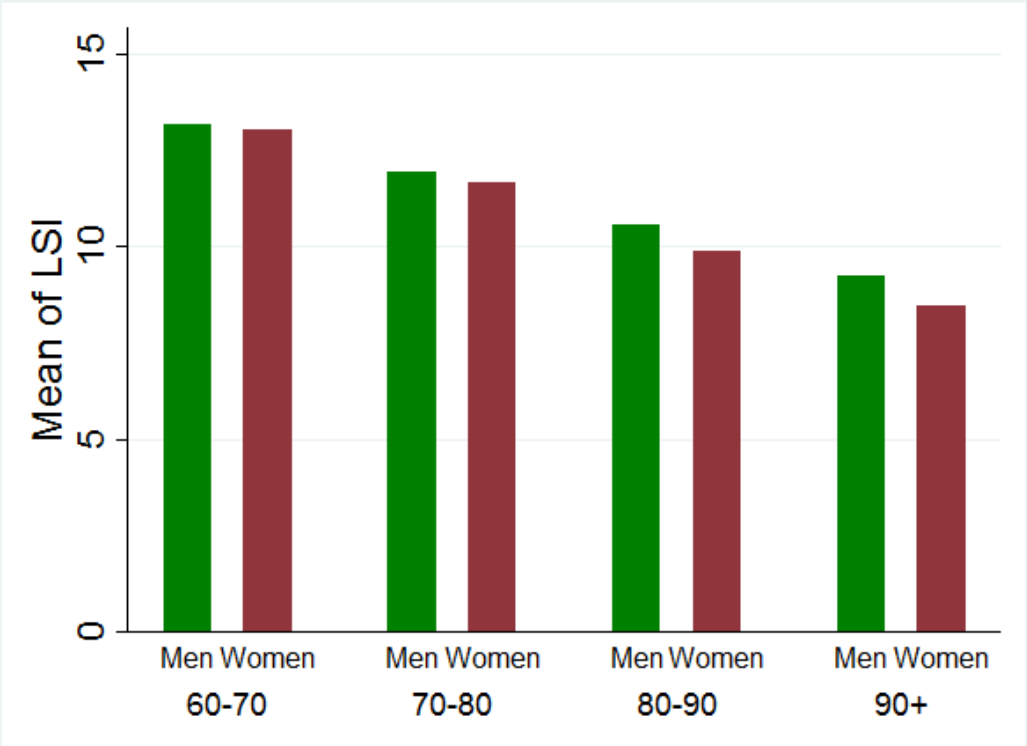


Figure 3. LSI-A score distribution by civil status and occupation. B= Blue collar worker, W= White collar worker and E= Entrepreneur.

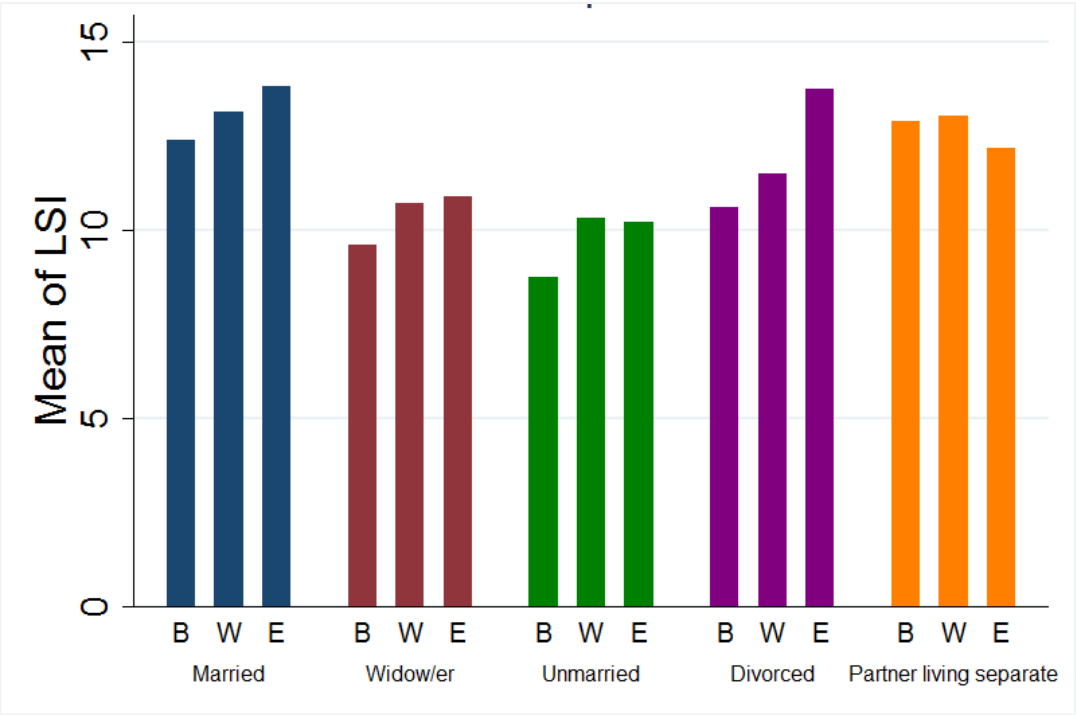


Table 2. Odds ratio of T2 (LSI-A ≥ 7 <14) and T3 (LSI-A ≥ 14) by demographic characteristics.

Ref. LSI-A T1 n=233	**LSI-A T2 *n*= 945**		**LSI-A T3 *n*= 797**	
Age category	Odds ratio (95% CI)	*p value*	Odds ratio (95% CI)	*p value*
60-70	Reference		Reference	
70-80	1.15 (0.76 to 1.74)	0.501	0.72 (0.47 to 1.10)	0.131
80-90	0.75 (0.47 to 1.20)	0.236	0.24 (0.14 to 1.41)	0.000
90+	0.61 (0.31 to 1.18)	0.142	0.08 (0.03 to 0.21)	0.000
Sex				
Male	Reference		Reference	
Female	1.11 (0.77 to 1.58)	0.578	1.14 (0.80 to 1.66)	0.483
Education				
Elementary	Reference		Reference	Reference
High school	1.59 (1.02 to 2.47)	0.042	2.11 (1.26 to 3.54)	0.005
University	1.84 (1.08 to 3.12)	0.024	3.10 (1.72 to 5.57)	0.000
Occupation				
Blue collar	Reference		Reference	Reference
White collar	1.26 (0.84 to 1.88)	0.264	1.37 (0.88 to 2.13)	0.163
Entrepreneurs	1.67 (0.81 to 3.45)	0.164	2.08 (0.98 to 4.40)	0.057
Civil status				
Married	Reference		Reference	Reference
Widow/er	0.56 (0.34 to 0.90)	0.016	0.35 (0.21 to 0.58)	0.000
Unmarried	0.34 (0.21 to 0.54)	0.000	0.12 (0.07 to 0.20)	0.000
Divorced	0.42 (0.25 to 0.69)	0.001	0.26 (0.20 to 0.44)	0.000

Partner living separately	1.09 (0.24 to 4.90)	0.913	1.12 (0.25 to 4.91)	0.893

Table 3. Odds ratio of T2 (LSI-A ≥ 7 <14) and T3 (LSI-A ≥ 14), reference group T1 (LSI-A<7) by number of chronic diseases and subjective health.

Ref. LSI T1 n=233	**LSI-A T2 *n*= 945**		**LSI-A T3 *n*= 797**	
Number of chronic diseases	Odds ratio (95% CI)*	*p* value	Odds ratio (95% CI)*	*p value*
None	1.00 (ref)		1.00 (ref)	
One	0.01 (-0.52 to 0.53)	0.982	0.19 (-0.35 to 0.73)	0.803
Two or more	-0.25 (-0.74 to 0.24)	0.367	0.02 (-0.49 to 0.54)	0.862
Subjective health				
Poor	1.00 (ref)		1.00 (ref)	
Good	0.96 (0.57 to 1.35)	0.000	1.81 (1.35 to 2.78)	0.000
Very good	1.98 (1.39 to 2.56)	0.000	3.57 (2.95 to 4.20)	0.000

*Adjusted for age, sex and education

6.4 *The effect of physical activity and physical exercise on life satisfaction.*

Table 4 shows the odds ratio and 95% CI of LSI-A by levels of physical activity and exercise. Neither physical activity nor exercise was significantly associated with LSI-A score.

Table 4. Odds ratio of T2 (LSI-A ≥ 7 <14) and T3 (LSI-A ≥ 14), reference group T1 (LSI-A<7) by physical activity and physical exercise.

Ref. LSI-A T1 n=233	**LSI-A T2 n= 945**		**LSI-A T3 n= 797**	
	Odds ratio (95% CI)*	*p* value	Odds ratio (95% CI)*	*p value*
Physical activity				
Never	Reference		Reference	
Sometimes	0.32 (-0.38 to 1.01)	0.629	0.26 (-0.51 to 1.03)	0.742
Frequent	-0.25 (-2.15 to 1.65)	0.363	-0.29 (-2.26 to 1.66)	0.321
Physical exercise				
Inactive	Reference		Reference	
Moderate	-0.00 (-0.68 to 0.67)	0.640	0.34 (-0.40 to 1.07)	0.722
Intense	1.21 (-0.70 to 3.13)	0.212	1.78 (-0.19 to 3.75)	0.078

*Adjusted for age, sex and education

6.5 *The effect of social network and social activity on life satisfaction.*

Table 5 shows the odds ratio and 95% CI of LSI-A by social network and social activity level. Both moderate and intense social networks were significantly associated with having Middle range (T2, LSI-A ≥ 7 <14) and upper range LSI-A (T3, LSI-A ≥ 14), compared to those with a low social network. Frequent social activity was significantly associated with having upper range LSI-A (T3) (table 5).

Table 5. Odds ratio of T2 (LSI-A ≥ 7 <14) and T3 (LSI-A ≥ 14), reference group T1 (LSI-A<7) by social network and social activity.

Ref. LSI-A T1 n=233	**LSI-A T2 n= 945**		**LSI-A T3 n= 797**	
Social Network	Odds ratio (95% CI)*	*p* value	Odds ratio (95% CI)*	*p value*
Low	Reference		Reference	
Moderate	0.98 (0.63 to 1.35)	0.000	1.72 (1.32 to 2.11)	0.000
Intense	1.90 (1.36 to 2.46)	0.000	2.98 (2.41 to 3.55)	0.000
Social activity				
Never/seldom	Reference		Reference	
Sometimes	0.05 (-0.33 to 0.44)	0.786	0.87 (0.53 to 1.41)	0.569
Frequent	1.22 (0.51 to 1.93)	0.001	1.50 (0.77 to 2.22)	0.001

*Adjusted for age, sex and education

6.6 *The effect of feeling harmonious the past four weeks on life satisfaction.*

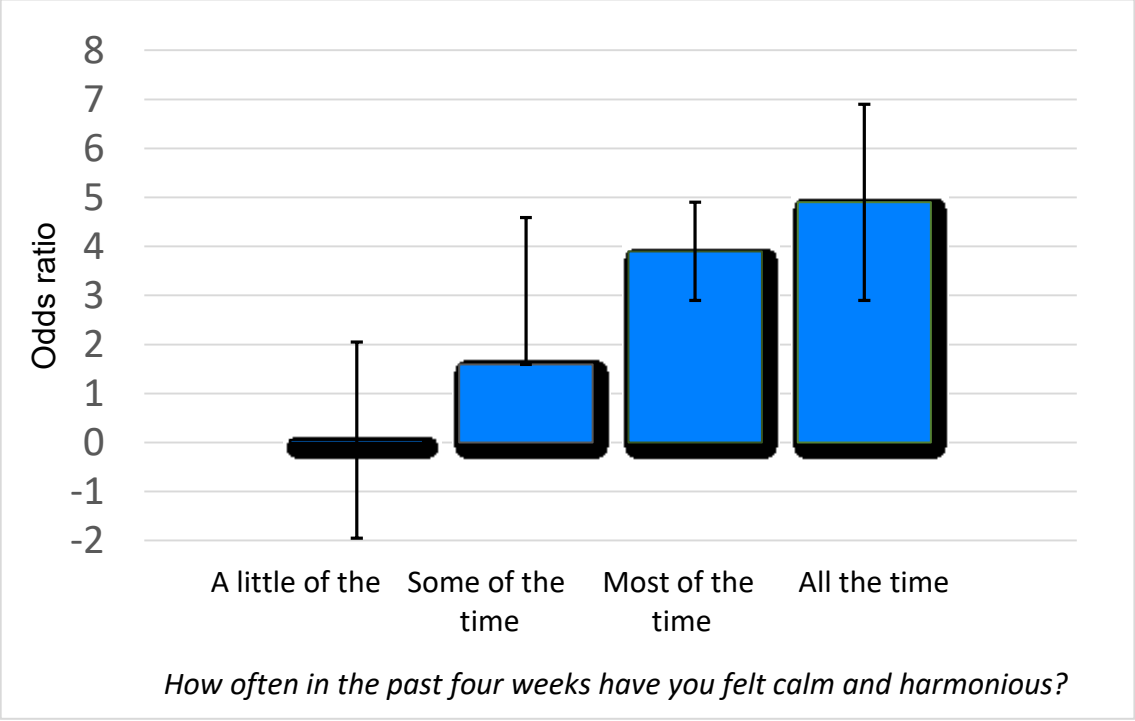
Table 6 shows the odds ratio and 95% CI of LSI-A by how often participants had felt harmonious in the past four weeks. The results show that feeling harmonious some of the time or most of the time compared to none/little of the time, was associated with both the middle range (T2) and upper ranger (T3) LSI-A (figure 4).

Table 6. Odds ratio of T2 (LSI-A ≥ 7 <14) and T3 (LSI-A ≥ 14), reference group T1 (LSI-A<7) by feeling harmonious in the past four weeks.

Ref. LSI-A T1 n=233	**LSI-A T2 n= 945**		**LSI-A T3 n= 797**	
Harmony	Odds ratio (95% CI)*	*p* value	Odds ratio (95% CI)*	*p value*
Never	Reference		Reference	
Some of the time	1.12 (0.70 to 1.55)	0.000	1.81 (1.08 to 2.54)	0.000
Most of the time	2.41 (1.96 to 2.90)	0.000	4.36 (3.60 to 5.12)	0.000

*Adjusted for age, sex and education

Figure 4. Odds ratio of high vs. low LSI-A by feelings of harmony during the past four weeks.



6.7 *Additional analysis: the effect of feeling harmonious on LSI-A individual items.*

To further investigate which items of the LSI-A were most affected by feelings of harmony, odds and 95% CI was calculated for each LSI-A item. Feeling harmonious most of the time/all of the time during the past four weeks was significantly related to a positive response on items: *Q2. I have been given more opportunities in life than most people I know; Q4. I enjoy my life as much and am as satisfied now as when I was younger; Q11. I feel as old as I am, but it doesn't concern me; Q12. When I look back at my life, I feel content; Q19. Overall, I have gotten what I wanted out of life*; and negative response to item: *Q18. Compared to others, I very easily get disheartened and depressed*. Participants who had felt harmonious either some of the time or most/all of the time had higher odds of positive responses on item; *Q8. I look forward to interesting and exciting things happening and negative responses to items: Q3. This is the most boring and monotonous period of my life; Q7. Most of what I do is monotonous and dull and Q10. I feel old and tired* (table 7).

Table 7. Odds of feeling harmonious in the past four weeks by positive response per LSI-A item.

Ref. Harmonious none/ a little of the time	**Harmonious some of the time**		**Harmonious most/ all of the time**	
LSI-A items	Odds ratio (95% CI)*	*P value*	Odds ration (95% CI)*	*p value*
Q1 As I get older, things seem better than I imagined they would be	0.92 (0.55 to 1.51)	0.732	1.08 (0.65 to 1.79)	0.770
Q2 I have been given more opportunities in life than most people I know	0.65 (0.41 to 1.04)	0.072	0.58 (0.36 to 0.93)	0.025
Q3 This is the most boring and monotonous period of my life	2.69 (1.62 to 4.45)	0.000	3.45 (2.03 to 5.87)	0.000
Q4 I enjoy my life as much and am as satisfied now as when I was younger	1.24 (0.7 to 2.20)	0.455	1.81 (1.02 to 3.21)	0.041
Q5 My life could be more eventful than it is now	0.59 (0.32 to 1.06)	0.079	0.74 (0.41 to 1.34)	0.325
Q6 These are the best years of my life	0.48 (0.24 to 0.96)	0.038	0.79 (0.40 to 1.55)	0.485
Q7 Most of what I do is monotonous and dull	1.79 (1.08 to 2.97)	0.023	2.20 (1.28 to 3.78)	0.004
Q8 I look forward to interesting and exciting things happening	1.59 (1.00 to 2.51)	0.048	1.64 (1.02 to 2.63)	0.040
Q9 What I do today interests me as much now as ever before	0.79 (0.49 to 1.28)	0.338	1.10 (0.67 to 1.81)	0.706
Q10 I feel old and tired	1.65 (1.02 to 2.68)	0.042	3.66 (2.22 to 6.04)	0.000
Q11 I feel as old as I am, but it doesn't concern me	1.44 (0.95 to 2.17)	0.087	1.65 (1.07 to 2.53)	0.023
Q12 When I look back at my life, I feel content	1.64 (0.93 to 2.88)	0.085	2.60 (1.45 to 4.63)	0.001
Q13 I would not exchange or change my life even if I could	0.84 (0.51 to 1.37)	0.491	1.06 (0.64 to 1.75)	0.827

Q14 If I compare myself to others my age, I feel I have made many unwise and short-sighted decisions in my time	1.12 (0.73 to 1.72)	0.607	1.32 (0.85 to 2.05)	0.222
Q15 I often feel at my best when with others	1.03 (0.65 to 1.63)	0.915	0.97 (0.60 to 1.55)	0.887
Q16 I plan things that I intend to do in a month or in a year	1.35 (0.86 to 2.14)	0.195	1.29 (0.81 to 2.06)	0.288
Q17 When I look back at my life, I feel I have not gotten much of what I wished or thought was important	0.90 (0.53 to 1.53)	0.691	0.94 (0.54 to 1.63)	0.829
Q18 Compared to others, I very easily get disheartened and depressed	1.17 (0.74 to 1.85)	0.498	3.19 (1.92 to 5.31)	0.000
Q19 Overall, I have gotten what I wanted out of life	1.60 (0.87 to 2.93)	0.130	2.03 (1.09 to 3.77)	0.026
Q20 Regardless what people say, the fate of humanity gets worse, not better	1.30 (0.74 to 2.12)	0.393	1.13 (0.67 to 1.91)	0.665

*Adjusted for age, sex and education

6. Discussion

The hypothesis of this thesis was that harmonious aging components (social network, subjective wellbeing, and feeling harmonious) are associated with higher odds of greater life satisfaction (LSI-A score) in old age than successful aging components (number of diseases, independence and being physically active). The hypothesis is in large supported by the main findings, which were: 1) having a good/very good subjective health was associated with having a greater LSI-A score compared to those with poor subjective health, and number of chronic diseases (multimorbidity) was not associated with LSI-A score; 2) Neither physical activity nor exercise were related to having a higher LSI-A score; 3) having a more intense social network and social activity was associated with greater LSI-A score; and 4) The amount of time spent feeling harmonious in the past month was related to higher LSI-A score. These findings suggest that indeed subjective health, social relations and feeling at peace are important for life satisfaction in old age.

Previous studies have reported a variety of factors important for life satisfaction in old age. One Swedish study[93] reported that health status and emotionally stable personality were the strongest factors, while another Swedish study[94] found that health and contact with siblings were most important for life satisfaction. Another qualitative study found that social contacts appear to be as valued components of a good quality of life as health status and a Brazilian study found that a poor quality of life is equivalent to decline in health and a good life quality is equivalent to several factors such as level of activity, income, social engagement and relationship with the family.[95]

One qualitative study by Reichstadt et al. (2010) from the United States sought to explore factors by which elderly people define successful aging.9[6] What they found was that older adults conceptualize successful aging as an equilibrium between self-acceptance and self-contentedness, as well as engaging with life and self-growth in older age. These factors seem to reflect more a harmonious aging perspective rather than successful aging, which stresses the importance of being cognitively, socially, and physically active, and to avoid ill health. What is more important is that this study was done in the United States, the center of Western values and home of the successful aging approach. This is further evidence that the successful aging approach is a misguided concept which is unrealistic,

and more importantly, does not reflect how older individuals evaluate their life satisfaction.

Several studies showing of no age-related decline in life satisfaction in late life contradicts the perceived objective decline in the quality of life of older adults. This has been referred to as a "paradox" and explained in terms of stability of life satisfaction in the gerontological discourse[8] Nevertheless, this phenomena was mainly observed in cross-sectional age group studies, therefore it does not clearly demonstrate the lack of an age-related decline, nor an intra-individual stability in satisfaction with life. Nevertheless, a German longitudinal study found only a modest decline in very old age and stability of life satisfaction throughout the life course.[97] In the present study, the average LSI-A score in the study population was 12.1 which matches the estimates found in Neugarten and colleagues (1956) first validation study of the LSI-A in a sample of 50-90 years old middle to upper class Americans,[45] as well as more recent studies such as Wallace and Wheeler (2002) who found a mean LSI-A of 13.1 in a meta-analysis of 34 studies with a mean age of 61.[98] However from the results it is evident that the LSI-A score goes down with increasing age. Indeed, being 80-90 years old in comparison to 60-70, was associated with a lower odds of a high LSI-A score. Therefore, these findings do not support the idea of a paradox in life satisfaction in older adults, rather in this population, age is negatively associated with LSI-A score.

Higher education and being married seem to also be important indicators of life satisfaction. It was not the focus of this thesis to investigate the effect of demographic characteristics on LSI-A, however these are important factors to keep in mind when discussing factors, which may impact life satisfaction in old age.

It is important to note that while many of the participants had chronic illnesses, very few were physically disabled. This means that we could not test part of the hypothesis stating that independence (as opposed to disability) is not associated with having a higher LSI-A score. Indeed, the population sample was relatively healthy and non-disabled in old age. It could be that compared to an unhealthier age-matched sample with less independence, they are more satisfied with life. However, 73% of those in the highest range of LSI-A score reported one or more chronic diseases, indicating that having a high life satisfaction is possible even with such circumstances. One could argue of course that this

can depend on the diseases in question, in that more disabling diseases could have a stronger affect on life satisfaction. However these numbers are a contra indicator of the successful aging's emphasis of absence of ill health in old age. Unfortunately, we could not test the effect of being dependent on life satisfaction, however a study in a 85-year old cohort in Denmark showed that out 187 adults with frailty (physical disability) adults 91 reported subjective satisfaction with everyday life in spite of declined mobility and loss of daily activities.[99]

Considering that the study population was a highly functioning sample, the findings are still in support of the harmonious approach in that the harmonious components (social relations, subjective health and feeling harmonious) seem to weigh heavier than successful components (physical health, activity and exercise), in having a high LSI-A score. This is further supported by the additional analysis of individual LSI-A items. Firstly, the frequency of feeling harmonious the past month was associated with a positive response in 12 out of the 20 items, suggesting that this is an important state of mind for satisfaction with life. Secondly, these 12 items seem to reflect acceptance of getting older, lust for life and being content about the past. However, this can be deemed more speculation as no interview was held to get qualitative information regarding the way the participants answered the LSI-A questionnaire. Nevertheless, this interpretation is supported by previous qualitative research by Reichstadt et al. (2010), who reported similar themes, as mentioned earlier.[96]

6.1 *Strengths and limitations*

The strength of this study is the large sample size of Swedish elderly people both living in home and institution, which guaranteed sufficient statistical power to detect studied associations. In addition, we could use different sources of medical information including clinical examination, impatient registry, use of medications and self-reported medical history, which could limit the possibilities of information bias. Furthermore, a broad range of factors were explored in relation to life satisfaction, with the novel addition of feelings of harmony which captured a large spectrum of possible relationships.

However, some limitations need to be pointed out. First, the population in this study

is residents in an area called Kungsholmen in Stockholm Sweden, where inhabitants have a relatively high income, are highly education and mostly native Swedes. Thus, the generalizability of the findings of this thesis can be extended to other high-income areas with a highly educated population in the Scandinavian countries. This generalizability is quite limited, however as Sweden is regarded as a Western culture where Western concepts have been readily adopted, it is noteworthy that the successful aging framework does not seem to reflect how Swedish people evaluate their lives in old age. This could apply to other Western countries as well, meaning that the hard borders between Western and Eastern mindsets could be much more blurred than previously thought. Second, as we only used cross-sectional data, the temporality of the observed associations could not be determined. Furthermore, our measure of feeling harmonious was limited to the past 4 weeks, which may not capture the state of mind extending this period. Finally, in all participants in the SNAC-K project, there were 744 participants with missing or incomplete information on LSI-A. It could be that these participants had more disability and multimorbidity than the rest of the study population, which could have biased the results.

6.2 Conclusions and Implications

Successful aging theory has its roots in the American dream of success and a capitalistic society. While this concept has persisted in gerontological research for many decades, it seems that it is deeply flawed in regards to how older people evaluate their lives and what they consider as important. Successful aging has spurred on campaigns of cognitive training, anti-aging products and various diets and exercises, all in hopes of being a winner rather than a loser. However, conceptualizing aging in this way makes it seem like something we should work against and postpone as long as possible.

While it is true that we live longer and healthier lives, aging is still an inevitable process, which we all face. By accepting the challenges that may come and embrace the opportunities gained with old age, this process may be viewed less negative and create less pressure to be "successful". Recalling Carol Ryff's (1982) words: "like goodness, truth, and other human ideals, successful aging may appeal more than it illuminates", it is the "appeal" bit which will be hard to move away from to reach a shift in the gerontological discourse. People will always find self-improvement appealing and by no means is it a

negative thing to try to improve oneself to be fitter or healthier. The problem is that anti-ageism has become an obsessive phenomenon. In a population, where the majority have one or more chronic illness, the scores for life satisfaction are relatively high. This highlights the problematic gap of an imposed strive for success and the actual daily life of a person growing older.

The aim of this thesis was to explore the alternative, using the novel harmonious aging approach. The results show promise in that old Swedes seem to value more their subjective view of their health and to feel socially connected, rather than being at their optimum health and activity wise. Therefore, based on the findings of this thesis as well as other studies that have been discussed, it seems that harmonious ageing is a more intuitive approach to aging.

The hope is that in the future, more focus will be put on celebrating getting older and facing the challenges with dignity.

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